

POPULATION HEALTH MODELS AND THE PROFESSION OF NURSING

(POPULATION HEALTH IN NURSING 2)

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EXECUTIVE SUMMARY

The United States continues to spend more on health care than any other nation in the world while experiencing some of the worst health outcomes in the developed world. Many analysts have concluded that this deficit is due to social factors outside the usual purview of the formal health care system. This has sparked a new interest in population health and its role in creating a just and sustainable health care system.

This paper considers what this new interest in population health means for the profession of nursing. It is the second study conducted by the Population Health in Nursing (PHIN) team at the Center to Champion Nursing in America. The center is an initiative of the Robert Wood Johnson Foundation, AARP, and the AARP Foundation. The first study (PHIN 1) examined population health in nursing curricula. This paper (PHIN 2) surveyed the field of population health, asking its leaders how nurses might best contribute to a healthier society.

The paper consists of an introduction and four sections. The introduction reviews recent findings on the health of all in America and explains the population health crisis currently facing the nation. Section one summarizes a meeting of nursing and population health stakeholders held at the Robert Wood Johnson Foundation and explains how its themes informed the research. Section two presents thematic conclusions from in-depth interviews with population health leaders, who discussed the critical elements of population health partnerships. Section three describes additional visits to four population health partnership sites that provided the team with additional insights into current practice. In section four, the authors analyze the dominant themes of the research and their significance for the nursing profession.

Overall, the team discovered that nurses are ubiquitous in population health practice, making contributions consistent with the profession's skills, values, and well-earned positive reputation with the public. However, despite learning a great deal about best practices for population health partnerships, the team found no single overarching theory of how nurses should best contribute to population health. The report therefore concludes with the most relevant themes nurses should consider as they develop their own positions about the future of the profession in population health.

INTRODUCTION

The Crisis Continues

The United States spends more on health care than any other nation in the world, yet its population is one of the most unhealthy of any developed nation (Sawyer and Gonzalez 2017). An ever-growing body of research suggests this problem persists due to factors the health care system is not currently designed to address.

In November 2019, researchers using data from the U.S. Mortality Database and the Centers for Disease Control and Prevention confirmed what the CDC and others had already warned: Improvements in American life expectancy stalled in the early 2000s, then declined for three years in a row after 2014 (Woolf and Schoomaker 2019).

This decline in health, the authors found, was not being driven by some new pathogen or a shortage of vital drugs. Instead, the authors identified the main causes as a series of mental and social maladies striking down adults in the midst of life, including drug overdoses, suicides, and alcohol abuse. Also prominent were poor health outcomes driven by chronic conditions like obesity and diabetes, which in turn can be linked to social and economic inequities.

In short, social factors outside the traditional purview of the health care system were driving down the entire nation's life expectancy. Though recent data suggests life expectancy may have improved, the health of the American population is still much poorer than that of comparable nations.

"The whole country is at a health disadvantage compared to other wealthy nations," Steven Woolf of Virginia Commonwealth University told the *New York Times*. "We are losing people in the most productive period of their lives. Children are losing parents. Employers have a sicker workforce" (Kolata 2019).

The decline in aggregate life expectancy cuts across all racial and ethnic groups and can be observed in almost every state, though it is much worse in regions facing protracted economic decline.

Glaring inequities across race remain as well. For example, black women are two to three times more likely than their white peers to die in childbirth (Centers for Disease Control and Prevention [CDC] 2019). In Chicago, life expectancy in mostly white Lincoln Park on the North Side is 11 years greater than mostly black Washington Park on the South Side (Center on Society and Health, 2016).

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These kinds of statistics have rightly prompted reflection on the relationship between health and broader social injustice. Everyone aware of the crisis in American health and its link to inequality is searching for solutions.

Health Care's Response

In response to this ongoing crisis, many of the nation's health care leaders are considering ways to broaden their focus to include problems not normally addressed in hospitals and clinics. These leaders have approached this challenge using many different models and frameworks, including population health, health equity, and the social determinants of health. In practical terms, they are launching new outreach initiatives, devising new technological tools, and tinkering with the model of primary care. Many such efforts are described in a wide-ranging new study from the National Academies of Science, Engineering, and Medicine, *Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health* (National Academies of Science, Engineering, and Medicine 2019).

Another approach is the one advanced by the Robert Wood Johnson Foundation (RWJF), which in 2015 adopted 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 more equitable communities, and strengthening integration of health services and systems. These efforts are all intended to work together to improve population health outcomes.

Since the Culture of Health framework was adopted, RWJF has been exploring where the nursing profession might fit into this broad effort. After all, nurses serve in all aspects of the American health care system and consistently rank as the nation's most trusted profession (Reinhart, 2020). It stands to reason to believe they will play a key role in reversing America's health decline.

In 2017, the foundation convened a group of thought leaders to explore the roles nurses might play in improving the health of the U.S. population. The result was the report *Catalysts for Change: Harnessing the Power of Nurses to Build Population Health in the 21st Century* (Storfjell et al., 2017). The report called for nursing and health care to move beyond the 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."

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Population Health in Nursing

In response, RWJF commissioned the two-phase Population Health in Nursing (PHIN) project. The foundation tasked the Center to Champion Nursing in America (an initiative of RWJF, AARP, and the AARP Foundation) with exploring new models the profession could use to improve population health. The first phase of the project, PHIN 1, described promising educational models for preparing nurses, across all levels of professional practice, for population health practice and leadership. The inquiry discovered broad support among nurse educators for increased training in population health and many new programs and proposals to achieve that goal.

For PHIN 2 — the work of which is described in this paper — the team took a different approach. If PHIN 1 analyzed the “supply” side of nursing in population health, PHIN 2 tackles the “demand” side. At the suggestion of a panel of nursing stakeholders, this phase of the project took a broad view of the health inequity problem and responses to it. The inquiry embraced population health initiatives based in hospitals and universities, but also new ideas in housing, policy, primary care, community organizing, and social justice.

The original intent of this inquiry was to isolate several discrete models of population health and then analyze the ideal role of nurses in each. In practice, the heterogeneity of the data led the authors to a more eclectic approach. So much change and innovation is currently happening in population health, with several different models colliding and influencing each other, that the team instead decided to focus on core concepts that emerged from their interviews and site visits.

The paper’s findings are presented in three sections. Section I describes the stakeholders meeting, in which the team decided on a broad population health approach. Section II is based on in-depth interviews with leaders in the population health field. It presents the most common themes from those interviews, with representative quotes. Section III describes the research team’s more detailed inquiries into four population health sites whose work embodied the themes represented by the interviews. These inquiries were undertaken with a particular view to the role that nurses play in these sites and could play in the future.

Finally, in Section IV, the authors review the most important learnings from the entire PHIN 2 process, then consider what they might mean to the ongoing development of the nursing profession.

I: STAKEHOLDERS MEETING

Following the publication of the PHIN 1 report, the Population Health in Nursing team convened nursing and population health thought leaders for a meeting at the Robert Wood Johnson Foundation in Princeton, N.J. on February 28 and March 1, 2019. At this meeting, participants discussed findings from the first report and debated where the nursing profession might fit into the broader movement toward population health. Materials from this meeting, including a participant list and agenda, may be found in Appendix A.

The key conclusion of this meeting was that the PHIN project needed to examine the population health partnerships in which nurses would likely practice in the future. Participants urged the authors to take a broad view of population health, looking beyond models grounded in health care systems or those where nurses already play a leading role. Instead, meeting participants enjoined the PHIN team to examine four areas in all population health models:

Marginalized Populations: The group recommended an approach grounded in a strong ethic of social justice. They sought a better understanding of how successful models are addressing the social determinants of health and structural health inequities, and how nurses might be engaged on these issues in the future. They recommended that a critical perspective on race, class, and gender inform the analysis. Finally, the group urged the PHIN team to adopt a working definition of population health that took these kinds of inequities into account.

Collaborative Practices: The participants resolved that the PHIN team should ask what kinds of skills individuals and teams will need to successfully implement new population health models. In particular, they were interested in approaches to interdisciplinary teams and better information on the variety of disciplines that might be a part of those teams. They wanted to know what kinds of education and training models might best prepare nurses and others to function in these teams. Finally, the group was particularly interested in questions of leadership in population health partnerships, whether nurses were exercising leadership in these partnerships, and how nurses might improve their capacity to lead in the future.

Value and Reimbursement: The meeting participants were insistent upon the idea that improvements in population health could not be realized without sustainable reforms in reimbursement and conceptions of value within the American health care system. They therefore encouraged the PHIN team to make this a particular focus of all its inquiries.

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The group was interested in how data analytics and new technologies might make more visible the potential to identify population health opportunities and reimburse interventions more effectively, as well as demonstrate their feasibility and scalability. The group was also interested in how changes in policy might inform the future of payments for care.

Engaging Communities: The group took as a given that future population health efforts will more proactively engage patients and communities in their own care. But they were interested in the most effective strategies for making this happen. They were curious about partnerships that bridged the usual divide between providers and patients. They wanted to know what kinds of institutions and stakeholders needed to be in the loop for community engagement to succeed. And they wanted to know the role that new technologies might play in helping communities take greater control of their own health.

The Population Health in Nursing team took all these factors into account as they investigated and analyzed the partnerships in this report. In particular, they attempted to keep a broad mindset about how population health partnerships should look and who should lead them. As a result, the focus on nursing is somewhat more diffuse than it was in the first PHIN report; however, the authors believe this approach will ultimately serve the profession by helping it develop a clearer perspective on the many possibilities for improving the health and well-being of all in America.

II: POPULATION HEALTH LEADER INTERVIEWS

To better understand the conceptual models at the root of population health partnerships, interviews were conducted with 18 leaders in the design and execution of such partnerships. These leaders included founders of partnerships, executives leading partnerships for hospitals and health plans, government officials and other administrators who oversee multiple partnerships, and academic experts with prior experience designing such efforts.

After the team developed an initial list of questions, interviews were conducted over the phone by Alan Newman Research. The research team then synthesized the interviewees' responses into essential elements of population health partnerships. Each of these elements is described below using the interviewees' observations and quotes that convey the main idea. For elements where there was no clear consensus or interviewees offered significant divergent responses, an "Additional perspective" section was added to represent their insights.

To allow for candor from the informants, in this section no observations are connected with any specific source or population health effort. Quotations are not attributed to individuals and have sometimes been lightly edited for length and clarity. However, a full list of the leaders consulted may be found in Appendix B.

CORE PRINCIPLES

Common Purpose - Nearly all of the leaders identified a clear, overarching goal as the critical element to a population health partnership's success. American institutions have long embraced efforts to improve the health of the general population. But in today's population health partnerships, institutions are often addressing challenges beyond those for which they were initially designed. While a common challenge may have brought the partners together, in the absence of a clearly defined goal institutions risk reverting to their standard ways of operating. Again and again, leaders emphasized the need to adopt processes that ensure the entities involved remain focused on a common purpose. This common purpose often included improving quality of life in specific metrics in a population shared by multiple institutions, frequently defined by geography.

"All of the partners need an alignment of goals and objectives, no matter if it's just two partners or ten partners. They need to understand each other's pain points. ... We're going to be asking them to do something different in their community to take advantage

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of the fact that we've got all of these partners here. And that may make their lives a little less efficient in some ways, but we think the lack of efficiency will be more than made up for from better outcomes for kids and adults."

Additional perspective: Though no leader disputed the need for members of a partnership to share overarching goals, a few pointed out instances in which a new understanding of a community's health challenges and opportunities have emerged after the initial launch of a partnership. Therefore, it may be wise for the designers of population health partnerships to consider how goals can change over time and the need to check in regularly with partners to sustain common goals.

Common Language - Almost as often as they emphasized the need for shared goals, the interviewed leaders stated the need for partners to communicate in a way that does not let one group or its perspective dominate. Health care providers are trained to speak with the authority of science and clinical protocols. But almost all of the health care leaders described how in the process of developing their partnerships, professionals needed to set aside their usual tone of authority as they learned to relate to all of the stakeholders as well as each other. Successful partnerships also frequently required concerted efforts to coordinate understanding across different professions, institutions, and systems, such as education and housing. Organizers should understand that they will need to work through communication barriers that result from differences in race, class, culture, geography, language, and more. Just as often as it requires learning new facts, this process requires participants to set aside assumptions as they discover new ways to listen and collaborate.

"We need to understand each other's vocabulary and language. Doctors often think that public housing works one way, but it may be really important to understand that it does not. There is absolutely no match, for example, between Medicaid income eligibility and housing income eligibility. That leads to silly assumptions like the idea that you can just plop a clinic into a low-income housing site and that's a marriage made in heaven."

Convening Many Voices - The ability to convene many different stakeholders in a system or community was cited as the most important attribute of partnership leaders. Population health partnerships usually begin with a conversation among many different entities about how to improve the well-being of a particular group or community. Maintaining the effort most certainly requires regularly bringing these entities back to the table and making requests that fit their various capacities. So it's no surprise that the quality of "convening authority" was often cited as key to leading these efforts. Anchor institutions like hospitals and universities often conceived of their population health efforts as ways of leveraging their convening authority for the good of the community.

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Yet many of them also found that partnerships with churches, schools, government, cultural institutions and other entities were necessary to keep the conversation going. Interviewees stressed that no one type of organization or person is inherently more effective at convening partnerships than any other — it all depends on the stakeholders and objectives involved. But most leaders argued that some specific entity has to start the discussion and actively maintain it to keep the partnership healthy.

“In every case where we have asked, ‘How did this partnership happen?’ It started with somebody who convened people who said, ‘We can do better.’ By the way, there’s absolutely no pattern we’ve been able to discern in who that convener is. It could be a pastor, it could be a health system, it could be a nurse. ... It’s somebody who has enough stature in their community that when they call someone and say, ‘Hey, can we talk?’ then that happens.”

Additional perspective: Some interviewees cautioned that while bringing together partners from across the community is important, the ability to convene alone is not sufficient to construct a population health effort. One leader advised that at the core of each effort there should also be a “small and nimble team” empowered to actually execute the consensus arrived at by a larger group.

WORKING WITH THE COMMUNITY

Trust is Paramount - Populations with poor health outcomes are often justifiably distrustful of health care providers and outsiders, so it is essential that the partnership establishes and maintains trust from the groups it serves. The most entrenched health inequities in the United States did not occur by accident. Communities with poor health outcomes are often victims of oppression and inequality that have persisted for generations. Many interviewees said representatives of population health partnerships should assume they begin with a trust deficit when working with marginalized groups. Good intentions alone are not sufficient to achieve trust. The partnership must establish egalitarian relationships with stakeholders who have built up community trust over years or decades. Leaders need to develop real familiarity with the communities in which they are working, reckoning with histories they may know nothing about and fears they may not initially understand. Patience and listening are essential skills. The goal is not just cultural competence, but the cultural humility necessary to truly work with stakeholders as equal partners.

“Trust is not something that can be built right away. You can’t go into a relationship assuming that the community trusts you because you are wearing a white coat. You

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should probably think the opposite, that they don't trust you. You have to realize that you have to build trust until the community feels more confident that you are looking out for their interests and you're not just there to draw their blood and take from them. You have a commitment to deliver results. Often researchers feel like their work ends when they publish that New England Journal of Medicine paper. You've got to bring it back to the community."

Additional perspective: Interviewees varied in the degree to which they thought trust could be built in communities strategically. Some argued for intentionally engineering small wins to demonstrate the effectiveness of a coalition. Others focused more on values alignment and communication as means of achieving trust.

Continuity Builds Trust - Several different interviewees identified a consistent commitment to the population being served as the most important antidote to mistrust. The interviewed leaders cited the importance of continuity from care providers, managers, and institutions. They frequently contrasted the kind of continuity created by successful partnerships with the episodic nature of modern health care and the detached attitude of public health researchers. Even if it does not seem to produce immediate results, they argued that demonstrating consistency in a community can open up new opportunities to provide care. Nurses and community health workers were viewed as important vehicles for continuity.

"It can take years to build trust, and that's one of the key aspects of our model. It's seeing the same community health worker, the same nurse, day in and day out, year in and year out. The provider may run into that veteran in the hallway who has absolutely refused to participate. But if a nurse is mentally supportive and not pushy, sometimes people enroll because they get to trust that. That does not work if you have a revolving door of nurses or care managers. What's wrong in this country is that we have a zillion care managers coming from every direction, often by phone, and that does not work."

Stakeholder Representation and Co-Design - Ongoing representation of relevant populations' interests was important to most interviewees, with some also advocating for even more active roles for patients and community members.

Consistent with recent efforts for patients to be represented in the governance of health care institutions, interviewees insisted that community stakeholders play a role in the oversight of community health care partnerships. But many advocated for an even more active approach, discussing how community members were engaged as co-designers of outreach initiatives and research projects. Others argued that empowerment, agency, and respect could be measured as outcomes of their programs independent of more

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traditional population health metrics. Because of their skills in patient advocacy, nurses were sometimes seen as brokers for these kinds of co-design efforts.

“Part of our mission is that patients are listened to and heard and empowered to help co-develop research methods. They are no longer just subjects in a trial. ... No matter how many degrees and fancy doctorates that you and I have, we still don’t know what it is like to live with certain diseases. You only know what you know. You have to realize your limitations as a researcher. You have to treat patients as the experts in their disease. ... The National Institutes of Health wants you to have hypothesis-driven research. Well, if you haven’t done pre-engagement and talked to patients, you might build a hypothesis off of your systematic review, but you may be missing major things that patients are actually experiencing and are not captured in the literature.”

TEAMS, SKILLS, AND TRAINING

Teaming Up - When considering the skills necessary to implement population health partnerships, the interviewed experts overwhelmingly emphasized the need for personnel to effectively function in teams. The traditional model of health care in the United States has centered on one-on-one relationships between patients and providers. Much of the population still thinks of their interactions with the health care system centering on a long-standing relationship with a primary care provider. But the communities and issues addressed by population health partnerships are by definition ones that have not been adequately addressed by the traditional system of care. These populations need care that is configured differently in terms of cost, accessibility, location, frequency, expertise, and many other factors. The experts emphasized that clinicians who have practiced in a typical health care environment almost always need some sort of re-training to practice as part of a team focused on an entire population.

“We realized that the biggest issue was helping folks think outside of the one person, one patient at a time model where care takes place in a doctor-owned facility. We do a lot of exercises to this day with residents and students about how they think about health and what sort of strategies you can use other than doctors and clinicians in buildings.”

Team Players - The main traits the experts identified as essential to the population health team were not specific clinical skills, but the relational skills necessary to effectively serve vulnerable populations in a collaborative way. Many of the interviewed leaders talked about a somewhat undefinable quality that

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distinguishes clinicians who can effectively function as part of their teams from those who cannot. They frequently emphasized “soft skills” such as active listening, emotional intelligence, and pro-active coordination with others. To stay motivated and effective, team members need personal resilience, as well as a curiosity about the community they are serving and a willingness to invest in it personally. These qualities were sometimes contrasted with the traits necessary to thrive in more regimented clinical environments that place greater value on patient volume and data entry.

“In our case, bilingual and bicultural clinicians worked better because they had the cultural competency. Others were willing to get some experience with the population to build that cultural competency. It was people who went in with the attitude that they needed to be flexible. It was flexibility to know that they didn’t already know what would work with this population and they couldn’t just impose their usual way of doing it on this population. They had to go in with the curiosity and the intent to learn from the community what would work with them and adjust their messaging and approach to fit what worked in the community.”

Crossing Boundaries - Population health teams need a capacity not just to operate across health care disciplines, but also with social systems that clinicians do not normally know well. For many population health experts, patient-centered interdisciplinary teams were already a given. Teams with many different kinds of providers were often seen as an outgrowth of a system’s capacity to provide primary care; so just as primary care providers know how to refer a patient to a specialist in an acute clinical problem, they are gaining knowledge in how to refer patients facing unmet social needs. Yet the interviewed experts placed more emphasis on the need for health care providers to gain greater familiarity with systems like housing and public education, which were often essential to the delivery of care in the emerging partnerships.

“We need to start training people in the health professions to think about transportation and housing and parks and rec. I’d add economic development in there too. Otherwise we are always going to be re-training people after they’re out. We are looking at the partnerships needed across multiple sectors and realizing that the biggest shift is actually needed in the health professions.”

Additional perspective: The interviewed leaders offered several different perspectives on the role of clinicians who bill independently for their services (like physicians and dentists) versus workers who are treated as a set cost within a larger system. Some interviewees expressed skepticism that the kind of savings and scale their programs were designed to achieve could be realized if any members of the team were doing their own billing, since this would shift the focus to revenue rather than health outcomes.

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Notably, nurses were the only group on both sides of the ledger; some interviewees emphasized the need for nurse practitioners as independent service providers, while others valued the skills of registered nurses in providing effective coordinated care outside of dominant billing models.

Clinical Placements - Leaders from a variety of different backgrounds were enthusiastic about the idea of clinical placements within population health settings, including placements for nursing students. Many of the interviewed leaders contrasted the kinds of practical skills necessary for success in a population health partnership with the abstract models of public health that clinicians learn in school. Many of these skills, they argued, could only be learned through direct exposure. They also expressed hope that students who are exposed to working in population health partnerships will return to them later in their careers. Projects often used students to complete tasks that, though important to the overall goals, were not billable work.

“We are affiliated with a university and the college of nursing in particular. We do a lot of student training and they help with a lot of the outreach we do in the community. ... I know that we would not be able to accomplish some of the things that we do in our community without the involvement of students. When we do screenings, there could be hundreds of kids coming through in a couple of days and a lot of folks who need to be on board. ... It definitely takes a village.”

MEASUREMENT AND PAYMENT

Many Different Data Flows - There is no dominant model for data collection in population health partnerships; by the leaders’ own account, programs are looking at many different data sources for many different reasons, and reliable tools and explanatory models for this data are only beginning to emerge. Every interviewed population health expert expressed enthusiasm about new data being collected on the social determinants of health. Many programs had recently introduced new screening surveys, data entry protocols, visualization dashboards, and other new tools to better understand the social determinants of health in the populations they serve. At the same time, many leaders admitted that they were only tracking data on utilization or engagement, which they hoped would eventually inform more robust models for health outcomes and best practices. They frequently expressed enthusiasm for evaluation partnerships with universities and third-party researchers.

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“Right now, to some degree, everybody is trying a lot of different things, and some of the things work really good, others not so good, and it depends on the population, it depends on your payment model, it depends on your skill mix, it depends upon if you are a physician who is willing to think differently, it depends on the area of the country.”

Tech to Fill in the Gaps - When asked about the role of technology in their partnerships, the interviewed leaders often expressed hope about its potential to bridge the gaps found among different data sets, populations, and systems. The patients and communities served by population health efforts are often those who have “fallen between the cracks” of existing systems. So it was hoped that through improvements in electronic medical records and predictive analytics, providers could become more responsive to the social factors affecting their patients. In many cases, these were still speculative future applications of existing data collection and coordination efforts, though some interviewees discussed early results from newly developed tools.

“We have been talking about the best way to flag information in the electronic medical record. I think there is a way to do it effectively. I think a lot of physicians and nurses in the hospital would look at social determinants if there was an easy way to do it, if there was a way that could be built into their workflows. ... I think if we got the right information to their fingertips they would be able to use it. The problem is that I just don’t think we have found a good way to make it available.”

Clinical and Non-clinical Outcomes - While some programs described by interviewees focused on traditional clinical outcomes like decreasing the incidence of specific conditions, many advocated for non-clinical outcomes valued by the community. The gap between the ways outcomes are evaluated in clinical and non-clinical settings was on the minds of many of the interviewed experts. For example, many population health partnerships focus on schools or housing. While school performance and stable housing are important social determinants of health, they are not variables that health care systems are used to tracking, evaluating, or reimbursing. The experts argued that the leaders of partnerships need some sort of broader conceptual commitment to social justice and its relationship to health in order to ensure long-term investment in these types of initiatives.

“As a school-based health center, our overall goal is to keep kids healthy and in school so that they can achieve academically. ... It really demands that we look at all of the factors that address health in adolescents and children — not just health conditions and health care, but other components that affect their ability to attain academic

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achievement and graduate. Because we know that is a factor in a young person's lifespan that will affect their health outcomes later on."

Additional perspective: Some interviewees advanced the idea that clinical and non-clinical outcomes could come together through measuring factors like improved patient agency. For example, if community members face linguistic barriers to access in health and social welfare systems, then a program assists them in overcoming those barriers, both kinds of outcomes might be reflected in their changing feelings about their integration into the larger community.

Sustainable Funding - The overwhelming financial concern of population health leaders was developing funding models that are sustainable in the long run and not dependent on a single government grant or philanthropic gift. Consistent with their emphasis on continuity and trust, the interviewed leaders emphasized the need for funding derived from sources that will continue year after year. Data was often being collected with the goal of demonstrating the effectiveness of such funding. Leaders also frequently noted that demonstration of significant, replicable savings will be necessary to scale up population health partnerships to meet the actual challenge of social determinants of health and declining life expectancy.

"It still goes back to the money. It's about getting our financial flows right, it's about being able to nimbly make the investments that we need to and demonstrate that we are able to both do right by our patients in terms of improving their health but also deriving greater value from our health care system."

Systemic Savings - While the interviewed leaders appreciated efforts to respond to value-based care incentives like those built into the Affordable Care Act, the most sustainable models for funding seemed to be those driven by demonstrated savings within a budget. Many population health partnerships had their origins in efforts to avoid hospital readmissions or more effectively bundle care. But the data that was more frequently and enthusiastically cited was reduction in costs from factors like frequent utilization of emergency rooms or expensive chronic conditions. Many partnerships were developed to serve populations with a capitated Medicaid budget, incentivizing them to deliver care to the greatest number for the lowest cost. Policy decisions that allowed for these payment models were considered essential to the success of such programs. Some said that continued reform along these lines would be necessary to achieve population health goals nationwide.

"Value-based payments certainly create opportunities because people start thinking differently about how to invest health care dollars. But I would say we still have a long

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way to go in terms of driving the change that we need to with respect to aligning incentives and having reimbursement actually flow in a way that allows us to invest in what makes the biggest difference with respect to health.”

Additional perspective: Several interviewees argued that population health partnerships need a broad and flexible view of how to advocate for funding for their work. For example, one interviewee recalled how a program was ultimately justified because it led to lower absenteeism among employees in a university health system. This interview and others encouraged leaders to seek funding sources for programs wherever they might be found.

THE ROLE OF NURSES

Yet to Be Decided - The interviewed experts — even when they were nurses — did not offer definitive statements on the roles nurses should play in a population health partnership. Almost all population health partnerships discussed involved nurses to some extent. But despite nursing’s rich history of public health practice, the profession was rarely discussed as contributing to partnerships in categorically new ways. Instead, leaders usually highlighted the kind of clinical contributions that nurses might normally make in a hospital, but were now making in homes or communities as a result of the partnership. In some partnership models, a nurse always served as a key point of community contact, or all clinics were managed by nurses with a defined set of skills. Yet several leaders argued that the full potential of nurses in population health partnerships is only beginning to be realized.

“I will tell you that I think we have to do a better job of engaging nurses in all areas. The bulk of our nurses still work in hospitals. That’s changing a bit. But we have to recognize that nurses in hospitals are busy, there is a lot going on, and in some cases the social determinants of health don’t get highlighted much because you’re focused on the acute need right now. I think we have got to have structures that connect the dots for people.”

The Character of the Profession - At the same time, many leaders also recognized that the traits that are essential to the success of population health partnerships, like effective communication and patient advocacy, are essential to the nursing profession. Despite uncertainty over the ideal role of the nursing workforce, population health leaders clearly recognized the qualitative difference that properly trained nurses makes on the ground in their clinics, schools, and communities. Though many cautioned that even nurses need to be re-trained to work in population health settings,

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there was no doubt that the right person to fill many of the jobs created by population health initiatives is a nurse.

“They are perceived as more approachable. They are the people patients interact with during an office visit or appointment with an agency. They have a certain level of trust in the community. They have skills with patient education and health literacy and bringing information to the level where the patient is at. They have the practice skills of doing patient-centered care or client-centered care. Those types of things are typically part of nursing education. They have vast knowledge, but also ways of imparting that information in a way that is understandable. They also have that navigator or care management function of ‘Here are all the services we need to build around you, and here is how you access them,’ and then following up to see that they do actually access them.”

Additional perspective: Some interviewees saw even greater potential for nurses to help achieve population health objectives if structural changes are made. For example, one expert said that the nursing workforce could be “the heroes” of more effective health care systems, but only if the United States moves a more decisive break with the fee-for-service model.

III: POPULATION HEALTH SITE VISIT INQUIRIES

To further explore the themes expressed in the thought leader interviews, the research team decided to conduct additional research into four specific population health partnerships. These inquiries were conducted using a combination of in-person visits, video conferences, and literature review.

To some extent, the sites chosen were limited by scheduling and logistical considerations. However, they are differentiated from each other in one key way: each site uses a different institutional platform to achieve population health results. These sites helped the authors better understand the variables inherent in launching population health programs from the platform of (respectively) a large health system, an affordable housing system, a primary care clinic system, and a university system.

ADVOCATE AURORA HEALTH

Advocate Aurora Health is one of the largest not-for-profit integrated health systems in the United States. Formed by the merger of Wisconsin's Aurora Health Care and Illinois's Advocate Health Care Network in 2018, the combined system serves about 2.7 million patients annually in the two states. The network also serves about 1.3 million people through various value-based care contracts. These include everything from exclusive provider plans and shared savings programs to capitated Medicare and Medicaid populations.

The many population health initiatives undertaken by Advocate Aurora Health all proceed from the efficiencies that can be achieved by serving such a large population in a single system. Through mergers and partnerships, the system has come to include facilities that span the continuum of care: walk-in clinics, major trauma hospitals, skilled nursing facilities, and more. Consequently, the system's executives have adopted a strategy to improve care and contain costs through better integration of the patient experience across this network.

"In a large health care system like this when you have the full continuum of care, many of your initiatives are contained within the system," Chief Nursing Officer Mary Beth Kingston told the Population Health in Nursing team. "Then you partner with specific community agencies." So while many care improvement initiatives center on a clinical experience in an Aurora Advocate facility, they also include factors like social determinants of health as part of a longitudinal plan to keep patients healthy and avoid hospital readmissions and unnecessary emergency room visits. Network executives

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note that through nurse-led care transition programs, they have achieved a 31 percent reduction in hospital readmissions in Illinois and a 38 percent reduction in Wisconsin.

Key Population Health Concepts

The Population Health in Nursing team learned that the following ideas were important for Advocate Aurora's model:

- **Primary care can serve as a platform for continuous improvement** - In the years since it was first introduced, the patient-centered medical home model has come to be a paradigmatic model of primary care. According to Advocate Aurora representatives, the system now includes the greatest number of medical homes certified by the National Committee for Quality Assurance. Like other systems invested in the medical home model, Advocate Aurora has made quality improvement of this primary care experience a key modality for realizing the "Triple Aim" of improved patient experience, better population health outcomes, and reduced costs. System administrators are trying to realize these goals through process improvement efforts like stratifying patient risk levels, looking for greater efficiency in episodes of care, and increasing coordination in the primary care team.
- **Meaningful measures help bend the cost curve** - As explained by Don Calcagno, Advocate Aurora's Senior Vice President for Population Health, the system seeks to continuously innovate, but cannot pursue the kind of disruption often found in the private sector. "We need to get more effective and efficient in our operations," he said, "but we are first and foremost a safe clinical enterprise. We are never going to make it less safe in order to decrease costs." To meet these objectives, the Advocate Aurora team has focused on metrics they know inherently combine cost savings and better health outcomes, such as redirecting frequent emergency room users to more effective sites for care. The population health team has also developed new metrics around less tangible factors like patient engagement. New population health initiatives frequently target these "meaningful measures." For example, a new program in a capitated Medicare population aims to improve community responses to accidental falls, which are both expensive for the health care system and a leading cause of death among seniors.
- **Thoughtful use of data and technology can make population health more visible** - Many of the resources the Advocate Aurora team are currently rolling out focus on making clinicians more aware of social factors affecting patients and

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how to best respond to them. The system is currently using tools within EPIC's electronic medical records system to relate social determinants of health to patients' clinical goals. Chicago-based startup NowPow developed a system that is being used to more effectively track patients' social needs and generate recommendations for resources in the community.

The Role of Nurses

The Advocate Aurora system employs approximately 22,000 nurses in Illinois and Wisconsin. Many of these nurses work in traditional clinical roles with little to no responsibility for population health. However, a significant number of the initiatives Advocate Aurora has launched to improve the clinical experience are led and staffed by nurses. Nurses use their skills to design stratify patient risk, improve education around appropriate sites of care, and design more effective patient transitions. A focus on improving “meaningful measures” has also led to the creation of new, specialized population health roles designed with nurses in mind. For example, “Targeted Care Coordinators” are senior registered nurses who focus on specific populations and health outcomes. These new roles are defined by nurses' ability to critically ask not just how to meet immediate patient needs, but what factors in their lives might make them vulnerable to avoidable utilization of care in the future.

Mary Beth Kingston, Advocate Aurora's Chief Nursing Officer, says she sees the system as a place where nurse-led initiatives for improving the patient experience and population health are clearly supported. “Being part of a very large health care organization has a lot of benefit because we have infrastructure where we're willing to try different things without having everything tied up in a bow. We can say, ‘All right, right now we know we don't have a funding source, but we're going to fund it and see what the impact is.’” Leaders from the system's post-acute care team said that nurses often have the skills and insights to improve care; management just needs to “light a fire” under them by creating a supportive culture for their ideas.

Population Health in Nursing Insights

These were the most important insights for population health in nursing the team took away from the visit to Advocate Aurora Health:

- **Core values of the nursing profession are also essential to population health efforts that center on primary care** - When asked to describe the ways in which nurses shape population health within their system, leaders at Advocate

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Aurora highlighted qualities that are also essential to the modern nurse's identity, such as a holistic view of patients. "It's because these are nurse-managed programs that individuals are viewed holistically," said Kingston, the Chief Nursing Officer. "It's not focused only on the clinical picture. That nurse is taking a very comprehensive view of the person's needs, synthesizing all that information, and developing a complex and comprehensive plan of care." This kind of analysis is only possible with a well-educated, professional nursing team. Kingston also emphasized how nurses' professional values encourage them to move patients toward self-sufficiency, which is essential to sustain improvements in primary care.

- **But less formal qualities of the nursing workforce are also important to population health improvement** - Calgano, the senior vice president for population health, describes how in a large health care system, population health can be viewed as "grease between the wheels." From administrators' point of view, a smoothly functioning system will naturally lead to better health outcomes. Nurses are effective at making improvements not just because of their professional education, but because of their practical familiarity with health care systems. "Nurses know how to get it done," he says. Meanwhile, though clinical skills are clearly valued, leaders of the post-acute care team listed many "soft skills" that are necessary for success in some of the new nursing jobs tied to population health efforts. For example, they argued that nurses in these roles need personal initiative and the ability to take on "something of a sales role" as clinicians and community members become familiar with new programs. Nurses also need a willingness to collaborate closely with social workers and familiarize themselves with community programs.
- **New metrics and programs can be designed to help nurses practice to the top of their education and training while also improving population health** - Some of the population health initiatives within the Advocate Aurora system draw on specialized aspects of nurses' training that are often under-utilized within the American health care system in general. For example, nurse-led programs realized cost savings through improvements in anticoagulation treatment, optimization of medication regimens, and mobility assistance. These "sweet spots" where clinical process improvement intersects with nurses' scope of practice could be important opportunities to expand nurses' role in population health.
- **However, it is important to remember that all population health efforts in this model are still centered on the clinic** - "Triple Aim" innovations like those being pursued at Advocate Aurora are powerful drivers for improvements in the

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American health care system. But system leaders also admitted that their population health efforts were still anchored in traditional clinical institutions. They sometimes contrasted their efforts with models that engage patients more directly in their homes and communities, which can achieve a different set of population health outcomes.

SUPPORT AND SERVICES AT HOME (SASH)

About 10 years ago, Nancy Eldridge, then the CEO of affordable housing nonprofit Cathedral Square, asked how she could help Vermont realize a real system of population health.

“I was saying to myself, ‘What can housing offer this terribly broken health care system?’” she told the Population Health in Nursing team. “I realized what we could offer up is a place to truly manage chronic conditions and truly get to people in a way that a doctor or a hospital never can, nor can home health really on any consistent basis.”

That idea was the basis of Support and Services at Home (SASH) a statewide initiative run out of Cathedral Square. After a local pilot in 2009, the program began expanding to other locations in 2011 and now serves all of Vermont through a network of partnerships and support from the state’s all-payer reimbursement model. At the program’s heart are panels of about 100 participants, most of whom are Medicare recipients living in congregate housing. Each panel is served by a SASH coordinator and a wellness nurse, who share the goal of connecting participants with the services they need to remain independent. About 5,000 people are served through this system.

Evaluators from the U.S. Department of Health and Human Services determined that SASH realized an average savings of \$1,227 per person per year in Medicare expenditures. A *JAMA* study determined that SASH’s initiatives around advance directives could ultimately save the health care system \$18.4 million while also empowering patients. Meanwhile, the program has reported improved health outcomes on many fronts, from hypertension management to reducing social isolation.

Eldridge is now seeking to expand the SASH model nationally as CEO of the National Well Home Network. The program’s goal is to demonstrate how housing can be used as a platform for improved health and well-being in all 50 states.

Key Population Health Concepts

- **SASH and the National Well Home Network argue for housing as a natural platform for improving population health** - Health care providers have long understood the benefits of serving patients in their homes. But SASH takes the model a step further; partnerships with housing organizations help the organization treat the home as a site for offering new options in preventive care and coordinated services. Housers have a consistent, long-term relationship with their residents and understand the services available in their communities. Furthermore, the SASH team observes that affordable housing is where the target patients for population health efforts already live — residents often spend more on Medicare and have multiple chronic conditions and serious unmet social needs. Relationships with housing organizations help SASH build a system to meet those needs.
- **The organization treats patient autonomy as a paradigm for program development and evaluation** - SASH executives like to say “the participants are in the driver’s seat.” Every aspect of the program is voluntary. SASH’s engagement with an individual begins with the development of a healthy living plan driven by the participant’s preferences for independent living. While many of the partnership’s key metrics are associated with systemic savings, many of them were designed to achieve participant self-sufficiency first (such as SASH’s advance directives initiative). “For me the most important outcome is seeing that the participants really feel like they have a voice,” Eldridge said, noting that the program’s external evaluators have been investigating participants’ subjective sense of empowerment as well as objective measures.
- **The local policy context has been essential for SASH’s expansion** - Since the passage of the Affordable Care Act in 2010, Vermont has been a leader in using the various tools the law offered for health care policy innovation. The state has adopted an all-payer accountable care organization model where an independent board promotes and evaluates cost-saving measures across the state. The SASH partnership is highly integrated with this model as well as the state’s previously adopted “Blueprint for Health.” This policy context makes possible the capitation model in which SASH coordinators and nurses can care for panels of patients without constantly worrying about the details of reimbursement.

The Role of Nurses

Nurses play an essential role in every SASH experience, since every team serving each panel of participants consists of at least one wellness nurse and SASH coordinator. Nurses perform several duties that draw on their unique skills. Upon enrollment, every participant receives a comprehensive health assessment that includes social determinants of health. Many residents also come to participate in SASH through care transitions, which are coordinated by the wellness nurses. According to SASH executives, core competencies for the nurses who participate in the program include coordination with non-medical peers and the appropriate management of health education for the target population. These skills are reinforced through a four-week training program all wellness nurses receive. Nursing students from local colleges also participate, learning about the model and helping out with programs like tai chi and yoga.

Population Health in Nursing Insights

- **SASH leaders see themselves as enabling nurses to practice the kind of holistic care the profession also hopes to provide** - In describing the role nurses play in the health of a SASH participant panel, the partnership's leaders emphasize many of the qualities nurses would likely emphasize about themselves. The group hopes to create continuous, consistent relationships to manage care holistically. Eldridge says she feels SASH specifically attracts nurses who dislike the episodic care of clinical settings. "It's people who don't like the coding and don't like the compartmentalization of medicine," she said. "They have to be very agile, nimble, observant, and they have to know a person well enough that when they're off their meds, they can tell."
- **In the SASH model, nurses also need to demonstrate creativity and initiative in a way that is different from clinical settings** - Most SASH panels are running many different small initiatives to improve the collective health and well-being of their participants. But all activities are voluntary and require coordination with many different partners. Successfully executing an intervention like a "cooking for one" course or mental health initiative may require assessing the community's interest levels and creatively promoting the program. Funding and evaluation of such programs may require independent coordination with external groups. This is a skill set many nurses possess, but that isn't necessarily emphasized in their clinical training.
- **A housing-based model like SASH may require different leadership skills from nurses** - Despite the importance of nurses to the SASH model, there are relatively few

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nurses in positions of leadership in the organization. Eldridge explains that that is because housing organizations and their partners form the backbone of the initiative. This could suggest that nurses will need a better understanding of the housing sector if they wish to play a prominent role in such organizations. Alternatively, leadership could be exercised through mastery of SASH as a population health platform; the group's executives observed that the partnership has served as the perfect network to propagate promising new health programs throughout the state.

COMMUNITY HEALTH CARE, INC.

Inspired by the free clinic movement, Mark Masselli worked with Wesleyan University students and community activists to found Community Health Care Inc. in Middletown, Connecticut in 1972. Since then, CHC has grown to become a statewide provider of primary care, drawing on multiple payment models to serve 145,000 patients annually. Several CHC sites are designated as federally qualified health centers.

The core idea of CHC's model is simple: all of the most important components of primary care should be available in the same place. In the early days that meant locating a physician and dentist in the same building. Today, it means the "pod system" — instead of each practitioner maintaining a private office, teams of physicians and nurses practice together in a central space, reconfiguring their teams around the needs of individual patients. Through an intake process centered on digital kiosks, the team learns about the patient's most important preventative health needs and makes sure they are all taken care of as promptly as possible.

"Primary care is a process, not a person," said Margaret Flinter, the organization's clinical director. "Process is a core skill at CHC, like being able to read."

In addition to providing care across the state, CHC has served as a kind of research and development lab for innovations in primary care. In 2007, several of its founders opened the Weitzman Institute, the first community-based research center established by a federally qualified health center. The institute conducts original research in the process of transforming primary care as well as providing training and consultation on such topics across the country. In conjunction with the institute, CHC has also launched dozens of other initiatives to improve the health of populations in Connecticut and elsewhere.

Key Population Health Concepts

- **CHC's social justice principles put it ahead of the curve of health care reform** - When CHC first opened its doors, the local medical establishment resisted the idea of a free, community-driven clinic. But now, as health care systems across the country figure out how to treat broad populations efficiently, that early commitment to health care as a right gave CHC valuable expertise. "We treat everyone as if they are in the care system even if they are not," Flinter said. This has included a commitment to developing expertise in populations that typically "fall through the cracks" of the health care system. For example, CHC's Center for Key Populations supplements primary care with advocacy for HIV-positive patients, patients affected by substance abuse, homeless patients, and others.
- **The organization's leaders have been willing to reshape it to accommodate whatever the community needs** - Mark Masselli, CHC's founder, likes to say that "People can't be healthy if their community isn't healthy." Toward that end, CHC has launched all sorts of community initiatives, including a park, a dance hall, and domestic abuse services. The organization worked with Walgreen's to co-locate a pharmacy at one of its locations to take advantage of national drug discount policies. Flinter said CHC is constantly evaluating opportunities to expand by asking, "Are we needed, are we wanted, and can we do it?"
- **Though focused on providing low-cost care, CHC has adopted a startup-like approach to data-driven expansion and cost reduction** - CHC's research to improve primary care has also driven savings within their own model. The group employs a business intelligence officer to evaluate opportunities to better capture reimbursement for value-based care and spend proactively to reduce waste. One well-known example of this process is ConferMED, an initiative CHC launched to reduce the need for specialist visits in its primary care population. In a study published in Health Affairs, CHC demonstrated that by setting up a telehealth system that connects primary care with specialists, 69 percent of referrals could be handled electronically. It is estimated that this saved the state's Medicaid system \$82 per patient per month.

The Role of the Nurse

Advancing the possibilities of the nursing profession has been a part of CHC's rethinking of the primary care model for decades. The organization's relationship to nursing is embodied in the career of Margaret Flinter, a pediatric nurse practitioner who

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started with CHC in the 1980s and eventually rose to become the organization's clinical director. Several other key leadership positions are filled by nurses. While they emphasize that everyone at CHC is just part of a larger team, they also say that nurses play several critical roles, with nurse practitioners providing primary care and nurses administering screenings for social determinants of health with community partners. Many of CHC's national initiatives are also aimed at enhancing the role nurses play in primary care.

Population Health in Nursing Insights

- **CHC treats nurses as experts in population health, but also shows the need for additional training** - The CHC team emphasized the role that nurses play in community partnerships, taking the lead on identifying and responding to social determinants of health. Yet a number of initiatives attest to the idea that nursing school alone does not sufficiently prepare nurses to practice within population health partnerships. The group created an internal one-year curriculum for its providers to learn the core competencies of care management, which they say new professionals typically do not know. On the national level, CHC launched the National Nurse Practitioner Fellowship and Training Consortium to share what they have learned and support other innovators in continuing nurse education.
- **A supportive policy environment for nurses is important for CHC's model** - Across the nation, there is an ongoing debate about who is best suited to provide primary care. In many states the debate has pitted family physicians against nurse practitioners. Connecticut has granted nurse practitioners full practice authority, and CHC says this is important for their model. But it isn't so nurses can replace physicians as primary care providers. Instead, they view this policy as enabling their more flexible team model. This suggests that many states are having the wrong debate, and should instead be investigating the most efficient path toward enabling such team-based models.

UNIVERSITY OF NORTH CAROLINA AT GREENSBORO

The University of North Carolina at Greensboro provides an example of how a university can serve as the base for a wide variety of population health initiatives. Founded in 1892 as a women's college, the university has always focused on community service as a core value. Today it is one of the relatively few institutions that the Carnegie

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Foundation for the Advancement of Teaching has classified as both research institutions and institutions emphasizing community engagement.

UNCG is known nationally as the springboard for an interconnected series of population health initiatives focused on sports in communities. Through the school's Institute to Promote Athlete Health and Wellness, faculty created a series of tools to help evaluate young people's well-being in the context of sports programs. This led to the development of a private entity and partnerships with national sports leagues and wellness initiatives. This network has enabled UNCG researchers to develop screening programs for adolescent suicide and social determinants of health.

In the area of population health, the university has built a strong relationship with Cone Health, the most prominent local health care system. Together the two institutions are attempting to create a comprehensive system for investment in local children from before birth to third grade. The university in particular is focused on building the data systems necessary to track the system's effectiveness. The two entities have also partnered on the evaluation of health equity initiatives, particularly economic development programs in Greensboro and efforts to integrate refugees into society at large. Faculty are encouraged to use community-focused research when they apply for tenure.

Key Population Health Concepts

- **Universities and their partner institutions can serve as “backbone organizations” for diverse public health initiatives** - UNCG leaders talked about the personal relationship between their vice chancellor and Cone Health's CEO as the genesis for their partnership. But what keeps it going is the aligned long-term interests of the two organizations. Both are concerned with maintaining the vitality of their surrounding communities, as well as their own reputations. They both already have the relationships and expertise needed to fund and sustain programs. These resources allow them to serve as bases for much more focused initiatives in the Greensboro area — everything from community-focused genetic counseling to programs designed to stop human trafficking.
- **Good partnerships involve research-based practice and practice-based research** - The UNCG approach is grounded in implementation science, an emerging field focused on how the latest knowledge is translated into practice in the field. Ideally, a thorough understanding of how an intervention has fared elsewhere can save time and resources the next time it is tried. But specialists in this area often emphasize that researchers need to learn from the community just

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as much as the community needs to learn from them. UNCG offers itself as the hub for such exchanges in its own community.

- **Changing culture is a part of good interventions too** - One of the partnerships faculty from the Institute to Promote Athlete Health and Wellness were most excited about was the InSideOut Initiative, which seeks to change the culture of youth sports from one focused on “winning at all costs” to one focused on healthy development. In the view of the researchers, sports provides a natural opportunity to align discussions about young people’s health, education, and well-being. The initiative is funded by the National Football League Foundation and includes partnerships with 18 teams aimed at producing a healthier culture of sports. UNCG’s evaluation partnership with InSideOut brings faculty research on health development and risk prevention outside the academy and into interaction with the broader culture.

The Role of Nursing

UNCG’s School of Nursing was established in 1966 and now has over 4,000 alumni. The school offers degrees at the Bachelor’s and Master’s level, as well as Ph.D and DNP programs with emphases in public engagement and population health. In particular, the nursing school’s associate dean, Debra Wallace, has played an important role in designing and evaluating UNCG’s partnerships focused on vulnerable populations. The school also operates its own initiatives, including four clinics for the elderly that also serve as clinical placement sites.

Population Health in Nursing Insights

- **A robust university ecosystem of community partnerships benefits nursing education and practice** - Every nursing school has clinical placements, but the considerable variety of UNCG’s relationships allows nurses to be exposed to population health settings that they might not have expected. New population health programs in Greensboro have given nursing students the opportunity to work alongside social workers and community organizers. The partnership with Cone Health has given students and faculties chances to develop research and evaluation programs.
- **Nurses should also consider what they can learn from cross-sector partnerships with organizations that do not provide health or social services** - UNCG’s national connections with sports programs and the National

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Football League did not result from a double-blind study or legislation expanding practice authority. Instead, they seized upon a moment when many different institutions were concerned that the culture of sports was proving harmful for young people. Any organization with the right expertise could have seized upon this opportunity. Nurses should also be looking for less formal opportunities to extend their influence to improve population health.

IV: CONCLUSIONS

After reviewing all of the data collected from the various population health leaders and sites in the second phase of the Population Health in Nursing project, the authors identified several common themes. Below are the themes and the team's thoughts on their significance for the future of the nursing profession.

Culture is key - Creating a supportive culture for population health was an important theme that ran through all interviews and site inquiries. Interviewees emphasized that even people who are not directly involved in population health partnerships can support a culture that empowers them. Nurses are just one of many groups who should be thinking about how to create, work within, and sustain such cultures. One trait in particular that stood out for the authors was the way in which the cultures of population health partnerships supported creativity, initiative, and experimentation. This may be an adjustment for nurses who trained and worked in cultures that emphasize efficiency and compliance. Nurse educators and leaders may want to think about the best ways to encourage the development of the skills necessary to thrive in more open, collaborative workplace cultures.

Teams are evolving - Nurses have long understood the importance of working in teams. Perhaps no other profession understands so well how to negotiate the needs of the many different stakeholders who come together in health care settings. Recent educational initiatives have emphasized the importance of collaboration among nurses as well as collaboration across disciplines. But emerging population health models suggest the need to come to grips with an even more fluid, dynamic model of teamwork. In many of the models examined, teams were often reconfigured around the need of the patient or the problem. Professionals might play roles that do not necessarily align with their formal training or identities. Health care providers need to collaborate with community members and patients who are exercising much more agency than in the past.

Learning other systems - Many of the population health partnerships examined were either based in or required significant involvement with complex systems outside of health care: education, housing, social services, and even professional sports. Familiarity with these systems (or the ability to acquire it) was often discussed as a valuable skill set. The nursing profession has a rich history of cooperation with other sectors; population health residencies and other collaborations are enabling that kind of cooperation today. But the profession could push further still, encouraging the mastery of specific skill sets and bodies of knowledge from other sectors. Nurse leaders could

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explore even more ambitious collaborations that synthesize the best the nursing profession has to offer with other systems.

Data unlocks possibilities - Many nurses today feel oppressed by the requirements of coding, billing, and electronic medical records. But few of the interviewed population health leaders felt that way. Through the use of more advanced data tools designed with the needs of the target populations in mind, these leaders have found ways to identify new opportunities to improve health. These tools were often conceived of or improved through collaborative relationships with leaders. Nurses at all levels of training could increase their engagement with these kinds of tools. Similarly, the developers of tools for population health should be working with nurses to keep improving these platforms, since nurses are likely to be key users of any tools that are developed.

Money matters - The leaders interviewed for this paper had often thought long and hard about the best way to sustainably fund their population health ventures. Many of them had shifted funding models over time, or had sought out new funding sources in order to share their models with more people. Some models are only possible because of new funding models enabled by state or federal legislation. Others took advantage of every organization's need to cut costs and deliver services more efficiently. In any case, there can be no doubt that successfully delivering population health at scale requires engaging with payment systems. In the more dynamic cultures that seem to drive new population health models, nurses may have more opportunities to experiment with new kinds of funding. To this end, nurses should become even more conversant with the language of finance and consider the best ways to balance cost savings with their obligations to patients.

Nurses are everywhere - Not every population health partnership examined deployed nurses in a central role. But virtually every project had some connection to nurses and nursing, and most of them were positive about the idea of further developing the role of nurses in their model. The roles nurses played ranged from nursing students providing basic outreach and care to highly educated nurse executives using their education to design and implement new programs. Many of these roles are ones that only nurses could fill. But informants also emphasized that a nursing credential was not enough to succeed. Many of these nurses had not originally planned to work in population health or did not receive specialized training until they arrived in their current roles. This suggests that much more work can be done to think about how to prepare all nurses to work in the various emergent models for population health partnerships. In particular, the authors noticed the importance of direct exposure to such practice settings through residencies, fellowships, and other forms of training in the field.

Everyone is still learning - Despite all of the stories and wisdom they had to share, the authorities interviewed for this paper often discussed how much they still had to learn. Many of the models being used had only recently been developed or were still being studied. It is clear that even when a model offers great promise, considerable work must be done to measure its impact and scale it or adapt it to new settings. Furthermore, no one profession or model currently dominates in this area. This suggests that there is still considerable opportunity for nurses at all levels to become leaders in population health if they are willing to try.

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APPENDIX A: Nurses as Catalysts for Population Health Improvement Meeting Materials

FUTURE OF NURSING™

Campaign for Action

AT THE CENTER TO CHAMPION NURSING IN AMERICA



Nurses as Catalysts for Population Health Improvement Meeting Agenda February 28–March 1, 2019 Robert Wood Johnson Foundation

Goals of meeting: Provide feedback on the progress to date on Phase 1 of the RWJF Population Health in Nursing project and advise on next steps for Phase 2 and translation to other health professions.

Objectives:

- Reflect on Phase 1 findings and implications for nursing education;
- Advise on goals, methods, and key informants for the Phase 2 focus on nursing practice in population health;
- Discuss how changes in the health care environment impact preparation of all health care professionals for population health improvement;
- Discuss strategies for preparing all health professionals to improve population health and thus build a vibrant Culture of Health in America.

Thursday, February 28 5:30–8 p.m.

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| 5:30–5:50 p.m. | Welcome and introduction
Paul Kuehnert, DNP, RN, CPNP
Associate Vice President – Program, RWJF |
| 5:50–6:15 p.m. | Participant introductions |
| 6:15–7:30 p.m. | Overview and findings of PHIN 1 paper, <i>Nursing Education and the Path to Population Health Improvement</i> ; update on PHIN 2. |
| 7:30–8 p.m. | Brief reactions: What are the benefits and challenges to the health care system of educating nurses in this new direction? |

Friday, March 1 8 a.m.–3 p.m.

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| 8:15–8:45 a.m. | Breakfast (working) |
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8:45–9:30 a.m.	Small group work —Identify/describe practice systems that are involved in population health; what roles do nurses play?
9:30–10:15 a.m.	Small group work —Facilitators and barriers for health care systems shifting to a population health focus.
10:15–10:30 a.m.	Summary
10:30–11 a.m.	Break
11–11:30 a.m.	Large group work —Who are the key stakeholders to disseminate best practices in population health education and practice and what are the messages that will resonate with them?
11:30–noon	Large group work —How do the changes in the health care environment impact preparation of all health care professionals for population health improvement?
Noon–1:15 p.m.	Working lunch
1:15–2 p.m.	Final activity —How do the changes in health care impact preparation of health care professionals?
2–3 p.m.	Wrap-up and evaluation

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APPENDIX B: Population Health Leader Interviews

IN-DEPTH INTERVIEW SUBJECTS

- * Lloyd Michener - Duke School of Medicine
- * Darla Coffey - Council on Social Work Education
- * Nancy Eldridge - National Well Home Network
- * Teanya Norwood - ProMedica
- * Joey Mattingly - American Pharmacists Association
- * Sally Lemke - Rush University Medical Center
- * Beth Taylor - Veterans Health Administration
- * Carol Naughton - Purpose Built Communities
- * Barbara Brandt - National Center for Interprofessional Practice and Education
- * Hugh Tilson - North Carolina Area Health Education Center
- * Deborah Bach-Stante - Michigan Department of Health and Human Services
- * David Wong - Office of Minority Health
- * Nancy May - University of Michigan Ambulatory Care
- * Alexis Bakos - Office of Minority Health
- * Dave Chokshi - NYC Health and Hospitals
- * Mary Beth Kingston - Advocate Aurora Health
- * Angela Mingo - Nationwide Children's Hospital
- * Linda Knodel - Kaiser Foundation Hospitals and Health Plan Inc.

IN-DEPTH INTERVIEW QUESTIONS

Population Health Practice Partnerships/Models

Provide examples of exemplar practice partnerships (or relationships) to improve population health with in your organization focusing specifically and only on practice models related to population health.

- What are its intended goals or outcomes?
- Who are the committed key stakeholders involved in this partnership?
- What is this practice partnership in population health trying to accomplish?
- Describe specific strategies for engaging the community in this partnership.
- How does this partnership address population vulnerabilities?
- Related to the SDOH, health equity, gender, class, and intersectionality?
- How are structural inequalities addressed?
- How is success measured by key stakeholders?

- How are the individuals served represented in program planning and evaluation?
- What practice disciplines need to be involved in this partnership? *(Examples might include Nursing, Pharmacy, Dentistry, Social Work, Medical, Public Health, other)*
- What types of professional development and new staff competencies are necessary for the success of this partnership?
 - If nurses are involved what are their roles and if not, what could they be? What skills do nurses need to be successful in these roles?
 - What are the implications for formal education and continuing education for nurses?
 - Who is leading the partnership and what is their role?
 - Are there nurses in leadership roles?
- Are any of the stakeholders in these models from academic institutions (colleges, universities, community colleges, research institutes)?
 - If not, is there anything that an academic partner could add to the partnership? Please describe.
 - If yes, what role does the academic institution play? What do they add to the partnership?
- How is value measured and described in the partnership?
- How is population health reimbursed in this partnership
- How does the reimbursement impact the practice partnership (specifically value based payment vs fee for service models)?
- Are there implications for business investment in health in this partnership?
- What data is used to measure the economic and population based outcomes and how is this data used?
- How does technology factor into the ideal practice partnership model?
- What are the top 3 challenges to implementing successful partnerships to improve population health?

Health Systems Inquiry

- Briefly describe the payment system for health services in your organization and how it relates to population health initiatives and outcomes for the partnership described above.
- Describe how technology is used in your organization specifically to advance the goals of population health.
- What types of data does your organization generate, what are the sources of this data, and how is it used to assess the value of population health models?
- How is data generated and used by your organization to evaluate the effectiveness of the model and monitor the ongoing health of a community?
- Are there components of electronic medical records that are helpful in implementing and evaluating models in the community?
- Are there structural/policy issues that need to be addressed to facilitate population health practice partnerships/initiatives? Please describe.

Conclusion

- Share anything about your organizational model or exemplar related to improving population health not already shared above.
- What would you like to do in population health that you are not doing now – why?

- Is there anything else you would like to share related to identifying and defining the key components of successful practice partnerships/models with the potential to prepare nurses for practice, education, and leadership in population health?
- Are you aware of any practice partnerships/models we should explore further? Please provide name and contact information.