Primary care in the United States is in urgent need of transformation. The current organization and capacity of our primary care enterprise are insufficient to meet the healthcare needs of the public. The 2010 Affordable Care Act (ACA), which emphasizes the importance of primary care, has enabled millions more people to seek care at a time when more than half of Americans have at least one chronic condition and many have multiple illnesses and complex healthcare needs—trends that will continue as the population ages. However, resources currently allocated to primary care are inadequate. Strengthening the core of primary care service delivery is key to achieving the Triple Aim: improved patient care experiences, better population health outcomes, and lower healthcare costs.

These mounting pressures from external forces are shifting primary care toward new practice models staffed by high-functioning, interprofessional teams. Teams can increase access to care; improve the quality of care for chronic conditions; and reduce burnout among primary care practitioners, including physicians, physician assistants, and nurse practitioners. But this team-focused culture shift is nascent and, without enough appropriately trained healthcare professionals, primary care could falter under the increased demand.

Who can help alleviate the pressures on primary care? A tremendous, available resource is the 3.7 million registered nurses (RNs)—who comprise the largest licensed health profession in the nation. RNs are the ideal team members to help expand primary care capacity, yet they have been woefully underutilized in primary care settings. Practices that have deployed registered nurses in enhanced roles have shown improved health outcomes, reduced costs, and enhanced patient satisfaction.
Registered nurses, appropriately prepared and working to the full scope of their licensure, can successfully implement and sustain patient-centered services for the aging and increasingly complex primary care population. They can increase access to care for all patients, and also assist in the management of patients with chronic diseases—such as diabetes, hypertension, chronic obstructive pulmonary disease, and substance abuse and mental health conditions—who require more services. They also can help improve transitional care, as patients move between hospitals, other care facilities, and home. Further, they can help improve patient engagement, quality scores, and team collaboration using health assessments, teaching and patient education, motivational interviewing, medication reconciliation, care planning, and more. This can occur through RNs following a panel of patients as well as through nurse-led individual and group visits.

While the large RN workforce has the potential to help meet the 21st century demands facing primary care, a number of barriers must be overcome. First, many RNs currently working in primary care spend much of their time on patient triage, sorting out who needs to be seen immediately and who can wait. This is an important function, but primary care practices need to balance RNs’ time between traditional triage and the emerging chronic care management, care coordination, and preventive care. Second, some state laws limit utilizing RNs to the full extent of their education and training. Even when state law supports full practice authority, healthcare organizations sometimes restrict RNs from practicing to the full extent of their licensure.

Third, much of the work that RNs and other primary care team members currently perform is not directly reimbursable under the traditional fee-for-service payment model, meaning that new payment models are needed to facilitate the growth of primary care teams that include RNs. Finally, and perhaps most importantly, many RNs are not exposed consistently to the full range of primary care content in the classroom or through instructional clinical experiences, which overwhelmingly focus on inpatient and acute care. As a result, RNs may lack skills and competencies essential to functioning effectively in primary care.

The significance of these issues and their relevance to the mission of the Josiah Macy Jr. Foundation prompted the Foundation to focus its annual conference on the topic of Preparing Registered Nurses for Enhanced Roles in Primary Care. The conference represented the intersection of three themes of importance to the Foundation in its efforts to help reform health professions education: improving primary care, preparing nurses for leadership roles, and linking education reform and healthcare delivery transformation.

The conference generated actionable recommendations around the potential for RNs to help meet the urgent needs of primary care. Participants at the two-and-a-half-day working conference—held June 15–18, 2016 in Atlanta, Georgia—included more than 40 leaders in primary care, representing academic nursing and medicine, healthcare delivery organizations, professional nursing associations, healthcare philanthropy, and more. Nursing students also were at the table.

“The forward momentum in primary care means we are moving in the right direction, toward higher value care that is focused on improving the health of the public,” said Macy Foundation President George Thibault, MD. “But we have a long way to go. We simply can’t meet the primary care needs of the nation unless registered nurses are part of the solution, and we must prepare them appropriately and then use them for this role.”
Context for the Conference

Nursing has its roots in primary health care. Florence Nightingale, widely recognized as the 19th century founder of modern nursing, said: “Money would be better spent in maintaining health in communities rather than building hospitals to cure.” By the early 20th century, registered nurses were serving as autonomous primary care providers, particularly in urban centers and rural communities where the needs were greatest. In 1919, a nurse-run community health center regarded the hospital as a “repair shop, necessary only where preventive medicine has failed.”

Nursing, at its core, has a history of helping patients identify and improve their psychosocial and health needs. Nursing education, in contrast to other health professions education programs, includes a holistic approach to patients that is not solely based on organ systems or body parts. Nursing science includes an assessment of personal and familial health within a social and environmental context, not just a focus on disease and treatments. This becomes even more important as the role of primary care in the U.S. health system expands to acknowledge and address the role that social determinants of health play in achieving improved health status.

By the mid-20th century, health care’s center of gravity shifted from homes and communities to hospitals, and the nursing profession followed suit. Approximately, 60% of registered nurses work in hospitals, and nursing schools focus on the skills needed for inpatient hospital care, with little attention paid to practice in primary care settings. Yet the costs of hospital-based care are too high and the health of Americans lags behind other developed nations. Today, the pendulum is swinging back toward community-based primary care. Changes in nursing education, regulations, and payment are critical to support and accelerate this shift.

The Institute of Medicine’s *Future of Nursing* report, released in 2011, echoed these themes: “[W]hile changes in the healthcare system will have profound effects on all providers, this will be undoubtedly true for nurses. Traditional nursing competencies, such as care management and coordination, patient education, public health intervention, and transitional care, are likely to dominate in a reformed healthcare system as it inevitably moves toward an emphasis on prevention and management rather than acute [hospital] care.”

While significant progress has been made on the Future of Nursing recommendations concerning advanced practice nurses, particularly nurse practitioners, comparatively little attention has been paid to the report’s implications for RNs. The American Academy of Nursing approached the Macy Foundation to raise the significance of this issue, and the Foundation now hopes to reignite the conversation on the enhanced role of registered nurses in transforming primary care to meet the needs of the nation.

Conference Discussion

To create a baseline from which to launch the conference discussion, the Macy Foundation commissioned four papers on topics related to registered nurses and primary care practice. Prior to the conference, participants read the commissioned papers as well as other suggested articles, and on the first day of the conference, discussions centered on themes from these papers.

The first paper, *The Future of Primary Care: Enhancing the Registered Nurse Role* by Conference Co-chair Thomas Bodenheimer, MD, MPH, and his colleague, Laurie Bauer, RN, MSPH, both of the University of

---

2 Papers commissioned for this conference will be published in the full conference monograph in fall 2016.
California, San Francisco, described how the transformation of primary care in the United States is creating “favorable conditions” for growth in the number of RNs in primary care, particularly in larger practices and community health centers.

The paper also elucidated the likely roles of primary care RNs as focused around patients with chronic disease; patients with complex health needs and high healthcare costs; and patients whose care must be coordinated across many settings, including hospitals, skilled nursing facilities, ambulatory practices, and private homes. Barriers to more RNs working in primary care include the scarcity of nurses adequately prepared to perform primary care functions and payers not reimbursing for work performed by some members of the primary care team, including RNs.

Registered Nurses in Primary Care: Strategies that Support Practice at the Full Scope of the Registered Nurse License was the second commissioned paper. It was written by Margaret Flinter, APRN, PhD, FAAN, senior vice president and clinical director for Community Health Center Inc. (CHCI); Mary Blankson, APRN, DNP, chief nursing officer for CHCI; and Maryjoan Ladden, APRN, PhD, FAAN, senior program officer at the Robert Wood Johnson Foundation. This paper posits that achieving “better, safer, higher quality care that is satisfying to both patients and providers, and affordable to individuals and society” will require us to “effectively use every bit of human capital available in the primary healthcare system,” and presents a vision for the “blue sky” future of primary care and the role of RNs.

The third paper commissioned for the conference, Expanding the Role of Registered Nurses in Primary Care: A Business Case Analysis, was written and presented by Jack Needleman, PhD, FAAN, professor and chair of the department of health policy and management at the University of California, Los Angeles Fielding School of Public Health. The author describes new roles for RNs that achieve economic gains by engaging their expertise and reducing demands on primary care clinicians. These roles include RN co-visits; RN-only visits using standing orders; and increased responsibilities for RNs in care coordination, telehealth, patient education, and health coaching.

Through two case studies, the author describes how primary care practices have financially supported the expanded role of the RN. For example, in fee-for-service settings, increases in billable services can help pay for RNs in these new roles, while in capitated settings, additional RN-related costs can be offset.
by reduced use of other services, such as emergency department visits and hospital readmissions. Additional research is needed to examine the feasibility of these roles under emerging value-based payment structures and solidify the business case, but evidence suggests that increased engagement of RNs in caring for high-cost patients with chronic conditions will pay for itself and improve care.

The fourth and final commissioned paper discussed at the conference was Preparing Nursing Students for Enhanced Roles in Primary Care: The Current State of Pre-licensure and RN-to-BSN Education by Danuta Wojnar, PhD, RN, FAAN, professor and associate dean for undergraduate education at Seattle University College of Nursing, and Ellen-Marie Whelan, PhD, RN, CRNP, FAAN, chief population health officer at the Center for Medicaid and CHIP Services. The authors presented results from their survey examining primary care content in the curricula of the more than 500 pre-licensure (entry-level associate, baccalaureate, or master's degree) and RN-to-BSN education programs that responded to the survey. Though the authors acknowledged limitations regarding their findings, among survey respondents, only about 20 programs offered a robust primary care curriculum.

Findings from the survey focused on factors that facilitate and inhibit the implementation of primary care content in nursing curricula. Some of the factors facilitating primary care's inclusion in nursing schools are recognition of the emerging shift toward primary care; visionary leadership and forward-thinking faculty; increasing opportunities to learn with other health professions students; and mandates from state nursing commissions. Factors inhibiting the inclusion of primary care curricular content are lack of faculty buy-in and RN faculty preceptors; logistical challenges coordinating with community-based teaching sites; students’ fear of not acquiring acute care skills; and the perception that primary care is not considered a significant content area on the National Council Licensure Examination for RNs (NCLEX-RN).

During conference discussions, participants agreed that registered nurses are well suited to both generalized and specialized roles within primary care. Examples of generalized roles include managing the care of panels of patients with chronic diseases, working with interprofessional teams to improve the care of patients with complex healthcare needs, and managing transitional care for patients between inpatient facilities, ambulatory care, and home care. Registered nurses who are experts in diabetes, heart failure, asthma, or behavioral health, or who are focused on populations such as children or women, might perform specialized roles. A body of evidence regarding the contributions of nurses in such roles has demonstrated improved health outcomes and reduced costs.

As discussions progressed, conferees also agreed that preparing registered nurses to serve in expanded roles will require exposing learners to all types of nursing, including caring for patients across their lifespans and across all kinds of settings, from hospitals to community health centers and schools, from private homes to homeless shelters. While RNs should not be limited to acute [hospital] care, neither should they be limited to primary care. Instead, they should be encouraged to explore a variety of practice options to determine the best fit for their personal and professional needs and interests. Expanding educational options for nursing students, including the development of interprofessional, collaborative practice opportunities in a variety of community-based clinical settings, will require strong partnerships between leaders of academia and clinical practice.

Conferees also discussed how RNs can help address two other concerns that permeate many healthcare organizations: insufficient attention to eliminating persistent disparities in
care, which harm vulnerable populations; and overemphasis on acute care while minimizing the social determinants of health. RNs trained in culturally responsive care, including developing the knowledge and skills to recognize and address implicit and explicit bias and racism, will be better prepared to care for diverse patients and address population health.

Essential to all of this, the conferees agreed, is changing the culture of health care in general, and nursing in particular, to place more value on primary care as a career choice. Nursing leaders within both academia and practice environments must assume responsibility for this culture change. In concert, primary care practitioners must embrace enhanced roles for RNs in primary care. The Macy conferees agreed that enhancing the role of RNs to serve as members of primary care teams will not only improve patient care, but also help reduce burnout and increase job satisfaction among all team members. Further, if primary care hopes to solve its capacity problem in caring for the 21st century population, primary care practices will need to attract RNs by empowering them to enjoy professionally rewarding jobs—caring for patients, promoting health, preventing illness, and addressing population health.

The forward momentum in primary care means we are moving in the right direction, toward higher value care that is focused on improving the health of the public, but we have a long way to go. We simply can’t meet the primary care needs of the nation unless registered nurses are part of the solution, and we must prepare them appropriately and then use them for this role.

Conference Themes

The second day of the conference built upon the discussion themes that emerged during the first day, and conferees broke into groups to begin crafting recommendations in the following areas.

I: Changing the Healthcare Culture

II: Transforming the Practice Environment

III: Educating Nursing Students in Primary Care

IV: Supporting the Primary Care Career Development of RNs

V: Developing Primary Care Expertise in Nursing School Faculty

VI: Increasing Opportunities for Interprofessional Education
Conference Recommendations

Over the course of the second day, specific recommendations and supporting or sub-recommendations were drafted in small groups and debated during plenary sessions. On the third day, the draft recommendations were reviewed and refined—a process that continued via phone and email following the conference. As a group, the conferees felt strongly that the following recommendations were urgently needed and possible to achieve.

1. Leaders of nursing schools, primary care practices, and health systems should actively facilitate culture change that elevates primary care in RN education and practice.

2. Primary care practices should redesign their care models to utilize the skills and expertise of RNs in meeting the healthcare needs of patients—and payers and regulators should facilitate this redesign.

3. Nursing school leaders and faculty should elevate primary care content in the education of pre-licensure and RN-to-BSN nursing students.

4. Leaders of primary care practices and health systems should facilitate lifelong education and professional development opportunities in primary care and support practicing RNs in pursuing careers in primary care.

5. Academia and healthcare organizations should partner to support and prepare nursing faculty to educate pre-licensure and RN-to-BSN students in primary care knowledge, skills, and perspective.

6. Leaders and faculty in nursing education and continuing education programs should include interprofessional education and teamwork in primary care nursing curricula.
Recommendation I

Changing the Healthcare Culture. Leaders of nursing schools, primary care practices, and health systems should actively facilitate culture change that elevates primary care in RN education and practice.

Changes in educational priorities and in the structure of primary care practices will not happen without leadership from educational institutions, primary care practices, and professional organizations. Their incentive to take on this leadership role comes from evidence that these changes will result in better patient care, improved utilization of resources, and enhanced professional satisfaction. The necessary policy and payment reforms and broad community support will also require leadership advocacy. In addition, while there is evidence of the value of RNs in primary care practices, building a strong business case for their use will accelerate the pace of change in both education and practice.

Actionable Recommendations

1. Leaders of all healthcare organizations should support a culture change that reimagines primary care and the enhanced role of RNs. This culture change should maintain academic rigor around the biomedical model while increasing the emphasis on the family, social, environmental contexts of health and the importance of interprofessional teamwork in achieving better patient outcomes and greater professional satisfaction.

2. Leaders of nursing schools and practice sites should advocate and allocate resources for a re-balancing of nursing education to give greater priority to the teaching of primary care knowledge, skills, and attributes to pre-licensure nursing students, to RNs considering transitioning to primary care careers, and to the continuing professional development of primary care RNs. This will mean providing more primary care clinical opportunities for all pre-licensure nursing students, professional development opportunities for RNs in primary care who want to take on enhanced roles, and continuing education for practicing RNs contemplating a move into primary care.

3. Leaders of both educational and healthcare delivery systems should promote the academic-community partnerships that will be necessary to achieve the re-balancing of education and the higher visibility of primary care. Nurses should be in meaningful leadership roles in these partnerships, and the career development of nurses in these partnerships should be supported. These academic-community partnerships should also include patient, family, and community representation.

4. Leaders of both educational and healthcare delivery systems should work with policy makers, payers, government agencies, large employers, and community leaders to advocate for the changes necessary to support the work outlined in this report.

5. Leaders of all stakeholder organizations should help disseminate these recommendations, working with the American Academy of Nursing and the Josiah Macy Jr. Foundation.

The conclusions and recommendations from a Macy conference represent a consensus of the group and do not imply unanimity on every point. All conference members participated in the process, reviewed the final product, and provided input before publication. Participants are invited for their individual perspectives and broad experience and not to represent the views of any organization. The Josiah Macy Jr. Foundation is dedicated to improving the health of the public by advancing the education and training of health professionals.
Recommendation II

Transforming the Practice Environment. Primary care practices should redesign their care models to utilize the skills and expertise of RNs in meeting the healthcare needs of patients—and payers and regulators should facilitate this redesign.

Patient quality outcomes and the abilities of practices to build capacity can be improved using enhanced RN roles, but government and private payers must provide financial support for building primary care capacity. In addition, the practice environment must value enhanced RN roles and design care delivery and payment models to make best use of RNs’ skills and competencies. Doing so will improve access, outcomes, care coordination, and satisfaction.

Some best practices in the optimal deployment of RNs in primary care already exist. Exemplary primary care practices 3 are using RNs to begin the appointments, take histories, engage patients, and set the stage for long-term relationships—with a primary care practitioner (PCP) coming in near the end of a visit to perform medical management. Others are utilizing co-visits with RNs and PCPs working side-by-side in the patient encounter. In these practices, an RN takes the lead role in patient engagement, education, and activation, and uses data to inform practice. The nurse also may take the lead on pre-visit planning and follow up after the visit, in collaboration with the PCP, as well in transitional care and disease management. In most documented cases, relying on RNs in these ways has enabled primary care practices to increase their volume and revenues to the extent that, at a minimum, the RN’s salary is offset.

3 Examples of exemplary primary care practices will be included in the full conference monograph in fall 2016.

Actionable Recommendations

1. Primary care practices should evaluate the skill mix of current team members to ensure that their contributions are optimized, and either hire RNs into enhanced roles or reconfigure the roles of those already on the team. The RN roles should include care management and coordination for aging and chronically ill patients and those with increasingly complex health needs; promoting health and improving patients’ self-management of prevention and behavioral health issues; and placing greater emphasis on transitional care, prevention, and wellness. Practices should optimize the potential of RNs, allowing them to spend ample face-to-face time with patients.

2. Health systems and primary care practices should support the transformation from practitioner-dominated care models to team-based care models (“I to we”), with RNs leading the primary care team when appropriate given their expertise.

3. Payers should develop alternative payment models—such as shared savings for reducing expensive hospital admissions, re-admissions, and emergency department visits—so that the work of all primary care team members, including RNs, adds value rather than simply increases expenses. In fee-for-service systems, specific RN-visit types, such as Medicare wellness visits and care coordination, should be reimbursed at a higher level. RNs should be encouraged to acquire a National Practitioner Identifier (through the National Plan and Provider Enumeration System) for both payment and tracking purposes.

4. Nursing, primary care, and health services researchers as well as primary care administrators and chief financial officers
should develop the business case for enhanced RN roles in primary care, with an emphasis on their impact on quality; costs; patient, family, and team member and staff satisfaction; and their contributions to addressing social determinants of health in primary care settings. The evidence-based Ambulatory Nurse-Sensitive Indicators provides a much-needed tool to assist in quantifying the value of RNs in primary care.

5. Healthcare systems, professional organizations, states, and other regulatory entities should identify barriers, real and perceived, that limit or impede enhanced roles in primary care for registered nurses. Of particular importance are strategies for reducing barriers presented by outdated state practice acts that may limit RNs’ abilities to utilize their skills to the fullest extent. State medical and nursing boards and health system leaders should rely on research that supports enhanced roles in primary care for RNs, and they should facilitate the adoption of evidence-based guidelines and standing orders that empower RNs to carry out these roles.

Recommendation III

Educating Nursing Students in Primary Care. Nursing school leaders and faculty should elevate primary care content in the education of pre-licensure and RN-to-BSN nursing students.

A multi-pronged approach that spans classroom and clinical instruction is critical to elevating primary care in nursing education. Interventions include developing the pipeline of students interested in primary care, rebalancing curricula between acute and primary care instruction, and supporting graduates in seeking RN roles in primary care. The rebalancing of curricula to incorporate primary care content should be informed by adult learning theory and educational scholarship. These efforts will create a movement to build a critical mass of RNs in primary care.

Actionable Recommendations

1. Nursing schools should work with the communities they serve to develop a pipeline of diverse students to meet the needs of diverse patient populations. Admissions criteria should be broadened to identify candidates with particular interest in and aptitude for primary care and community service.

2. Nursing faculty must broaden and deepen the primary care focus in the curriculum. Doing so includes enriching content on topics such as wellness, health promotion, and disease prevention; population health and risk stratification; motivational interviewing and health coaching; health equity; leadership, cost of care, delivery models and systems innovations; care coordination and care transitions; chronic care and complex care management with associated behavioral health concerns; longitudinal care throughout the lifespan;
culture change and primary care practice transformation; informatics and data analytics; and telehealth and virtual delivery models.

3. Schools of nursing must reach out to primary care practices to develop innovative arrangements for meaningful clinical experiences for nursing students. Accomplishing this will require that schools create an inventory of primary care practices, partner with them to develop enhanced clinical experiences that can include longitudinal opportunities for students to serve the same individual and family across settings, and adapt the designated education unit concept in high-performing primary care sites.

4. Nursing faculty must provide opportunities for students to have exposure to primary care outside of the curricular experiences. This exposure could include informing students of the opportunities to delve more deeply into issues in primary care through working with organizations that promote primary care, such as Primary Care Progress.

5. Nursing faculty should establish a strong evaluation and research component to improve on curricular changes and identify best practices in preparing pre-licensure and RN-to-BSN students for enhanced roles in primary care. This component could include examining the impact of curricular changes on licensure performance and career choices.

Recommendation IV

Supporting the Primary Care Career Development of RNs. Leaders of primary care practices and health systems should facilitate lifelong education and professional development opportunities in primary care and support practicing RNs in pursuing careers in primary care.

Registered nurses working in primary care practices or interested in transitioning into primary care will need to strengthen or build primary care knowledge and competencies in areas that include chronic disease management, care coordination, care transitions, prevention and wellness, interprofessional teamwork, and triaging. This skills acquisition will require a learning system designed to assure that the most recent knowledge for innovation, evidence, system design, leadership, and technology within primary care settings is available and accessible to practicing RNs. Educational modalities should be varied, flexible, and promote development of a diverse primary care RN workforce, including opportunities for academic-practice partnerships, residency programs, and engagement in the redesign of primary care practice.

Actionable Recommendations

1. Schools of nursing, health systems, and professional organizations should create opportunities for lifelong education and professional development in primary care for RNs, including nurse managers and executives. Potential partners who can help develop learning modules include professional nurses associations as well as national organizations focused on healthcare transformation.
2. The American Nurses Credentialing Center (ANCC) should establish a Magnet®-type recognition program for primary care practices, or incorporate a primary care focus into the existing Magnet® program. This would encourage primary care systems to create practice environments known for their excellence in nursing practice and high-quality care. The ANCC convene leaders within professional nursing associations to develop an action plan.

3. Academic and practice leaders should develop academic-practice partnerships across primary care settings and schools of nursing to create residency programs in primary care; enhance RN development; co-design curricula and toolkits for implementing educational programs; and disseminate co-designed curricula to organizations supporting primary care transformation, such as health plans, foundations, and consultant agencies, as well as entities that provide continuing nursing education.

4. Primary care practices should establish opportunities to engage registered nurses in the redesign of primary care with foci on full RN practice authority, leadership, and interprofessional practice.

5. Primary care practices and organizations involved in training healthcare professionals should provide staff development and continuing education on enhanced RN roles at the practice level, prioritizing RN-led contributions to the specific needs of the community served by the practice and reflecting the culture, language, and values of the community.

**Recommendation V**

**Developing Primary Care Expertise in Nursing School Faculty.** Academia and healthcare organizations should partner to support and prepare nursing faculty to educate pre-licensure and RN-to-BSN students in primary care knowledge, skills, and perspective.

Although some nursing faculty teach primary care content in undergraduate programs, many are more comfortable teaching acute, inpatient hospital content in classrooms and clinical settings. To re-balance nursing education toward a greater primary care orientation, there is a need for considerable faculty development in the areas of primary care nursing knowledge, skills, and functions. Academia and ambulatory practices should work together in this endeavor.

A primary care perspective not only looks at an acute inpatient episode in a patient’s life, but also concerns itself with the entire trajectory of a patient’s illness throughout the lifespan. Moreover, while nursing care in acute settings has focused on RNs implementing the orders of practitioners (physicians, nurse practitioners, or physician assistants), RNs in ambulatory practice may make autonomous patient care decisions within their scope of practice and under standardized protocols.

**Actionable Recommendations**

1. Deans, other leaders of nursing education, and faculty should utilize an interprofessional model of RN faculty development. Faculty who achieve competence in primary care practice should be recognized and rewarded for their broadened knowledge, expertise, and skills.

2. Health systems and health insurers should help fund faculty development, including residencies and fellowships in primary care.
nursing, as they may benefit financially from the enhanced RN primary care roles. Further, schools of nursing should develop innovative partnerships with primary care practices to help them recruit faculty and develop instructional materials and other educational resources on the primary care nursing paradigm.

3. Nurses actively working as care coordinators, chronic care managers, and other enhanced roles in primary care should have joint faculty appointments to teach both didactic and clinical primary care competencies. Nursing faculty should spend time working in primary care practices to enhance their own skills and close the gap between education and practice.

4. Nursing faculty should model an RN culture of equal partnership with physicians and other team members, such that RNs become comfortable caring for patients autonomously under standardized protocols as authorized by state nursing boards. Faculty should educate nurses to care for patients not only during an acute episode of illness but also throughout their lifespan and across acute care, primary care, and home settings, paying attention to socioeconomic, cultural, and environmental factors impacting the health of the population.

5. Partnerships should be developed between nursing schools, other health professions schools, and health systems to further the integration of RN education and interprofessional education with primary care clinical practice. Partnerships may be contractual, specifying the responsibilities of each party, or involve a health system partnering with a nursing school to create the strongest possible integration between RN education and practice.

Recommendation VI

Increasing Opportunities for Interprofessional Education. Leaders and faculty in nursing education and continuing education programs should include interprofessional education and teamwork in primary care nursing curricula.

Interprofessional teams are key to successfully transforming primary care to meet the healthcare needs of the public. Thus, opportunities for interprofessional education (IPE) and teamwork are essential in the preparation and continuing education of all primary care team members, including registered nurses. This theme cuts across all prior recommendations on education and faculty development, but conferees felt it was of such paramount importance that it should be reinforced as a separate recommendation.

Actionable Recommendations

1. All primary care nursing education curricula should incorporate core interprofessional competencies, such as those developed and disseminated by the Interprofessional Education Collaborative and the Quality and Safety Education for Nurses Institute. Additional foundational support for IPE curriculum development is available from the National Center for Interprofessional Practice and Education and Collaborative Practice and from the Institute for Healthcare Improvement’s Open School. Essential steps include:
   - Convene leading health professions education and practice groups, and patient and family representatives, to co-develop the curriculum;
• Identify competencies to prepare registered nurses for expanded roles in primary care; and

• Ensure that the curriculum is deployed in the continuum of education of current and emerging primary care professionals. One example of an educational tool that includes interprofessional elements is the American Academy for Ambulatory Care Nursing’s modules for clinical care coordination and transition management.

2. Deans and faculty should position students from all professions to bridge and accelerate the connection of academia and practice and to drive change in practice sites. For example, have students from multiple professions work with a shared panel of high-risk primary care patients or engage in a classroom discussion about best practices in primary care.

3. Deans and faculty should leverage technology as a catalyst to spread innovative curricula and collaborative practice in primary care. Technology fosters better education and collaboration in primary care teamwork. For example, simulations may be used to model important resource management challenges. One scenario, for example, might require all team members to use the same electronic health record screens to record and integrate information about a patient.

Conclusion

Preparing registered nurses for enhanced roles in primary care is an urgent issue; exemplary practices show that these enhanced roles are achievable.

To succeed in this endeavor, primary care and nursing education need to undergo fundamental culture change, assisted by the engagement, support, and commitment of a wide variety of stakeholders. Patients will be the ultimate beneficiaries.
Participants

Carmen Alvarez, PhD, RN, CRNP, CNM  
*Johns Hopkins University*

Erica Arana, RN, DNP, PHN, CNS, CNL  
*University of San Francisco*

Cynthia C. Barginere, DNP, RN, FACHE  
*Rush University College of Nursing*

Debra J. Barksdale, PhD, FNP-BC, ANP-BC, CNE, FAANP, FAAN*  
*Virginia Commonwealth University*

Kenya Beard, EdD, GNP-BC, NP-C, ACNP-BC, CNE  
*Jersey College*

Judith G. Berg, RN, MS, FACHE  
*HealthImpact*

Bobbie Berkowitz, PhD, RN, FAAN*  
*Columbia University School of Nursing*

Mary Beth Bigley, DrPH, MSN, APRN, FAAN  
*Health Resources and Services Administration*

Thomas Bodenheimer, MD, MPH*  
*University of California, San Francisco School of Medicine*

Janice Brewington, PhD, RN, FAAN  
*National League of Nursing*

Peter I. Buerhaus, PhD, RN, FAAN  
*Montana State University College of Nursing*

Ellen Chen, MD  
*San Francisco Health Network*

Marilyn P. Chow, PhD, RN, FAAN  
*Kaiser Permanente*

Pamela F. Cipriano, PhD, RN, NEA-BC, FAAN  
*American Nurses Association*

Jason Cunningham, DO  
*Sebastopol Community Health Center*

Malia Davis, MSN, RN  
*Clinica Family Health Services*

Margaret Flinter, APRN, PhD, FAAN, FAANP, e-FNP  
*Community Health Center, Inc.*

Erin Fraher, PhD, MPP  
*The University of North Carolina at Chapel Hill*

Robyn L. Golden, MA, LCSW  
*Rush University Medical College*

Andrew Harmon, BS  
*Thomas Jefferson University College of Nursing*

Susan B. Hassmiller, PhD, RN, FAAN  
*Robert Wood Johnson Foundation*

Laura Hieb, MBA, BSN, RN, NE-BC  
*Oconot Hospital and Medical Center*

Anne Jessie, DNP, RN  
*Carillion Clinic*

Gerri Lamb, PhD, RN, FAAN  
*Arizona State University College of Nursing and Health Innovation*

Diana J. Mason, PhD, RN, FAAN*  
*Hunter College, City University of New York*

Peter McMenamin, PhD  
*American Nurses Association*

Storm L. Morgan, MSN, RN, MBA  
*U.S. Department of Veteran Affairs*

Andrew Morris-Singer, MD  
*Primary Care Progress*

Mary Naylor, PhD, RN, FAAN  
*University of Pennsylvania School of Nursing*

Jack Needleman, PhD, FAAN  
*UCLA Fielding School of Public Health*

Camille Prado, BS, RN  
*University of California, San Francisco*

Joyce Pulcini, PhD, RN, PNP-BC, FAAN*  
*The George Washington University School of Nursing*

Lisa Rivard, RN, CDE  
*Scripps Health and Neighborhood Health Care Clinics*

Sandra Ryan, RN, MSN, CPNP, FCPP, FAANP, FAAN  
*Walmart*

Stephen C. Schoenbaum, MD, MPH*  
*Josiah Macy Jr. Foundation*

Karla Silverman, MS, RN, CNM  
*Primary Care Development Corporation*

Thomas A. Sinsky, MD  
*Medical Associates Clinic*

Alice D. Smith, BS, RN  
*Harvard Vanguard Medical Associates*

Beth Ann Swan, PhD, CRNP, FAAN*  
*Thomas Jefferson University College of Nursing*

George E. Thibault, MD*  
*Josiah Macy Jr. Foundation*

Donna Thompson, RN, MS  
*Access Community Health Network*

Deborah Trautman, PhD, RN, FAAN  
*American Association of Colleges of Nursing*

Ellen-Marie Whelan, PhD, RN, CRNP, FAAN*  
*Center for Medicaid and CHIP Services Centers for Medicare and Medicaid Innovation*

Danuta M. Wojnar, PhD, MN, MED, IBCLC, FAAN  
*Seattle University College of Nursing*

Staff

Peter Goodwin, MBA  
*Josiah Macy Jr. Foundation*

Yasmine R. Legendre, MPA  
*Josiah Macy Jr. Foundation*

Cheryl Sullivan, MSES  
*American Academy of Nursing*

Ellen J. Witzkin  
*Josiah Macy Jr. Foundation*

Teri Larson  
*Teri Larson Consulting*
To receive further updates from the Macy Foundation, sign-up at www.macyfoundation.org.

Registered Nurses: Partners in Transforming Primary Care: Recommendations from the Macy Foundation Conference on Preparing Registered Nurses for Enhanced Roles in Primary Care