# ACTIVATING NURSING TO ADDRESS UNMET NEEDS IN THE 21St CENTURY

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## EXECUTIVE SUMMARY

The deteriorating epidemiological profile in the United States requires more than a traditional medical response. This report argues that the nursing profession could contribute significantly to addressing this crisis if it embraces its historic role at the intersection of medicine and society, and if educators, employers, and policymakers work with nurses to create jobs with roles that allow them to more effectively utilize their education and training. Several recent developments may provide a unique window of opportunity for this to occur, including the Robert Wood Johnson Foundation's reorientation of its mission and programming to focus on building a Culture of Health, the evolving alternative payment arrangements in health care, changes in the oversight of tax-exempt hospitals' community benefit spending, the ability of new health technologies to decentralize the delivery of care, and changes to the physician workforce.

The report is divided into four sections. Part I describes the historical forces that defined two models of nursing—one with a holistic focus on patients, families, and communities in the context of social justice, and the other focused largely on support roles with a defined set of clinical tasks in the hospitals. Part II describes the current epidemiological situation and provides background for major contextual developments that may help reposition nursing. Part III focuses on nursing today and provides examples of the types of nurse-led, or nurse-involved, models that have evidence of impact and are successfully spreading. Part IV concludes with an analysis of what it would take to activate nursing and scale up this holistic approach to addressing unmet needs of the 21st century.

Between 1910 and the 1930s, an important branch of nursing focused on patients in the context of their relationships and environment, and it developed a strong partnership with social workers. Yet by the 1920s, the expanding dominance of the medical profession, and following World War II, the growth of the hospital sector and the emergence of pre-paid health insurance companies, severely constrained this approach to nursing. Nurses were largely relegated to passive support roles in the context of professional hierarchies and silos that separated health professions according to their ability to bill for services. Home and community-based nursing care were marginalized, as physicians and hospitals emerged as the central players in the health care system.

Then, in the context of the women's movements in the 1960s and '70s, nursing experienced a partial renaissance, developing alternative patient-centered care models and moving nursing education into the university, where the profession formalized nursing science and theories. In the subsequent 50 years, however, many of these alternative nurse-led initiatives faced challenges of financial sustainability and remained largely outside the mainstream health care market. Nursing education also faced an incessant push by hospital employers to prepare graduates for clinical jobs in hospitals, a priority that trickled down into nurse licensure and education accreditation standards.

Today, the context is changing, and while both strands of nursing history co-exist, there are new opportunities for nurses to contribute to building a Culture of Health. With life expectancy stagnating and other industrialized nations far outperforming the United States on many health indicators, analysts point to the so-called diseases of despair and growing economic and social inequities as the primary drivers of poor population health outcomes. There is growing recognition

that medical care alone is insufficient to address these health problems, and that a variety of new policies and initiatives are needed to incentivize the health care sector to consider the social determinants of health—including historic problems of racial, ethnic, gender and other forms of discrimination—as well as economic and geographic disparities in access to basic needs, such as affordable housing, transportation, quality education, healthy foods, and child care.

Several developments suggest that change may be afoot. Among the efforts that have emerged since passage of the landmark 2010 Affordable Care Act (ACA) is the Robert Wood Johnson Foundation's reorientation of all their philanthropic investments toward building a Culture of Health in America, which has fueled the design and testing of new cross-sector and community engagement models around the country. A second significant contextual development is the slow decline of fee-for-service payments in health care and the expansion of alternative value-based payment arrangements. Alternative payment methods are driving a transformation of the delivery system, and in some places expanding nurses' work into areas such as coordinating care, managing care transitions, conducting home visits, and developing community-based partnerships. Payments linked to patient reported outcomes are also placing a spotlight on nurses' work and providing opportunities for nurses to focus on patient and family preferences.

Three additional developments may speed the process of transformation. New oversight of tax-exempt hospitals requires the conduct of community health needs assessments and the implementation of subsequent community health benefit plans. The advancement of health technologies is facilitating the decentralization of health care and the engagement of patients in their own health care plans. And lastly, the physician workforce is experiencing changes that may alter the traditional relationship with nurses, including a decrease in self-employment among physicians, a reduction in their autonomy vis-à-vis managed care, and the growing participating of women, who now outnumber men among medical students.

All of the factors may help to explain why some large health systems and other healthcare employers are exploring old and new models of care that are nurse-led or involve expanded roles for nurses. Some of the most prominent models echo the successful partnership of nursing and social work of the early 20th century, and include care coordination for complex patients with a variety of wraparound services, interdisciplinary home care teams for the elderly and new mothers, programs to prevent the need for children to enter foster care, and stand-alone modern innovations outside the health sector, such as walking-to-school programs.

These conditions, and the wide ranging models of nursing care that exist, suggest that there is an opportunity to re-activate the massive U.S. nurse workforce to address the new epidemiological needs of the 21st century. For this to occur, progress is needed on a variety of fronts, including the following:

(1) Identifying the core functions of nursing in the 21st century
(2) Choosing to work at the intersection of disciplines
(3) Aligning nursing education with core functions
(4) Aligning jobs, professional development, payment and regulatory policies with core functions

Nursing roles and the settings in which nurses' work are diverse and they will likely continue to diversify. As such, the profession will intersect and overlap with other professions and community-based personnel. Such intersections may not always be comfortable for nurses, but if they are embraced as opportunities for innovation, they could lead to the kind of creative social solutions that characterized Lillian Wald's vision of nursing in the early 20th century.

Regardless of the settings, or even sectors, in which a nursing job exists, nursing has the potential to help the nation focus on health and well-being as holistic values, and nurses can bring a specific set of knowledge and skills that are desperately needed in the 21st century United States.

## PART I: 20TH CENTURY NURSING

### Early Vision

From its beginnings in the late 19th century, "nursing care" in the United States has been grounded in a holistic approach to health promotion, with an implicit recognition of the subjective experience of individuals, including family and community relationships and the environment in which they live. These elements stand in contrast to a focus on health as simply the absence of disease. Florence Nightingale, who has been widely viewed as one of the profession's first and most articulate leaders, wrote in the mid-19th century about the need for nurses to play a role that is unique, i.e., one that is different from the role of physicians, and is proactive and self-directed. She wrote nursing has incorrectly been assumed to be simply *"the administration of medicines and the application of poultices."* Instead, she argued, nursing should focus on context, which for her was *"the proper use of fresh air, light, warmth, cleanliness, quiet and the proper selection and administration of diet - all at the least expense of the vital power of the patient" (1969).*

Following the Nightingale era, women of high social standing, who were not afraid to bypass physician authority, took it upon themselves to visit hospitals where destitute women comprised the support staff. They called for both professionalizing these jobs and improving sanitation. Initially concerned that educated women would be less likely to follow their orders, doctors, over time, began to see the benefit of nurse education and begrudgingly accepted the work of women's organizations like New York's Charity Aid Association (CAS) and later the Young Women's Christian Association (YWCA) (Rothman, 1978, p. 87-88).

> **WHAT IS NURSING?**
>
> Nursing is the protection, promotion, and optimization of health and abilities, prevention of illness and injury, facilitation of healing, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, groups, communities, and populations (*American Nurses Association, 2015*).

By the early 20th century, another pioneer, Lillian Wald, expanded the focus of nursing to the living conditions in immigrant tenements of New York City. She wrote: *"The call to the nurse is not only for the bedside care of the sick, but to help in seeking out the deep-lying basic causes of illness and misery"* (1934). Wald founded the Henry Street Settlement, which sent trained nurses to care for the sick in their homes. They mobilized a wide array of resources and established partnerships with a variety of community organizations that included donations of medicine, food, bedding, and cab fares. They arranged loans and housing subsidies, and they sought out and paid for others to clean, cook, and provide childcare. They organized community campaigns to clean roofs, disinfect houses, and clean up trash. They organized job-training classes and educated the community, through individual instruction, as well as classes for mothers and a kindergarten for children. They were especially concerned about the health of immigrants and African American communities because they had the highest mortality rates, so they trained and hired nurses from those communities to extend their work. Their work also extended into advocacy for "upstream" policy reforms in the areas of industrial workplace conditions, education, recreation, and housing. Wald wrote that nurses were *"the indispensable*

*carriers of the findings of scientists and the laboratories to the people themselves, using their sympathy and training to make as legible as language permits the facts of health and life…What a change is this from the priestly secrecy of the old-fashioned medical practitioner!"* (1934).

In a major step toward institutionalizing this approach to nursing care and making it financially sustainable, in 1909 Wald convinced the Metropolitan Life Insurance that they should cover nursing care as a means of reducing death rates among their members. By 1911, visiting nurse services (VNS) were available to more than 90 percent of Metropolitan policyholders (10.5 million) across 2,000 cities (Rothman, 1978). It became the first national insurance for home-based care.

Building on the success of this model, and following women's suffrage in 1920, the women's movement turned their attention to expanding nursing care. In 1921, they had a major victory with the passage of the Sheppard-Towner Act, the first federally funded health care program in the United States (Rothman, 1978). The field of preventive health care at that time remained largely outside the scope of physicians' private practice, allowing women to consolidate their leadership. The aim was to build on the VNS model to reduce infant and maternal mortality through prevention and health promotion. The program sent public health nurses into homes to teach better health practices and established a network of free nurse-staffed clinics. Nurses referred sick patients to doctors, but sought to maintain a rigid separation between public clinics and physicians' private practices in order to avoid antagonizing doctors.

## "Passive-ication"

While the VNS of New York continues its extraordinary work to this day, a number of historic forces conspired to constrain the scope of its work. First, medicine had been gathering force following the 1910 publication of the Flexner Report, which called for increased educational standards. The professionalization of medicine, as described by Paul Starr, also meant the establishment of economic control. Starr argued that "*The advancement of science cannot explain the competitive advantage of medicine. Knowledge must be transferred into authority, and authority into market power, before gains from scientific advances can be privately appropriated by a profession." (*1982, p. 144). Physicians constructed an economic monopoly by establishing clear professional boundaries, including the enactment of state practice acts, which aimed to exclude medical "sects" and to reduce nurses' autonomy. As one physician leader in 1914 advocated, there was an urgent need not only to regulate "*the practice of medicine as it is popularly known, but also all those who desire to treat the sick for compensation as a profession. This should include the regulation of midwives and all sects desiring to treat the sick for compensation*" (Hamowy, 1978).

By 1929, the medical profession had mounted a campaign against the maternal-child programs of the Sheppard-Towner Act that ultimately led to its repeal and reallocation of funds in accordance with the American Medical Association's priorities. The campaign against Sheppard-Towner, according to Rothman, went so far as to brand the new health bureau as a "Bolshevik plot" inspired by Moscow. Although medicine had until then restricted its activities to patients with diseases, general practitioners saw the growth of public clinics staffed by nurses and a few sympathetic female doctors as representing a lost opportunity for expansion. They declared preventive

screening and health promotion as part of their private domain. Suddenly, the well-baby and healthy pregnant women were defined as "medical problems," and pediatricians and obstetricians voiced their objection to these services "being turned (over) to lay organizations" (Rothman, 1978, p. 151). With the success of the campaign and elimination of the Act, Rothman argued that women were denied their expertise in the field of health (1978, p. 142). Wald was clear in her views on this and wrote: "*The nurse question has become the women question*" (Wald, 1934, p. 76).

A second complicating force relates to the challenge of interprofessional work. When Wald retired in 1933, the unified vision of nursing and social care was threatened. Wald had selected a social worker to head the Henry Street Settlement and a nurse to lead nursing services. A power conflict between the two wings of the organization subsequently ensued, leading to their split into two separate entities, with each claiming the other was imposing on their area of professional expertise. During her tenure, Wald's unique leadership style was undoubtedly able to transform interprofessional tension into a creative and flexible approach to health. She was unafraid to embrace the intersection of nursing and social care, and, as is often the case, it was precisely at this intersection where creativity in finding solutions to the intractable social problems of the time was most able to flourish.

Buhler-Wilkenson posits that the reduction in the prevalence of tuberculosis may have reduced the return on investment for Metropolitan Life Insurance (1999). Rothman argues, however, that the real blow to this holistic model of nursing care came when pre-paid health insurance emerged during the 1940s (1978). When Metropolitan Life Insurance terminated their contracts with nurses, they argued that their services should be covered by private health insurance. However, few of the new health plans included nurse home visits in their benefits, and it was only through the New York City Department of Health and Welfare that some of the independent nursing services were able to continue.

As public health nursing lost ground in the United States, hospitals were of course emerging as a new market force. Over the following decades, nurses' work reverted to the support role they had provided to physicians in hospitals prior to their professionalization. Hospitals' rise in prominence also challenged physicians, who wanted to maintain autonomy from the hospital without losing control of it; doctors needed to use hospitals and laboratories without being employees (Starr, 1982). In this context, Starr argues, physicians recognized the need for "*competent and loyal*

## A THEORY OF NURSING

**Jean Watson's** Philosophy and Science of Caring represents one of the theories of nursing that has emerged (2008). She calls for nursing to return to its "caring" roots and argues that medical cures are insufficient. She posits that core to nursing practice are 10 "curative" factors:

1. Forming humanistic-altruistic value systems;
2. Instilling faith-hope;
3. Cultivating a sensitivity to self and others;
4. Developing a helping-trust relationship;
5. Promoting an expression of feelings;
6. Using problem-solving for decision-making;
7. Promoting teaching-learning,
8. Promoting a supportive environment;
9. Assisting with gratification of human needs; and
10. Allowing for existential-phenomenological forces.

*assistants*" to work in their absence. Women, whom they hoped would not challenge the authority or economic position of the doctor, would fill these auxiliary roles (Starr, 1982, p. 221).

In 1946, the federal government provided massive aid for the construction of new hospitals via the Hill-Burton Act, further centralizing health care. With this expansion of hospitals came a seemingly insatiable demand for more hospital nurses, a process that further re-directed the history of nursing.

With the passage of Medicare in the mid-1960s, the role of physicians in society was enhanced, particularly with regard to their economic dominance (Rothman 2002). The contradictions inherent in physicians' professional identity between the impetus to assert an economic monopoly, on the one hand, and the "high-minded duties" of the profession on the other, had, until then, restrained physicians from raising their fees beyond the reach of the poor, with fees varying according to ability to pay. Beginning in 1966, however, physician incomes rose dramatically largely as a result of Medicare, since there was now guaranteed payment for services. Indeed, President Lyndon Johnson agreed to allow physicians' to set their prices as a means to offset their original opposition to Medicare (Rothman 2002).

Further widening of the gap between physicians and nurses developed during that period as result of the rise on specialized procedures that delinked reimbursement from the clock, and the emergence of pharmaceutical companies' practice of "*spending freely to win physician favor*" (Rothman 2002: p 115).

## TYPES OF NURSES

**Advance Practice Registered Nurses (APRN)** are licensed as registered nurses (RNs) who also hold at least a master's degree, in addition to the initial nursing education and licensing. They treat and diagnose illnesses, advise the public on health issues, manage chronic disease, and engage in continuous education. Specialty areas:

- **Nurse Practitioners** prescribe medication, diagnose and treat minor illnesses and injuries
- **Certified Nurse-Midwives** provide gynecological and low-risk obstetrical care
- **Clinical Nurse Specialists** handle a wide range of physical and mental health problems
- **Certified Registered Nurse Anesthetists** administer over 65 percent of anesthetics

**Registered Nurses (RN)** must pass the National Council State Boards of Nursing (NCLEX) licensure test, after obtaining a bachelor of nursing (BSN), an associate degree in nursing (ADN), or a diploma degree. Increasingly, the BSN is valued by employers, and younger ADN graduates often continue directly into BSN programs. RNs:

- Perform physical exams and health histories before making critical decisions
- Provide health promotion, counseling, and education
- Administer medications and other personalized interventions
- Coordinate care, in collaboration with a wide array of health care professionals

**Licensed Practical Nurses (LPN),** also known as Licensed Vocational Nurses (LVNs), work under the supervision of an RN, APRN, or MD. They:

- Check vital signs and look for signs that health is deteriorating or improving
- Perform basic nursing functions, such as changing bandages and wound dressings
- Ensure patients are comfortable, well-fed, and hydrated
- May administer medications in some settings

**Nursing Assistive Personnel**

- **Certified Nurse Assistants (CNA)** are unlicensed, but certified, support staff that work in hospitals and nursing homes under the supervision of nurses. Training programs are between 75 and 120 hours, depending on state requirements
- **Home Health Aides** are similar to CNAs, but work in homes and hospice settings
- **Personal Care Aides (PCA)** work in homes and in many states there are still no training requirements

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## The Second Wave of Feminism

Even as the power of medicine grew in the 1960s and 1970s, it was also a time of social unrest and the second wave of feminism. The women's health movement of the period was focused not just on improving access to care, but reforming care models as well, and, as in the period surrounding suffrage, nurses played a prominent role in conversations about how best to meet population health needs. With the publication of Our Bodies, Ourselves, the women's movement called for a de-medicalization of women's reproductive health, more female providers, empowerment of patients, families, and communities to promote their own reproductive health, and novel care settings, such as peer support groups (Rothman, 1978).

Until the 1960s, most nurses were educated in hospitals, although there were a few graduate level and later a few pre-licensure programs in academic settings. Beginning in the 1960s, however, nurses sought to expand the autonomy of their education, and more and more nursing programs opened in community colleges, where associate degrees in nursing (ADN) were conferred, and in universities, where bachelor degrees in nursing (BSN) were awarded. This allowed the profession greater control over the curriculum and meant nurses could pursue higher degrees and specialization within nursing. During subsequent decades, academia promoted formalization of theories of nursing care, as well as other nursing-specific scientific endeavors (Malka, 2007).

Certified nurse midwives (CNMs) and nurse practitioners (NPs) played a central role in the women's health movement during those years, and in many rural settings have since then continued to expand their role as key health care providers (Fairman, 2008). As physicians continued to specialize and primary care shortages intensified, experienced nurses believed they could help to fill the gap. One outgrowth was the development of the first NP program at the University of Colorado in 1965. The NP programs that began to spread around the country retained a strong focus on increasing access to primary care for the rural and urban poor.

A small number of nurse midwives, under the leadership of Mary Breckenridge, launched a small training program in rural Kentucky in the mid-1920s, and in the late 1930s a few graduate programs in midwifery were developed. However, it was not until the 1960s and 70s that CNMs became a key part of a feminist alternative care model, and more and more young women chose this professional path. Nurse anesthetists, the third type of advanced practice registered nurse (APRN), also dates back to the 1920s with a few independent schools, but gained new prominence during the 1960s and 1970s. Clinical nurse specialist, the fourth APRN, emerged as a hospital-based profession in the 1970s. These four types of APRNs, which by the early 1980s all required a minimum of a master's degree, were trained to work in collaboration with physicians, but with full autonomy as needed. Physician organizations, however, have generally opposed allowing them full scope of practice; although, state-by-state, APRNs and allies concerned about access to care have been able to convince legislators of the need for reform (see Campaign for Action).

While many of the freestanding nurse programs that emerged in the 1960s and 70s have survived over time, they have not changed our mainstream market-driven health care system. For example, by 2016, there were just 153 nurse-led clinics, despite abundant evidence that they provide cost-effective care (Campaign for Action, 2018). Among the constraints they face are restrictive state scope of practice laws, which in some states still require expensive physician supervision. Perhaps

even more importantly, many of these clinics have experienced financial challenges, as they were funded by short-term start up grants from foundations. Federal funding has often eluded nurse-led clinics that grew out of schools of nursing, since in order to qualify they must establish a community board and give up schools' control.

The NP workforce is growing more rapidly than the physician workforce, and studies show that they are more likely than physicians to provide care for patients in rural and underserved areas (Buerhaus, et al., 2015). Indeed, they now provide over a quarter of the primary care delivered in rural settings. NPs, however, are also been subject to the pull of hospital settings. Particularly since the restriction of medical resident hours in hospitals in 2011, hospitals have increasingly viewed NPs as cost effective (Pittman, et al., 2018). As of 2014, only 60 percent of NPs were practicing in primary care (Barnes, et al., 2018).

Interestingly, despite the wide range of roles that nurses have played in recent history, Gallup (2018) reports that nurses have been ranked as the most trusted profession in the United States for the last 17 years. Sociologists believe that public trust affords a legitimacy that is essential for any profession to be able to operate autonomously (Starr, 1981, p. 157). Starr writes that the strength of the "class" depends on its ability to win support from outside the membership, which, in turn, depends upon fulfillment of tasks set by interests wider than its own. We see this currently in the work that AARP has undertaken to advance APRN scope of practice reforms, which it views as critical to expanding access to care for their membership. This trust and validation by patient groups is a critical asset to be leveraged by the profession as it considers its future direction.

## PART II: THE CURRENT CONTEXT

### The New Epidemiological Reality

With unemployment in the United States now below 4 percent and economic expansion increasing the demand for a larger technical workforce, policymakers and employers are increasingly concerned about the high proportion of adults that remain outside the workforce due to poor health (Manyika, et al., 2017). It is well-known that other developed nations outperform the United States in health rankings, despite our spending far more than other nations on health care (Bradley, et al., 2013). Recent reports reveal that the situation is worsening, not improving. The Centers for Disease Control announced for the second year in a row that life expectancy has fallen, driven in large part by suicides, drug overdoses, obesity, and chronic diseases. A new *Lancet* paper lays bare the growing gap with other nations, with the United States expected to fall from 43rd in 2016 to 64th in 2040 among 195 nations; at the same time, China is predicted to rise to 39th place (Foreman, et al., 2018).

The term "diseases of despair" has been used to describe many of the conditions that are crippling our workforce (Case & Deaton, 2015). These are health conditions rooted in social determinants, rather than germs or genes, and include substance abuse, mental health, obesity-related conditions, asthma, maternal mortality, and low birth weight. Maternal mortality, for example, has long been viewed as an outcome measure related to access to quality care and is often a measure of health inequity. In the United States, maternal mortality is now three times as high for black women than white women, and epidemiologists have shown that high-income black mothers with access to quality care are more at risk than uninsured poor white counterparts (Reeves & Mathews, 2016). The emerging hypothesis is that it is the continued effects of racism over time (weathering) that place these mothers at risk (Villarosa, 2018).

Social indicators of inequity that are also alarming include declining high secondary school graduation rates, black men's high rates of incarceration and their risk of being killed in confrontations with police, childhood and adult trauma, and social isolation. Case and Deaton argue that factors such as the decline of employment, income, marriage, education, and health, together have caused a "cumulative disadvantage" that results in a downward spiral, with fewer opportunities, lower income, increased social isolation, and a sense of helplessness (2017).

A recent study by the Department of Defense reveals the magnitude of the challenge. In 2017, the Defense Authorization Act (NDAA) authorized the addition of another 20,000 troops on top of existing accession requirements. However, a study by Spoehr and Handy (2018) demonstrated how difficult this will be. Among 17-to-24 year olds eligible for recruitment, 59 percent are not qualified because of a health conditions (obesity, substance abuse, mental health problems, and asthma). Additional disqualifiers included criminal records (10 percent) and lack of high school/GED degree (25 percent). The report concludes that just 29 percent of this age group were eligible for recruitment.

These epidemiological challenges are markedly different from the 20th century, when medical cures represented the dominant paradigm. Interest in investing in upstream solutions to the health crisis are being driven by employers, who are concerned that economic growth will be hampered

without a way to bring people back into the workforce, and that medical care alone will not solve the problem. For example, faced with the recruitment challenges described above, the military is exploring ways to invest in communities, with a special focus on childhood nutrition and physical activity.

Research suggests that the poor health outcomes across the United States are not inevitable (AHRQ, 2017). Cross-country comparisons by Bradley and colleagues show that social spending and coordination of social services with health care improve outcomes and reduce health inequities in other nations (Bradley, et al., 2016). There is also evidence in the United States that investments in the social determinants of health, many of which are deeply connected to the social and economic structures that have constrained progress for certain population groups, can arrest the decline for specific at-risk groups.

In this context, a confluence of new developments is driving investments in social determinants of health and health equity, and these investments may set the stage for a reintroduction of nursing care in its original vision. First, the Robert Wood Johnson Foundation (RWJF) is motivating changes around the country with a new focus on a Culture of Health and promotion of models that are oriented toward cross-sector collaboration. Second, the movement toward value-based payment (VBP) in health care is leading health plans and providers to expand the focus of their services to include the social determinants of health. Third, new oversight of tax-exempt community benefit spending may lead to increased investments in community health. Fourth, new health information technologies have the potential to decentralize health care and enhance patient engagement. Fifth, the decline of the solo practioner model among physicians, and the dramatic rise in the percent of physicians employed by organizations, may portend further changes in the dynamic among health professions. As detailed in Part III, these changes are providing a new context in which to reconsider nursing's contributions to advancing our nation's health.

## The Robert Wood Johnson Foundation's Vision and Supported Initiatives

In 2014, RWJF announced an overarching vision that would orient its philanthropy—a vision calling for the nation to work together to build a Culture of Health, "enabling all in our diverse society to lead healthier lives, now and for generations to come." Four action areas were identified.

1. *Making health a shared value*, including mindsets and expectations, civic engagement around health, and a sense of community;
2. *Fostering cross sector collaboration*, including partnerships, investments in collaboration and policies that support it;
3. *Creating healthier, more equitable communities,* including the built environment, social and economic environment, and policy and governance; and,
4. *Strengthening integration of health systems,* including care coordination, integration with public health and social services, and focusing on consumer-driven care.

Another critical resource supported by RWJF and led by the University of Wisconsin is the ***County Health Rankings and Roadmaps***. In addition to interactive comparative statistics to quantify each county's outcomes for a range of health-related conditions, they also measure social determinants and equity in an overarching framework. The project has used the same framework to organize the

evidence of what works. The measurement and evidence on "what works" spans the following domains, with the relative weighting of clinical care at just 20 percent.

**County Health Rankings & Roadmaps**



County Health Rankings model © 2014 UWPHI
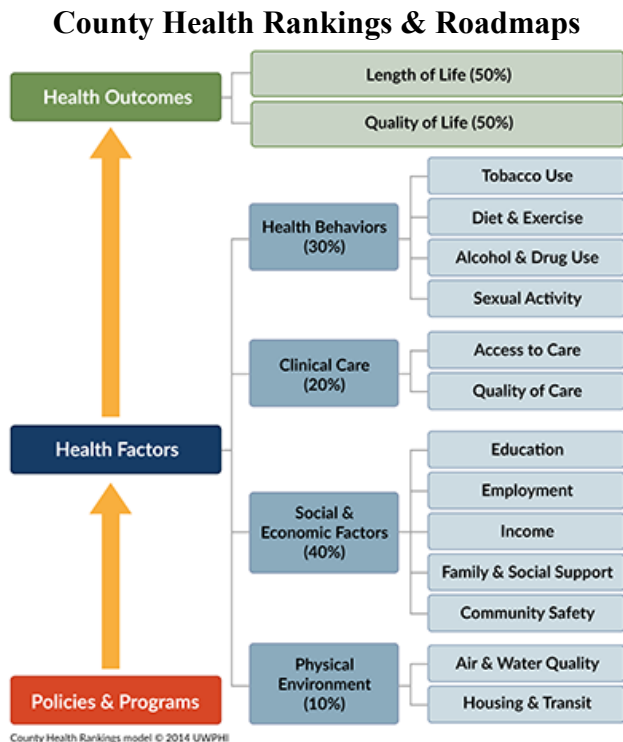
The roadmaps categorize interventions by key decision makers, including funders, non-profits, business, educators, government, health care, community members, public housing, and community development. Understanding the levers that each of these groups may control is, of course, an important part of planning change.

Another major RWJF investment has been support for the creation in 2017 of a National Academy of Medicine (NAM) multi-year Culture of Health Program. While many of the National Academies' of Sciences, Engineering, and Medicine (National Academies) efforts in the past have included a focus on social determinants of health (see sidebar), the goal of this program is to identify strategies to increase health equity through a series of consensus studies, public workshops, community events, and tools for stakeholders. As of October 2018, three stakeholder meetings have been convened to showcase a range of social movements working in

RELATED NATIONAL ACADEMIES OF SCIENCES, EINGINEERING, AND MEDICINE REPORTS

- Achieving Rural Health Equity and Well-Being: Proceedings of a Workshop (National Academies, 2018a)
- Assessing Progress on the IOM Report The Future of Nursing (National Academies, 2016)
- Building the Case for Health Literacy: Proceedings of a Workshop (National Academies, 2018b)
- Community-Based Health Literacy Interventions: Proceedings of a Workshop (National Academies, 2018c)
- Crossing the Quality Chasm: A New Health System for the 21st Century (IOM, 2001)
- Exploring Early Childhood Care and Education Levers to Improve Population Health: Proceedings of a Workshop (National Academies, 2018d)
- Exploring Early Childhood Care and Education Levers to Improve Population Health: Proceedings of a Workshop—in Brief (National Academies, 2018e)
- Exploring Tax Policy to Advance Population Health, Health Equity, and Economic Prosperity: Proceedings of a Workshop—in Brief (National Academies, 2018f)
- Faith–Health Collaboration to Improve Population Health: Proceedings of a Workshop—in Brief (National Academies, 2018g)
- Health Professions Education: A Bridge to Quality (IOM, 2003)
- Integrating Social Needs Care into the Delivery of Health Care to Improve the Nation's Health (National Academies, 2018h)
- Permanent Supportive Housing Evaluating the Evidence for Improving Health Outcomes Among People Experiencing Chronic Homelessness (National Academies, 2018i)
- Transforming the Financing of Early Care and Education (National Academies, 2018j)
- Violence and Mental Health: Opportunities for Prevention and Early Detection: Proceedings of a Workshop (National Academies, 2018k)
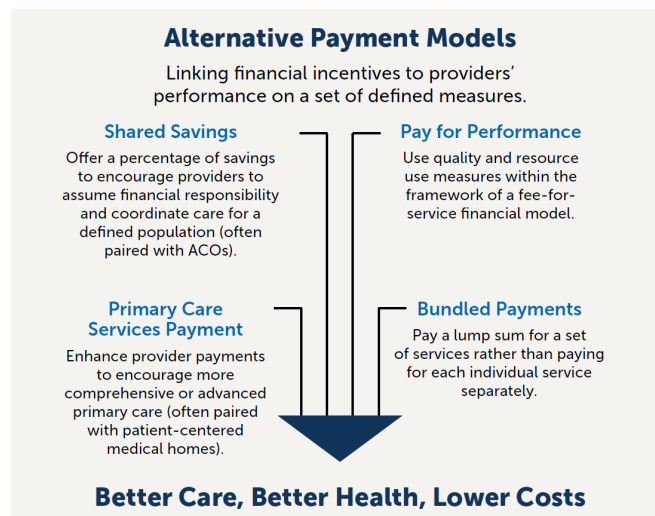
this area (NAM, 2017a; NAM, 2017b; NAM, 2018). The first of the consensus studies emanating from the program was Communities in Action: Pathways to Health Equity (National Academies, 2017). The report concludes that there is ample evidence that community-based solutions are effective at increasing health equity, and the report presents nine examples of such initiatives.

## Value-Based Payment in Health Care

A second major contextual development is growth of value-based payment (VBP) for health care services, which its advocates argue has the potential to radically redesign care to address population health and health equity (Nichols & Taylor, 2018). Since the early 2000s, there has been strong bipartisan support for changing the manner in which health care is reimbursed. The logic of traditional fee-for-service (FFS) is to drive patients to doctors and hospitals, rather than keeping them healthy at home, and FFS has also been blamed for much of the overuse of services, with its associated harm to patients (Brownlee, 2007).

While capitation and global payments are favored as the alternative approach by some, increasingly there is a recognition that a blended approach is preferred, with some bundled payments for a set of procedures associated with a disease, some rewards for high quality, and some penalties for poor outcomes (Laschober, et al., 2015). The figure below was developed by Mathematica Policy Research to describe the confluence of alternative payment efforts in the health sector (Laschober, et al., 2015). Additional payment reforms that align social services are also being developed in some states, such as New York and North Carolina under the Delivery System Reform Incentive Payment (DSRIP) Medicaid waiver.

### Mathematica Policy Research's Model of VBP



**Alternative Payment Models**
Linking financial incentives to providers' performance on a set of defined measures.

**Shared Savings**
Offer a percentage of savings to encourage providers to assume financial responsibility and coordinate care for a defined population (often paired with ACOs).

**Pay for Performance**
Use quality and resource use measures within the framework of a fee-for-service financial model.

**Primary Care Services Payment**
Enhance provider payments to encourage more comprehensive or advanced primary care (often paired with patient-centered medical homes).

**Bundled Payments**
Pay a lump sum for a set of services rather than paying for each individual service separately.

**Better Care, Better Health, Lower Costs**

A major component of both the penalties and the rewards in VBP for hospitals is patient experience, which in 2018 has been estimated to comprise about 25 percent of payment (Dempsey, 2018, p. 27). In addition, research has shown that patient experience is closely tied to patient safety and quality (Dempsey, 2018). Nurse staffing levels, as well as nurses' attitudes toward patient care in the hospital setting in particular, has been shown to directly impact patient-reported Hospital

Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores, which are tied to hospital reimbursement (Martsolf, et al., 2016).

Consistent with the emphasis on patient-centered care, in 2010 Congress established the Patient-Centered Outcomes Research Institute (PCORI) as a private nonprofit organization, funded through a new tax on health plans, which was estimated to generate between $3.5 and $4.5 billion through 2019. Comparative effectiveness research funded by PCORI must include patient participation and must report outcomes from the perspective of patients. As a result, a wide range of instruments that allow researchers to assess the impact of interventions on patient-reported outcomes have been developed. Because the most "nurse-sensitive" quality measures are patient-reported measures, advancements in this area have the potential to highlight nurses' work, and in particular demonstrate the value of nurse-led compassionate care, as described in Part III, in part because of the caring component of nursing practice (Dempsey, 2018).

A second scientific endeavor driving the outcome-based payment movement is the Center for Medicaid and Medicare (CMS) Innovation Center, which was also created as part of the Affordable Care Act in 2010. Congress provided it with $10 billion over 10 years to invest in the development and evaluation of innovations in delivery systems. It now appears likely that it will be re-funded for another 10 years in 2020. Among the most important programs the Center has supported are those with shared savings at their core, including the different levels of accountable care organizations (ACO) that incentivize provider organizations to form a network of providers that assume responsibility for patients across a continuum of care. The Innovation Center also supported the Comprehensive Primary Care (CPC) initiative, and its newer version, CPC Plus.

The Innovation Center's programs are increasingly focused on the integration of health services with social and community-based services in an effort to address the social determinants of health. They have launched a five-year initiative called Accountable Health Communities (AHC) to test the impact of health care services forming partnerships with social services and community organizations. Integrated Care for Kids is another new program that creates wraparound services for children at risk of being sent to foster care. Maternal Opioid Misuse (MOM) models a Center-supported program that focuses on mothers with substance abuse.

These experiments at the level of Medicare and Medicaid are spreading to private insurers, suggesting that nationwide there is growing acceptance that the health care sector must begin both the lengthy process of redesigning care and the process of building partnerships across social sectors if they are to manage risk-based contracts successfully (Erikson, et al., 2017; Pittman & Scully-Russ, 2016).

One of the effects of these alternative payment approaches is that to the extent that single providers are less likely to be billing for a service, leading health systems are viewing team-based care as more efficient. This leads to a more diversified workforce in which all professionals work to the top of their education and license (Bodenheimer & Bauer, 2016). Teams may add new team members, such as community health workers, and may change nurses' roles. An important NAM discussion paper recently synthesized the evidence on teams showing that, among other improved outcomes, they result in a reduction in clinician burnout (Smith, et al., 2018). Other lessons from

the field on team-based care have been synthesized in a recent RWJF report on Promising Interprofessional Collaboration Practices (CFAR, et al., 2015).

Payment reforms are beginning to change nurses' roles. In some places, nurses are moving from the position of passive support staff into positions as active partners with other care professionals. Additional investments in population health analysis, care coordination, and care transitions are also expanding nurses' roles in these areas. Nurse-led alternative models of care are also being noticed and adopted, as documented in Part III.

## Oversight of Tax-Exempt Hospitals' Community Benefit Spending

A third, perhaps less profound, but nevertheless potentially important development for nursing is the enhanced regulation of nonprofit hospitals. In return for their tax-exempt status, these hospitals are expected to contribute a portion of their revenues to benefit their communities. Historically, community benefit spending has been small, but when public outrage erupted over the excessive charges imposed on uninsured patients and the unreasonable collection practices of these hospitals, Congress had to act.

As a result of Congressional prodding, in 2009 the Internal Revenue Service issued a new policy stipulating what would constitute acceptable hospital community benefit spending practices and requiring to be reported on tax returns. Allowable expenditures included financial assistance to persons unable to pay, participation in Medicaid and other means-tested entitlement programs, research, health professions education, and, importantly, community health improvement activities. A recent study, however, suggests that based on the 2011 tax year, community health improvement spending "remained negligible in relation to other activities" (Rosenbaum, 2016).

Then, in 2010, the ACA included a requirement that tax-exempt hospitals conduct a community health needs assessment (CHNA), and produce a corresponding action plan to improve the health of nearby communities as part of their community benefit requirements (ASTHO, 2017). The first CHNAs began in 2012-2014, although final regulations were not completed until 2014 (Alberti, et al., 2018).

Hospitals have varied in the degree to which they have seized this opportunity to address the social determinants of health. Major professional associations, however, including the American Association of Medical Colleges and the American Academy of Nursing, believe in the potential of these reforms and have mounted support programs to strengthen hospitals' capacity and commitment to develop and implement CHNAs (AAMC, n.d.; Swider, et al., 2017).

Alberti and colleagues report that among teaching hospitals, the increase in community benefit spending was more than 20 percent between 2012 and 2015, totaling almost $18.5 billion in 2015 (2018). Rosenbaum, on the other hand, argues that while it is too soon to tell how much of this will be allocated to community health, even incremental increases would be important (2016).

Some authors also believe that a new public health accreditation requirement could help spur additional community investments by hospitals (Swider, et al., 2017). In 2013, the Public Health Accreditation Board (PHAB), funded by RWJF, added a new accreditation standard that obligates

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local public health departments, which must also conduct community health assessments, to collaborate with hospitals in this task. By working with public health departments, Swider and colleagues argue, hospitals may begin to see the importance of community health investments.

These developments are relevant to nursing because more funding for community health has the potential to increase community health jobs. Nurses, among others, are well suited to fill them.

## New Health Technologies

Another important contextual development that is relevant to the nursing profession's ability to address unmet needs is the innovation and adoption of new health technologies, in particular information technologies. The massive 2009 federal investment in health information technologies (HIT), and in particular electronic health records (EHRs), has spurred this process as health care organizations increase data utilization to understand population health and tailor programs to the most at-risk groups. This data analysis has in turn enabled care coordination and care transition models to proliferate, and allowed providers to proactively increase their preventive services and health promotion for specific groups. A leading example of this has been the Camden Coalition's "hotspotting" (n.d.), which they describe as using "data to discover the outliers, understand the problem, dedicate resources, and design effective interventions."

In addition, the emergence of telehealth, a plethora of innovative health apps, and various consumer-friendly diagnostic testing kits and medical devices has the potential to facilitate a decentralization of services into homes and communities. This idea that care can be delivered remotely, and that patients and families can assume some of the tasks previously carried out by clinicians and support staff, is potentially a seismic shift in the culture of health services and health professionals. While it is unclear how far the change will go, without doubt, it will be a factor that will influence the work of nurses going forward. In particular, it could allow more nurses to leave hospital settings and work autonomously in homes and in community settings.

## Changes in the Physician Workforce

A fifth and final development that may be relevant to the question of how nursing will evolve in the future concerns changes in the autonomy of physicians and the feminization of the profession. Whereas in the 20th century, most physicians were essentially shop owners, as of 2016, less than half of physicians (47.1 percent) were practice owners, and the remainder were employed by organizations (Kane 2018). Associated with this shift, many have argued that the advancement of managed care, even in its current less rigid iteration, has reduced the autonomy of physician decision-making (Starr 1982, Rothman 2002). Equally significant, is the trend of increased female participation in medicine. Historically a male dominated profession, the American Association of Medical Colleges (AAMC) reports that, as of 2017, the number of women enrolling in U.S. medical schools exceeded the number of men. Whether this change is related to the decline in physician autonomy is an open question (Rothman 2002).

Given the history of nursing and medicine in the last century, a period during which physician organizations fought to reduce nurse's roles to a passive support function in acute care settings, the new developments may portend changes in the relationship of the two professions. While the

American Medical Association continues to lobby at the state level against full practice authority for nurse practitioners, studies show that the majority of nurse practitioners on the ground report good relations with physicians (Poghosyan, Norful, & Martsolf 2017). The slow, but steady increase in the employment of RNs outside the hospital, particularly in primary care settings, also suggests a new dynamic may be possible in which nurses are becoming more active partners in teams (Center for Interdisciplinary Health Workforce Studies, 2018, Bodenheimer and Bauer 2016).

## PART III: NURSING CARE TODAY

Part II described the various contextual developments that are creating opportunities for change – including RWJF's work to build a Culture of Health; reorientation of payments to incentivize health care organizations to focus on patient, as well as population health outcomes and their social determinants; additional investments in community health by hospitals; and the potential for new technologies to decentralize health care delivery. In this section, we review the ways that nurses' roles are already beginning to change as a result of these developments.

Studies are just beginning to emerge that attempt to describe (or anticipate) how alternative payment programs are leading health care organizations and payers to see nurses' expertise differently. Common themes include the idea that nurses are being "activated" in new roles and new jobs, and in the context of diverse teams, every member must practice to the full extent of his or her education and license (Buerhaus, et al., 2015; Pittman & Forest 2016; Fraher, Spetz, & Naylor, 2015). One study shows a progressive shift from reliance on physicians to an expanded use of NPs and physician assistants (PAs) in primary care, especially in safety net settings, and in settings that have been accredited as primary care medical homes (PCMH) (Park, et al., 2018). Data analysis and increased use of patient risk segmentation are becoming more common and are functions that are often overseen by a nurse supervisor (Erikson, et al., 2017). Care coordination and care transitions have become essential functions for hospitals and ACOs, and these roles are often filled by nurses at different levels (Fraher, Spetz, & Naylor, 2015). Another study reported that ACOs are moving registered nurses (RNs) from inpatient settings to ambulatory care settings (Pittman and Forest 2016). There are also signs that health systems and health plans are increasing their use of community health workers (CHWs), and CHWs are supervised by nurses or social workers (Malcarney, et al., 2017).

Examples of innovations that are either led by or include nurses are also being documented across a broad swath of health care and community-based settings. Some systems have integrated nurse-led programs that target specific groups or problems. Other initiatives remain as stand-alone interventions that are funded by government or philanthropy. Still others have become for-profit start-up vendors that contract with large health systems.

As mentioned in Part II, an important secondary database on interventions that improve health is the County Health Rankings and Roadmaps. An analysis of 160 interventions that they rank as "scientifically supported" found that 35 (about 22 percent) explicitly include nurses or are nurse-

led. The breakdown by domains of these programs suggests that nurses are engaged in all four areas, although clinical remains the most dominant (see table below).

Another useful database is the American Academy of Nursing (AAN) Edge Runner Series, which focuses on innovative nurse-led programs that have demonstrated results. As of November 2018, AAN had recognized 57 nurse-led innovations across the spectrum of health (2015a). Martsolf and colleagues studied these programs and assessed the extent to which they contributed to building a Culture of Health (2016b). They found that the majority (54 percent) were focused on increasing access to care for rural and underserved populations. However, of these, 75 percent focused on wellness and community outreach, 28 percent focused on navigation and advocacy assistance, 28 percent targeted chronic disease management and 21 percent focused on culturally appropriate approaches to outreach and care.

Below are examples of programs drawn from the Edge Runner Series, as well as other sources when indicated, that span a variety of settings.

| DISTRIBUTION OF 35 SCIENTIFICALLY SUPPORTED INTERVENTIONS LED BY OR INVOLVING NURSES |
| --- |
| *Source: County Health Ranking and Roadmaps* |
| **Health Behaviors: 10** |
| • Diet and Exercise (7 items) |
| • Sexual Activity (1 items) |
| • Tobacco Use (2 items) |
| **Clinical Care: 16** |
| • Access to Care (6 items) |
| • Quality of Care (10 items) |
| **Social and Economic Factors: 10** |
| • Community Safety (2 items) |
| • Education (4 items) |
| • Employment (2 items) |
| • Family and Social Support (2 items) |
| **Physical Environment: 3** |
| • Housing and Transit (3 items) |

## Hospitals and Health Systems

An example of combining a set of programs aimed at improving community health is the Southwestern Vermont Health Care's Accountable Community of Health (AAN, 2015b). The initiative uses nurses and other health professionals in a variety of expanded roles. It is guided by a community board that meets monthly. The initiative includes several component programs, including

- Transitional Care Nursing follows patients post-discharge to connect them with resources;
- Community Care Team engages community partners in the development of care plans and collaborative care coordination for patients with substance use and mental health issues;

- Interventions to Reduce Acute Care Transfers (INTERACT™) trains nursing assistants to detect changes in patients' conditions to reduce hospitalizations;
- Certified Diabetes Nurse Educators embeds nurses trained in diabetes prevention and management in primary care offices, hospitals and skilled nursing facilities;
- Integrated Social Work links patients being discharged from hospitals to transitional care social workers who, in turn, connect patients and families to community resources;
- Home Safety Initiative, under the supervision of occupational therapists, trains high school students from low-income neighborhoods to improve the safety of homes for the elderly and disabled by installing railings and taking other safety measures;
- Medication Management and Education uses hospital pharmacists to perform comprehensive medication management/education for patients in both hospitals and primary care settings;
- Emergency Department Embedded Physical Therapists employs physical therapists in the emergency department (ED) to initiate treatment planning before discharge; and.
- Maternal Transitions of Care uses nurses to visit expectant mothers with a substance use disorder.

Results to date include a 56 percent reduction in hospital admissions and a 34 percent reduction in ED visits among patients with addiction and mental illness who had frequented the ED in the prior six months.

## Compassionate Connected Care

In the context of VBP that includes measures of patient and caregiver experience in payment policies, Christina Dempsey, chief nurse officer at Press Ganey, developed an action framework to address suffering of patients, their families, and of the nursing staff that attend them (Dempsey, 2018). Compassionate Connected Care establishes four specific connections to mitigate suffering: clinical excellence, operational efficiency, caring behaviors, and a culture of engagement (Press Ganey, 2014). She argues that nursing students who often use simulation to practice clinical skills have not been adequately prepared to express compassion, nor are they well-prepared to work towards their own well-being at work. As a result, she works with health care organizations to help frontline staff, in particular nurses, emphasize caring over and beyond delivery of medical interventions. The model teaches nurses to acknowledge suffering of patients and their families by using nonverbal and verbal communication to express compassion, to address anxiety, to facilitate patient and family autonomy, and to help coordinate and anticipate care. The model uses many of these same principles to promote greater staff engagement, including understanding and adopting a shared mission, vision, and values.

Press Ganey research has shown that reducing suffering and improving staff engagement results in better patient experience (as measured by HCAHPS scores), lowers rates of hospital-acquired conditions, shortens lengths of stay, and reduces 30-day readmission rates, all of which result in higher revenues for health care organizations under the new CMS National Quality Strategy (Dempsey, 2018, p.183).

## Schools

School nurses are traditionally funded by local governments, making their jobs vulnerable to economic swings and budgetary cuts. The Vine School Health Center is a school-based nurse-managed clinic in Knox County, TN that also serves an additional 10 schools through telehealth services (AAN, 2015d). Through a Health Resources and Services Administration (HRSA)-funded Nurse Education, Practice, Quality and Retention (NEPQR) Program grant, the clinic was able to expand services to include food, housing, clothing, insurance, financial support for rent and utilities, and individual and family therapy. The center is now the primary care provider for 77 percent of children in these schools, and in a recent survey more than a quarter of responding parents indicated that they would have taken their child to the emergency room for care had the telehealth service not been available.

## Aging in Place

The Community Aging in Place, Advancing Better Living for Elders (CAPABLE) model is a multidisciplinary (nursing, occupational therapy, and handyman) intervention to reduce health disparities among older adults is an example of a nurse-led, home visit intervention that provides comprehensive needs-based services to the elderly. Its goal is to help older adults "age in place." Funded by Medicaid and Medicare in 13 cities and eight states, the program has successfully reduced admissions to hospitals and nursing homes, reduced incorrect medication dosing, and improved nutrition and diet. With an annual cost of $2,825 per member, the program reports savings of more than $10,000 per member per year for Medicare.

## Complex Care

The Complex Care Center (AAN, 2015c) aims to stabilize complex patients by mentoring and maximizing existing resources in their circle of care. While nurse-led, it is an interdisciplinary effort to link providers in a shared plan of care that addresses social determinants of health (housing, transportation, financial barriers, or mental health/trauma). The Center focuses on changing the system, rather than just trying to change patients' behavior. Twenty-five Trinity Health hospitals adapted the model, and it is currently in evaluation for roll out across the system. In a study of 1000 patients over 12 months, the model resulted in greater than 40% reduction in inpatient admissions and ED visits, a one-million-dollar improvement in operating margin and a 23 percent return on investment. Aspects of the model were adapted by the State of Vermont in the design of their care coordination teams under the CMMI State Innovation Models grant initiative. The model is now being adapted in settings ranging from community collaboratives to safety net hospitals through the National Center for Complex Health and Social Needs.

## Maternal Child Home Visits

The Nurse-Family Partnership is one of the most studied nurse-led innovations, dating back 40 years. Its resilience undoubtedly is due to continued funding by HRSA, but it has also gained new visibility in the last several years in the context of heightened interest by health systems and health plans in nurse-led models. The program sends nurses to visit mothers living in poverty during their

first pregnancies up until the child is 2 years old. Key to the program's success is the trust that is built between nurse and mother, allowing nurses to serve as advisers on a wide range of issues facing the family. The program now operates in 44 states. Studies show that for every dollar invested in the program, $5.79 is saved for the highest risk families served. Results include a 48 percent reduction in child abuse and neglect, 67 percent fewer behavioral and intellectual problems in children at age 6, 72 percent fewer convictions of mothers, 82 percent increase in months employed, and 35 percent fewer hypertensive disorders during pregnancy (Nurse-Family Partnership, 2018).

## All-Inclusive Care

The Program of All-Inclusive Care for the Elderly Benefits (PACE) was originally designed for those who need long-term care and are certified as eligible for nursing home care. It consists of wraparound services that assess an enrollee's needs, develop care plans, and deliver all services (including acute care services and when necessary, nursing facility services). The team is composed of a dietician, a driver, a home care liaison, a nurse, an occupational therapist, a PACE center supervisor, personal care attendants, a physical therapist, a primary care NP or physician, a recreational therapist or activity coordinator, and a social worker. It is now a Medicare benefit, and there are more than 100 PACE organizations around the country. Studies show that, despite the fact that all participants were nursing-home-certifiable, the risk of being admitted to a nursing home following enrollment was reduced to 14.9 percent within three years (Friedman, et al., 2005). The model is currently being tested by CMS' Innovation Center to see if it could be adapted for disabled individuals age 21 and older who are dually eligible for Medicare and Medicaid.

## NP Home Wellness Visits

United Health Group's HouseCalls uses NPs to visit Medicare Advantage patients when new members who are still living in their homes join a plan. Typically a full hour, the NP visit includes an extensive assessment of the member's health, family situation, and living conditions. They then refer to disease management and other social programs as needed. A RAND study reported that the program has resulted in 14 percent fewer hospital and nursing home admissions, and actually increased (rather than replaced) visits to primary care physicians within the plan by 6 percent (Mattke, 2015).

## Urgent Care Clinics

Urgent care and retail clinics that are staffed exclusively by NPs have been expanding rapidly around the country. Their stated aim is to increase access by providing convenient locations and hours at a low cost (Wallace & Daroszewski, 2015). A recent study suggests there may be cost savings for health plans in this model. Poon and colleagues found that utilization of non–emergency department acute care venues increased by 140 percent, while emergency room visits for low-severity conditions decreased by 36 percent among commercially insured Americans between 2008 and 2015 (2018).

## Physical Activity

Walking School Bus is a program that has spread across the country and allows children to walk to school with adult chaperones using a fixed route, with stops and pick-up times. Studies show that it increases physical activity, improves health outcomes, improves sense of community, increases academic achievement, and reduces vehicle miles traveled and emissions (Smith, et al., 2015). The program was embraced by a family nurse practitioner in Springfield, MA., where one of the most successful versions of the programs now exists.

## Food Security

The Department of Nursing at Rush University Medical Center implemented a social determinants of health screening tool in their emergency department, and is piloting it in four inpatient units. Staff nurses integrate the screenings into their daily nursing assessment and are helping to establish linkages to needed resources. At a community level, the assessments quickly revealed food insecurities, transportation and housing as priorities. Partnering with community organizations in Chicago, the nurses designed a Food Surplus initiative which repackages unused food from hospitals and restaurants and delivers them to families in need. Since 2015, the program has served over 40,000 meals. They also provide of a month's worth of food to patients identified as experiencing food insecurity before they are discharged. Nine hospitals/universities and organizations across the country have adopted the model to date (personal communication 3/2/19).

## Volunteering

A recent survey of nurses found that 80 percent of the sample participate in some volunteer activity in their communities (McCollum, et al., 2017). This involved activities such as providing screenings at community events, offering advice on diet or exercise, and educating the public on the importance of hand washing and vaccinations. But the study also found that nurses report checking in on elderly neighbors, serving on local boards and commissions, and organizing fundraising efforts for community causes.

The array of examples presented above suggests there has been some uptake of nurse-led and nurse-involved initiatives, by health systems, health plans, and local governments, and that these programs are grounded in an expansive vision of nursing care.

All of these cases represent expanded roles in which nurses go beyond a limited set of clinical tasks and approach their functions in a holistic manner. This may include efforts to: 1) build trust and extend compassion for patients families and communities; 2) assess unmet social and emotional needs (e.g., trauma-informed care) in health care settings; 3) connect patients with community services; 4) carry out specialized roles focused on care coordination and care transitions; 5) conduct home visits; and/or 6) lead nurse clinics in school/workplace/parish/prisons, etc. In addition, nurses frequently volunteer in their communities, demonstrating their interest in addressing the needs of their communities.

Data on the breadth and distribution of nurses' current jobs is lagging; it has been 10 years since the last National Sample Survey of Registered Nurses (NSSRN), and the 2018 survey NSSRN results are not expected until the spring of 2019. It is likely that the new data will show that nurses in 2018 are employed in more varied settings and are carrying out far more diverse roles than they were 10 years earlier. It will be important to see, for example, how often they are employed as nurses outside the health care setting; i.e., are they being employed by city planners and transportation departments to work in teams to consider the health impact of different transportation routes; are they being employed by large companies to improve occupational and community health; are they being employed by law firms and advocacy groups interested in criminal justice reform, etc.?

In the next and final section, the report examines what it would take to accelerate this process of expanding opportunities for nurses to help meet the unmet needs of the 21st century.

**PART IV: ENHANCING NURSES' CONTRIBUTIONS IN THE 21ST CENTURY**

As reviewed in Part II, the epidemic of diseases of despair and other chronic conditions are demanding a shift in the types and locations of health services, as well as better collaboration of health professionals with other sectors. As documented in Part III, there is growing recognition that the old model of centralized health services organized around the idea of medical cures may have worked in the 20th century, but is insufficient today. As care begins to decentralize, returning to homes and communities, it is much more difficult to ignore the social, economic, and physical conditions of health, and collaborating with other sectors to resolve these kinds of problems becomes more feasible.

In this context, nurses have an historic opportunity to reclaim and expand their original vision of nursing practice. This vision, specifically at the beginning of the 20th century, and then again in the 1960s, has been grounded in a holistic focus on patients in the context of their full psychosocial well-being as members of families, workplaces, and communities.

Given the new landscape, with more and more employers and policymakers recognizing the importance of investing in the social determinants of health and health equity, the question facing the nation is: what will it take to achieve a vision in which the nursing workforce is prepared and activated to play a leading role in addressing unmet needs in the 21st century? For this to occur, nurses, employers, and policymakers must be inspired to make it happen across a broad spectrum of settings where they live and work.

The analysis of the literature reviewed in the proceeding sections point to at least four important areas for deliberation.

1. WHAT: Identifying core functions of nursing practice that are critical no matter where nurses work.
2. HOW: Choosing to work at the intersections of disciplines.
3. EDUCATION: Aligning nursing education with these functions.
4. PRACTICE AND POLICY: Aligning jobs, professional development, payment and regulatory policies with these functions.

## 1. Identifying core functions of nursing practice

Nursing has been defined at many stages of history, and current definitions from the American Nurses Association stake out an expansive role for the profession. The 2015 ANA Code of Ethics defines nursing as "*the protection, promotion, and optimization of health and abilities, prevention of illness and injury, facilitation of healing, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, groups, communities, and populations.*" In practice, however, key elements of this definition are absent in many job settings.

A re-conceptualization of the core functions of an activated nurse workforce would help nurses, their employers, consumers and other health professionals more clearly see nurses' potential. It

may also allow nurses to more clearly identify areas that could be delegated to other team members, so that they can focus on what is essential in their practice.

Core functions emerging from the prior section of this report, include the following:

A. *Extending compassion and establishing trust with patients, families, and communities*. Based on Gallup polls, it appears nurses are indeed aware of and have consumers' trust, but more work in acute care, as well as ambulatory and community-based settings, may be needed for organizations to allow nurses to practice in this way. The business arguments for this are strong. Not only is 25 percent of CMS's new quality payment strategy directly linked to patient and caregiver experiences, but, as Press Ganey's work has demonstrated, improved patient experiences also improve other outcomes, such as hospital acquired conditions and readmissions (Dempsey, 2018).

B. *Assessing patients', families' and communities' unmet needs in the context of their lives and their goals.* Most nurses are trained to assess the social, emotional and economic aspects of patients' lives, in addition to their clinical conditions. While public health nurses conduct comprehensive assessments, nurses have not always been encouraged or even allowed to conduct such assessments in many other settings. Health care organizations under VBP contracts are beginning to see how essential such screening is, and how it can be used to support patient autonomy.

C. *Building partnerships within and outside the health sector to find solutions*. Establishing new partnerships requires outreach, negotiation and the development of systems to manage partnerships across entities within the health sector, as well as with other sectors and community organizations. Some of this is occurring already through ACOs, AHCs, and CHNAs, for example, but more is clearly needed. Nurses can leverage these relationships to find collaborative solutions for individuals, families, and communities. Nurses are already being used as "boundaries spanners" within the health sector in their work as care coordinators and care transition specialists. Extending those boundaries outside the health sector should also be considered "part of the job."

D. *Identifying and advocating for collective upstream solutions.* In the process of collaborating across sectors to find solutions, nurses confront systemic injustices. Part of nursing's function, therefore, should arguably include advocacy for collective upstream solutions. Including these challenges in nursing's practice may be controversial, but many would argue that it was core to nursing in the early 20th century.

2. **Choosing to Work at the Intersections**

With the core elements of nursing practice defined, the question of how nurses practice in the context of other professionals emerges. The nursing profession faces a choice. Should nurses emulate other professions that have fought for and acquired dominance by establishing boundaries that exclude other professionals, and identifying services over which they can claim a monopoly (Freidson, 1970; Starr, 1982)? Or should nurses take an alternative path, one that deepens their

commitment to working at the intersection of disciplines, with far less concern about boundaries and exclusivity?

The literature on innovations suggests that it is at the intersection of disciplines where there is the highest potential for creativity and structural change (Johansson, 2004). Johansson writes: "*When you step into an intersection of fields, disciplines, or cultures, you can combine existing concepts into a large number of extraordinary new ideas.*" Psychologists believe that intersections provide the opportunities for making new associations, and while human brains prefer finding order and resolving perceived problems quickly based on past experience, it is these new associations that lead to innovation (Johansson 2004).

Intersections are by definition uncomfortable, especially as a profession seeks autonomy and prestige. Yet this is where the promise of innovation lies. As reviewed in Part I, in the early 20th century nurses accomplished extraordinary things by working at the intersection of nursing and social work (Wald, 1934). Today, as care teams expand and diversify, nurses again have the opportunity to welcome the contributions of community health workers, pharmacists, dieticians, city planners, and others, both into roles nurses have traditionally occupied, and in new spaces where nurses have been less present.

Working at the intersection of disciplines is also embedded in a larger call for "boundary spanning," defined as the process of making connections among otherwise unconnected groups in the quest for a higher goal (Weiberg, 2016; Yip, Ernst, & Campbell, 2016). Nurses are traditionally "boundary spanners" as they utilize care coordination and transition management to connect patients across health care and community settings (Fraher, Spetz, & Naylor, 2015). Boundary spanning also includes crossing departments, professions, organizations, sectors, demographics, and/or geographic areas to develop new care strategies and population health models.

### 3. Aligning nursing education with core nursing functions

Having clarified core elements of what and how nursing practice could enhance its contributions to building a Culture of Health in the 21st century, nursing education must be aligned with the core functions, regardless of where nurses work. Control over education and the production of a specific body of knowledge are two key components that distinguish occupations from professions (Friedson, 1970). As described in Part I, educational control grew over the latter part of the 20th century, but was consolidated in the 1960s, as nurses' training moved from the hospital to college and university settings. During this period, several nursing theories emerged as strong differentiators from the medical paradigm. At the same time, however, the high demand for nurses by the hospital sector meant that clinical training in most schools focused on acute care hospital settings, and upon graduation, most nurses began their careers in hospitals.

While BSN programs are required to provide some public health and community nursing content, preparation for primary care practice is less common, and issues related to the social determinants of health have not been at the forefront of their mission. Indeed, many nurses report that they are unprepared to conduct population assessments (Issel & Bekemeier, 2010). Calhoun and Harris (2016) summarized some of these concerns in their call for strengthening nursing education curriculum in the following areas:

1. Understanding population health;
2. Coordinating with interprofessional teams;
3. Recognizing and understanding epidemiological patterns;
4. Understanding care as value-based with a focus across the lifespan; and
5. Using ambulatory care delivery models.

The Center to Champion Nursing in America has been studying how leading nursing schools are actually doing this. In one example, the University of Montana system has been revamping its curriculum to focus on the specific needs of rural communities, many of which lack access to physicians and see nurses as the main point of contact.

Accelerating Interprofessional Education in Community-Based Settings, funded by the Robert Wood Johnson Foundation, the Josiah Macy Jr. Foundation, the John A. Hartford Foundation and the Gordon and Betty Moore Foundation, supported 16 schools of nursing to partner with other professional schools to develop community-based education and practice programs. For example, the Washburn University Nexus Project, which includes the School of Business, the Department of Communications, the Office of Sponsored Projects, and the local housing authority, developed a common curriculum for social determinants of health and opened a community clinic in a high-need public housing project staffed by students and preceptors to address the social determinants.

In addition to the need to bolster population health and primary care content in nursing schools, it has long been a goal of the nursing profession to better reflect, among its own ranks, the diversity of the populations it serves (Cohen, et al., 2002). In the National Academies report, *Assessing Progress on the Institute of Medicine's Report "The Future of Nursing"*, the committee finds that while progress has been made, particularly in terms of African American participation, other groups, such as Hispanics, have lagged behind. Among nursing faculty, they report, the problem is even greater; minorities comprise just 15 percent of nurse faculty in 2014 (2016).

Many professional nursing associations are working to increase diversity within the profession, including the National League for Nursing (NLN) and the American Association of Colleges of Nursing (AACN). AACN's Diversity, Equity, and Inclusion Group (DEIG), which serves as a convening body to explore innovative approaches to enhancing diversity, equity, and inclusion in academic nursing, spearheaded the development of "Holistic Admissions," an approach that calls for expanding admission criteria beyond grade point averages and SAT scores to a broad range of factors reflecting the applicant's academic readiness.

A call to reorient nursing education with the aim of what Fitzhugh Mullan calls the "social mission of education" is another promising initiative. Mullan, who pioneered the interprofessional "Beyond Flexner" movement to advance the concept, argues that social mission is about the ethical dimension of what it is to be a teaching institution, and asks the question "to whom is the institution accountable?" (2017). Among the early topics of discussion among members of the Social Mission in Nursing Education Advisory Committee, led by Mullan and Ashley Darcey-Mahony, was the importance of including social mission concepts in both the nurse licensure tests (NCLEX) and nursing program accreditation standards.

Graduate nursing education is another important are in which changes are needed. In particular, there has been a sustained call from the field for APRN residencies to be funded through Medicare. The Graduate Nurse Education (GNE) demonstration project was funded in 2010 as part of the Affordable Care Act. The GNE used Medicare funds to test the creation of APRN residencies in five hospitals. Evaluators reported to Congress that 70 percent of residents were able to receive placements outside hospitals and that the cost per APRN was $30,000 dollars, compared to an average of about 150,000 for physician residencies (DHHS 2018). While the program ended in 2018, the encouraging findings have resulted in calls for the continuation and expansion of the program. Many also believe RNs residencies outside the hospital setting would help to strengthen the roles of nurses in primary care and community based settings (IOM 2010).

4. **Aligning jobs, professional development and payment and regulatory policies with these functions**

While nurses are already demonstrating the contributions they can make when deployed in new and expanded roles in a variety of settings, many employers and policymakers are still not familiar with these programs. As a result, it is important to continue to make the business case for these expanded roles as they relate to changes occurring in health systems today. As described in Part II, the there is growing evidence showing the relationship of nurses' staffing levels and expanded roles to an array of outcome payment measures, including HCAHPS, 30-day hospital readmissions, hospital acquired infections, as well as more general shared savings programs based on health outcomes. More evaluation at the organizational level, and research at the national level on the return on investment (ROI) of these programs is essential to convince all employers that nurses can be deployed in more active roles.

In addition to playing a greater role in care coordination and care transitions, nurses will likely be more engaged in primary care settings in the future (Macy Foundation, 2015; Bodenheimer & Bauer, 2016), home visits, large workplaces, schools, community organizations, boardrooms, and, via telehealth, any other place they are needed (Storfjell, Winslow, and Saunders, 2017). The advancement of health technologies will enable this by creating opportunities for nurses to change where and how they practice. For example, the use of social determinants screening apps on tablets allows nurses to conduct comprehensive assessments and to move freely outside hospital walls. Telehealth also greatly facilitates the deployment of nurses in rural communities.

As these changes evolve, large nurse employers and nurse associations will need to develop and support opportunities for residencies and continuing professional development. UnitedHealth Group, which employs 20,000 nurses in a wide variety of roles, created the Center for Clinician Advancement. The Center's mission is to "enable clinicians to lead change, advance health and transform the health system." Among their most successful programs is an accelerated executive leadership development program for nurses, the aims of which are to increase executive mindset and presence, and to increase nurse leaders' ability to drive change across the company. The 13 month program requires that each participant develop a real "innovation," and upon graduation the Center tracks the results of these projects. They report that one project alone achieved $5.8 million dollars in savings in just one year through skill mix changes and optimization of nursing resources. The seven-year longitudinal impact of the program is clearly evident with 96% of

participant projects institutionalized and demonstrating long-term value, a 78% program participant retention rate, 61% promotion rate (personal communication, 11/3/18).

Kaiser Permanente (KP) in southern California has approached professional development in the context of their labor management partnership (Pittman and Scully-Russ, 2015). Like many employers, KP provides scholarships and tuition reimbursement for nurses and other employees to continue their formal education. Perhaps more innovative, however, has been their inclusion of nurses and other frontline health care staff in both the design of quality improvement projects and system wide innovations. They also include nurse and other health professional representatives in the human resources department working groups that are designing job changes and job creation.

To realize this vision, policies must also be in place to support the changes. These include payment and regulatory policies for both RNs and APRNs. On the payment front, we know that ambulatory and community-based jobs generally pay far less than jobs in acute care settings. This discourages RNs from exploring employment outside the hospital. Creative payment policies could be developed to encourage providers to hire and deploy RNs differently. Examples could include allowing nurses to bill for certain services; providing upfront payments to justify hiring them; and offering reimbursement for specific nurse-led interventions. Additional research is needed to identify and evaluate these kinds of payment incentives.

Constraints on APRN scope of practice, as well as other "who is allowed to do what" rules that underpin credentialing, privileging and payment policies are also clearly a barrier to fully realizing the promise of these professionals. The American Association of Nurse Practitioners' online NP scope of practice map shows 31 states and territories that still do not allow full practice authority for this group of nurses, although many states are incrementally taking steps to improve regulations. Organizations also vary dramatically in the degree to which they allow APRNs full privileges (Pittman et al 2018), and payers, including Medicare, still prevent APRNs from serving in certain roles. As nurse organizations advocate for these changes, so too must they be advocating for the liberalization of other professions and lay health workers' scopes of practice, so that they can work together in teams that utilize all personnel to their full potential.

## Research Needs

Progress in each of the proceeding areas will require research. Several broad areas of research emerge from this review, although they are by means the only areas of evidence needed.

1. *Assessment tools*. The first is a program of research focused on the review of current assessment tools, identification of gaps and the development of new or improved tools that would help to advance the core functions of an activated nurse workforce. These include the following:
    - *Curriculum and pedagogy review.* As more nursing education programs, healthcare organizations and other types of employers begin to see the need to activate nursing to address unmet social and health needs, a plethora of educational and training programs are emerging. A review of the content and pedagogical approaches of these programs would help to inform and enhance their spread.

- *Evaluation of patient assessment tools.* There are an increasing number of patient assessment tools that include social determinants of health. Research is needed to evaluate nurses' satisfaction and the impact of these screening tools. For example, tools must be easy and efficient to use, yet provide enough information to help nurses with deployment of resources, including getting help from other team members, such as social workers. Similarly, these tools have implications for electronic health records and those impacts require evaluation as well.
- *Competency assessments.* A variety of institutions would benefit from the development of standardized assessment tools that evaluate individual nurse's competencies as they relate to the expanded set of core nursing functions. These may include undergraduate and graduate level nursing programs, as well as by organizations recruiting to hire nurses, and/or offering professional development.
- *Organizational evaluation metrics.* Metrics and assessment tools are also needed at the organizational level to help institutions understand their baseline situation, and to evaluate the extent to which they are achieving the full potential of their nurses after they make changes such as new social determinants screening procedures, or the uptake of new technologies.

2. **Return on Investment (ROI).** More research on the ROI of new nurse-led (or nurse involved) programs/projects that aim to expand the focus of nursing to the social determinants of health and health equity. Heath care organizations, public and private health care payers, large employers in general, and communities will need ROI studies to justify the costs of their implementation. Systematic reviews will also be needed to synthesize the evidence as it emerges so that it can be easily accessed by decision makers.

3. **Stakeholder Analyses.** If nursing is to embrace working at the intersection of disciplines, there will be a need to better understand nurses' responses to change in specific situations, and in particular the underlying tensions that can surface in regard to interprofessional dynamics. Studies that use a positive deviance approach offer the opportunity to learn from organizations that have successfully managed these transitions. Types of changes that may warrant research include, for example:
   - the expansion of other team members' roles, such as medical assistants;
   - the incorporation of new healthcare/social needs occupations, such as community paramedics;
   - changes in the settings in which services are delivered;
   - uptake of new technologies that change the workflow;
   - partnerships with community based organizations in planning and implementing unmet needs screening and program responses.

4. **Evidence to inform scope of practice reforms across professions.** While considerable evidence has been amassed to inform APRN scope of practice, less research has been conducted on the expansion of RNs scope of practice, and the expansion of allied health professions and support staff. Analysis of the safety and quality of difference levels of scope for different professions is needed to inform changes in the workforce configuration. A program of research that also identifies similarities across professional groups could help inform broader reforms centered on changing how regulations in this area are developed.

Targeted international comparisons could be useful, as policymakers begin to imagine alternative decision-making processes for regulating scope of practice.

5. ***Evidence to inform payment policy.*** Organizations, and nurses themselves, will sometimes need additional incentives to remove barriers and activate the nursing workforce in a spectrum of new roles and settings. Accountability is one type of incentive, and the results of evaluations described in Topic #1 could evolve into broader public reporting mechanisms. The idea of paying for performance (financial incentives) enjoys broad political support and is a growing area of measurement science. Research is needed to identify the structural bottlenecks that impede change. For example, employers outside the hospital setting express concerns that market wages for RNs may be prohibitively high for certain sectors to be able to include them on teams. Similarly, RNs express concern that lower wages and the absence of unions outside hospitals make non-hospital jobs less attractive. Having identified the types of problems impeding change, alternative payment arrangements (whether they are fee for service, per member payments, or outcomes based) could be designed and tested.

## Conclusions

Faced with the surge in obesity, substance use disorders, mental health conditions and childhood asthma—among other conditions that are deeply rooted in social and economic conditions—, policymakers and health care organizations are beginning to see the limitations of the highly centralized and medicalized health services that characterized the last century. They are calling for greater integration of health and social services, and looking for ways to engage patients, families and communities in upstream solutions that improve population health, well-being and health equity. Payment policies and technologies are evolving as well, helping to drive and to facilitate these changes.

Given both its history and its sheer size, the nursing profession has the potential to help redirect the health care industry with the aim of addressing unmet needs of the 21st century. To do this, a set of core nursing functions— such as building trust and compassion with patients, facilities and communities, conducting comprehensive evaluations, coordinating partnerships and identifying upstream collective solutions—must be identified and strengthened,. Many of these functions overlap with other disciplines, making it important for nursing, as a profession, to embrace the notion of working with other disciplines at intersections, where many roles will undoubtedly overlap. This may not always be comfortable, but if it is embraced as an opportunity for innovation, nurses will have the opportunity to engage in the kind of creative social solutions championed by Lilian Wald at the start of the last century.

Nursing education will also need to keep pace, with a stronger focus on population health and health equity, as well as programs to increase the diversity and inclusiveness of the nursing workforce. Likewise, health care and other employers will need to be convinced that new and incumbent nurses should be deployed in roles that allow them to realize their full potential. Nurses and others will need to lay out existing evidence and generate new studies that demonstrate the impact of using nurses in expanded functions on population health, well-being, health equity, as well as, of course, business revenues. Government and businesses will need to ensure that their incumbent nurse workforce has the opportunity to continue to learn and change through residencies

and ongoing professional development and training. Payment and regulatory policies must be aligned to achieve these goals. Lastly, a robust research agenda associated with these transformational aims will help to inform and spur the process of change.

Regardless of the setting, or even sector, in which a nursing job exists, the nursing workforce has the potential to help the nation refocus on health as a holistic value. Nurses bring a specific set of knowledge and skills that, if encouraged to use them, could help address a new set of unmet needs that are emerging in the 21st century United States.

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