

Increasing Primary Care Capacity Through Academic Preparation and Effective Utilization of Registered Nurses in Team-Based Delivery

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Introduction: Escalating Need for Primary Care

California will face a shortage of 4,100 primary care providers in the next 10 years, according to a 2019 report by the California Future Health Workforce Commission.¹ At the same time, the demand for primary care services will continue to accelerate due to the state's growing and aging population, as well as payment models requiring value-based care and strong patient-centered focus on health maintenance and illness prevention.

The trends point to an urgent need to expand and more efficiently deploy California's primary care work-force. Effective utilization of registered nurses will be a crucial factor in addressing this need as part of interprofessional team-based care models.^{2–5}

There are more than 430,000 registered nurses (RNs) in California, the state's largest group of licensed health care professionals.⁶ The size and skill of this potential workforce—currently underutilized in ambulatory care—represents an opportunity to strategically address the growing demand for lower-cost, more effective primary care through new care delivery models that use RNs to their maximum effectiveness. Team-based care can help address rising costs and increasing demand as well.

However, realizing this potential will require addressing the academic-practice gap with significant changes in the way nursing schools prepare students for practice as well as the way primary care settings enhance and deploy RNs' knowledge, skills, and experience.

To acquire information to serve as a basis for specific recommendations, an 18-month project, *Improving Capacity for Team-Based Care: The Registered Nursing Workforce in Primary Care*, was launched in January 2018. (See sidebar, About This Project.) The project investigated current nursing roles in primary care, academic preparation of RNs for work in ambulatory settings, and gaps between current practices and what will be needed in the primary care workforce of the near future.

" My role is unique in that I work with people who may have no one else in their lives, often being the primary liaison when they interact with different health care systems. "

– PRIMARY CARE RN

About This Project

An advisory team of experts in primary care, nursing, and academia guided development of the project, including design of survey instruments and focus group processes. The team also recommended the recruitment of participants and codeveloped recommendations for action. See Appendix A for a list of advisors.

A statewide primary care survey and series of focus groups conducted in fall 2018 invited broad participation. Responses were received from 112 primary care site leaders in various types of health care organizations, 199 RNs working in primary care settings, and 58 academic leaders of RN pre-licensure nursing programs. The survey was designed to:

- Obtain information about the current primary care RN workforce, including the utilization of RNs and their roles.
- Consider the academic preparation and readiness of nursing students for RN roles in primary care.
- Explore strategies supporting the preparation of the future nursing workforce in these practice settings.

Focus groups were conducted in four geographical regions of California. Participants were leaders in organizations providing primary care, RNs practicing in primary care settings in various roles, and RN prelicensure nursing program leaders and faculty. The focus groups were designed to validate and build on the survey findings, providing opportunities to explore issues in detail. These discussions informed the development of recommendations and strate-gies detailed in this paper. See Summary of Findings (page 3).

Trends and Driving Forces

The health care environment is changing dramatically due to rising costs, increasing demand for services, shifting consumer expectations, workforce shortages, payment restructuring, and policy changes.^{7,8} Two of the most notable trends impacting primary care and RNs are discussed below.

Value-Based Payment and Care

Health care is transitioning away from hospital-centric models of care delivery to those that address social determinants of health and are community based, prevention and wellness oriented, and focused on optimizing client health independence. This shift elevates the importance of primary care in improving client and population health (whether defined by geographical boundaries or specific characteristics) and reducing cost.⁹⁻¹¹

Changing payment models that tie payment to outcomes are setting new expectations for efficiency and effectiveness. Combined with growing demand and provider shortages, this is driving organizations providing primary care to develop new skill sets and reconfigure their resources.¹² Many are expanding capacity by implementing team-based, client-centered care models in which providers work collaboratively with other team members to allow for larger patient panels and additional services.

The RN Workforce

Traditionally, RNs have not had an extensive role in the primary care workforce.¹³ However, as care models evolve to include prevention, wellness, management of chronic conditions, and population health, RNs are well positioned to assume roles and provide patientfocused care in all these areas.^{14,15} (See sidebar.^{16,17}) Baccalaureate-level nurses particularly have a grounding in leadership, research, and public health that enables them to address complex health and community-based needs.^{18,19} The Institute of Medicine (IOM)'s landmark report Crossing the Quality Chasm: A New Health System for the 21st Century identified nursing as the largest component of the health care workforce in a key position to improve client safety and influence the health care system.²⁰ Evidence supports the importance of RN roles working within interprofessional teams in achieving better outcomes.²¹ Many of the Affordable Care Act regulatory measures and Centers for Medicare & Medicaid Services (CMS) quality metrics link to functions and competencies that are carried out through nursing roles and responsibilities.²²

Definitions

Nursing is the protection, promotion, and optimization of health and abilities, prevention of illness and injury, alleviation of suffering through the diagnosis and treatment of human response, and advocacy in the care of individuals, families, communities, and populations.

- AMERICAN NURSES ASSOCIATION

Professional ambulatory care nursing is a complex, multifaceted specialty that encompasses independent and collaborative practice. The comprehensive practice of ambulatory care nursing is one built upon a broad knowledge base of nursing and health sciences, and applies clinical expertise rooted in the nursing process. RNs use evidencebased information across a variety of outpatient health care settings to achieve and ensure patient safety and quality of care while improving patient outcomes.

- AMERICAN ASSOCIATION OF AMBULATORY CARE NURSES

Assumptions Underlying This Project

The project team took into account a number of factors in determining the assumptions that would underlie their work: the driving trends affecting the primary care landscape and the RN workforce, a review of literature and relevant evidence, and findings of the project's surveys and focus groups. The assumptions include the following:

- Demand for primary care will continue to increase in all areas of California as a result of population growth, aging, and efforts to control cost.
- The transition to value-based payment will accelerate in response to rising health care costs.
- Demand for improved quality outcomes, for individuals and populations, and transparency of public reporting addressing measures attributable to primary care will continue to increase and be linked to ongoing payment reform.
- Team-based care delivery models build on the unique expertise of multiple health professionals to benefit populations served.
- Team-based care increases a practice's capacity to care for more clients and families and strengthens its ability to provide comprehensive care to complex populations.
- RNs with various levels of academic preparation, professional development, and experience in primary care are well positioned to provide a broad range of clinical, organizational/system, and leadership/administrative functions in diverse roles.
- Alignment of the academic preparation of nurses entering the workforce with shifts in care delivery models strengthens pipelines to employment and facilitates transition to practice for the effective utilization of RNs in primary care.

Summary of Findings

The surveys and focus groups provided information about current and evolving nursing roles, workforce development needs, and challenges related to the preparation and effective utilization of RNs in primary care practice. Takeaways from the findings are highlighted below and further detailed in the section Recommendations for Change: Five Key Domains (page 4).

RNs perform many functions in primary care. The core functions most often performed by RNs participating in the survey included clinical functions such as intake assessment and triage, care management of complex conditions, coordination of care across health care services and settings, education of clients and families, and collaboration within interprofessional teams. Leadership functions included quality improvement activities, developing and mentoring colleagues, coordination of the health care team, and administrative functions involving program development, resource allocation, and strategic planning. RNs can perform a broad range of functions; however, there is significant variability in their role's functions among practice settings.

Academic preparation does not sufficiently address preparation for practice in primary care. Pre-licensure nursing curricula leave many areas essential to primary care largely untouched. These include chronic disease management, care coordination, care transition management, prevention, enhancing wellness through self-management, triaging, and monitoring quality and effectiveness of care at individual and population levels. Limited clinical education time is conducted in non-acute health care settings. Current curricula focus predominantly on acute care concepts, learning experiences, and nursing roles, preparing RNs as generalists for entry into practice. Newly licensed RNs have insufficient preparation and experience with community-based populations, ambulatory health care settings, and RN roles.

Transition and residency programs are limited in number. Transition-to-practice/residency programs that support role development of newly licensed RNs entering practice or experienced RNs moving into new practice settings outside of acute care are rare. The dearth of such programs contributes to limited development from novice to expert in primary care professional nursing practice.

Responsibility for education of RNs in specialized primary care roles often falls to practice settings. Practices may face challenges fulfilling this responsibility, such as limited resources or experience developing RNs for roles in emerging practice models. Such limitations hinder effective guidance and onboarding, RN progression from novice to expert competencies in specialized roles, and effective team integration.

Required competencies are extensive. The synthesis of findings indicated that preparing new RNs entering practice and experienced RNs moving into various primary care roles needs to include the following competencies essential to primary care:

- Knowledge of chronic conditions, common laboratory tests, medications commonly used in primary care, behavior change theory, social determinants of health, community resources, motivational interviewing, and health coaching.
- Skills and ability to case-manage and coordinate care for complex conditions and across settings, including working with community agencies for effective referrals, accurately triaging clients, using electronic health records effectively, selecting and administering appropriate immunizations, assessing and providing needed education about prevention and management of health conditions, and interacting effectively with team members.

The findings are further detailed and discussed in Recommendations for Change: Five Key Domains, below.

Recommendations for Change: Five Key Domains

Preparing RNs to perform in specialized primary care roles relies on progress in five key domains based on analysis of findings obtained through this project. These domains are consistent with those of the conference proceedings on "Preparing Registered Nurses for Enhanced Roles in Primary Care" convened by the Josiah Macy Jr. Foundation in June 2016.²³ The following section summarizes challenges in each domain, discusses effective strategies, and provides recommendations for change or improvement. The recommendations for change were informed by the data obtained from survey participants, dialogue with the focus groups, and diverse expertise of the project's advisory team. Note that the recommendations in this section are organized by domain; the same recommendations can be found in Appendix B, organized by responsibility.

The following are the five domains:

- 1. Transforming the practice environment to effectively utilize RNs
- 2. Supporting the primary care career development of RNs
- 3. Educating nursing students in primary care
- 4. Developing nursing program faculty with primary care expertise
- 5. Increasing opportunities for interprofessional education and development of collaborative team-based practice models

The full report, *Primary Care Survey and Focus* Groups: Synthesis of Findings, is available at www.healthimpact.org.

DOMAIN 1 Transforming the Practice Environment to Effectively Utilize RNs

Ninety-five different job titles were reported by primary care RNs; 28 of the titles were used by RNs in direct care positions.

A large number of job titles were reported by primary care RNs responding to the survey conducted as part of this project. In fact, 95 different job titles were reported; 28 of the titles were used by RNs in direct care positions. The wide variety of position titles illustrates the diversity of RN roles and their range of functions in primary care settings.²⁴ However, 46.3% of RNs and 29.9% of primary care leaders also indicated that RN roles were not very clear.²⁵ The focus groups further identified the lack of role clarity and absence of — or limitations in — organizational policies and procedures as barriers for RNs in working to the top of their scope of licensure.

Notably, many of the practice setting strategies identified by Bodenheimer and Bauer to support more effective RN role functioning in *RN Role Reimagined: How Empowering Registered Nurses Can Improve Primary Care*²⁶ were rarely or never performed by RNs participating in this project's survey,²⁷ as summarized below:

- ▶ 26.0% indicated they did not use standardized procedures or protocols for special functions.
- ▶ 52.3% reported they did not participate in chronic disease management.
- 70.2% said they did not participate in case management for complex patients.
- 73.9% indicated they were not involved in population health management.
- 54.2% indicated they were not involved in quality and/or process improvement activities related to direct care (that percentage rose to 59.7% when RNs were asked about improvement activities within and between health care settings and services).

Additionally, focus group participants identified clerical tasks such as obtaining health care records and insurance approvals as taking inordinate amounts of their time; such tasks reduced their available time for care coordination and case management of complex and chronic health conditions—identified as two of the most important RN roles in primary care.²⁸

Changing practice patterns to adopt or expand these functions will require fundamental changes in practice models addressing gaps within existing primary care practices to meet evolving primary care goals. Conducting a gap analysis of the scope of services needed, including characteristics specific to the population served and identification of functions to support intended outcomes, should inform and guide the composition of the interprofessional team, including various RN roles. While the size of a primary care practice influences workforce planning, the effective allocation of personnel resources aligned with professional functions carried out by each discipline strengthens success. There are clearly roles for all RNs in primary care settings; however, team-based care can be enhanced by hiring RNs with the appropriate education and experience needed for the specific functions to be carried out. RNs prepared at the baccalaureate or higher level have a broader base of preparation to fill more comprehensive roles involving population-based management.

RECOMMENDATION 1 Ensure that RNs practice to the full scope of their licensure, educational preparation, and experience, and are effectively utilized as integral members of the interprofessional care team.

1.1 Develop and adopt standardized procedures that reflect evidence-based practices specific to common health problems of clients treated by the primary care practice; use the processes outlined in the California Nursing Practice Act,²⁹ including the following:

1.1.1 Provide clear expectations for the training, experience, education, and evaluation of RNs approved to carry this work out; the expectations should address specific activities, competencies,

and requirements for provider notification and communication.

1.1.2 Evaluate the effectiveness of standardized procedures for RNs in managing health care needs and outcomes, including the impact of these protocols on workflow, skill mix of personnel, and RN scope of work.

1.2 Utilize RNs with appropriate education and experience to supervise and/or provide preventive care services and contribute to population/panel management supporting healthier communities.

1.2.1 Require that chronic and routine preventive services follow evidence-based guidelines based on demographics of specific populations, individual characteristics of each client, and defined categories of risk.

1.2.2 Improve access for clients to more comprehensive care, including effective care management by providers and other health team members.

1.2.3 Expand panel capacity and capability through integration of RNs on the primary care team to increase access, including conducting co-visits with a provider,³⁰ enhance client experiences, improve chronic disease outcomes, and reduce emergency department (ED) encounters and hospitalizations.

1.3 Utilize RNs to provide complex care management to groups of clients identified to need and benefit from it, including those with multiple comorbidities, uncontrolled chronic or acute illness, high ED utilization, or significant social-environmental or economic challenges, as well as those experiencing transitions in care.³¹

1.3.1 Apply ambulatory care standards of practice as applicable to RN roles in primary care settings.

1.3.2 Deploy RNs in roles that strengthen performance-driven outcomes and meet the quality metrics required by value-based payment methods.

1.3.3 Use RN care management and care coordination roles to support continuity of care, optimize health, and engage clients and families in self-care.

1.3.4 Enable RN-only services for established clients in selected services, including immunizations, prescription refills or dosage adjustments, treatment of specific infections, wellness visits, and health screenings guided by standardized procedures, or chronic care management of individual clients with a comprehensive plan of care in place.

1.4 Establish an environment, systems, and workflows that promote effective utilization of RNs in various specialized functions such as triage, care management, care coordination, patient teaching, and team coordination.

1.5 Identify and reassign tasks and functions that are currently performed by RNs but that do not require the knowledge and skills of a licensed RN.

1.6 Assess volume, workflow, core functions, systems, and composition of primary care teams in order to establish an effective environment for all team members, including RNs, to practice to their full potential.

 Working with people in communitybased settings involves the assessment of their real-life challenges, the impact of barriers on vulnerable populations, and addressing health inequities and social determinants of health.

- PRIMARY CARE PROVIDER

DOMAIN 2 Supporting the Primary Care Career Development of RNs

Employers are well aware of the need to support new and experienced RNs in learning specialized roles, yet face challenges such as limited time, resources, and personnel to train and mentor RNs.

Because pre-licensure RN education offers little exposure to primary care, it is incumbent on the practice setting to provide initial education, support, and coaching for RNs entering primary care. In particular, RNs need to gain knowledge and competencies in functions that include chronic disease management, care coordination, care management, prevention and wellness, triaging, and interprofessional teamwork.³²

However, many employers have difficulty developing RNs for practice in primary care due to limited resources, time, and qualified personnel within their practice setting to accomplish this work. Often supervisors and leaders are not RNs themselves, and currently employed RNs may lack qualifications and experience to develop other RNs. This is particularly pertinent when practices are expanding their scope of services and developing new roles.

Since primary care practice sites do not typically hire large numbers of RNs at one time, practical solutions may involve several practice sites working together in regional partnerships in collaboration with an academic nursing program. A credited class may be offered through the nursing program, with the clinical portion being provided by each employer site through preceptorships with experienced primary care RNs. This type of academic-practice model of education has been proven to be effective in other clinical areas and practice settings.³³

Ongoing professional development — apart from the assistance an employer may be able to offer — would also be valuable for RNs working in primary care. While the American Academy of Ambulatory Care Nursing (AAACN) addresses the standards, development, and competencies of ambulatory care nursing

practice overall, there is a need for further focus on primary care nursing. $^{\rm 34}$

The research pointed to the value that a centralized statewide network could bring to the advancement of primary care nursing practice. As part of these efforts, a team of experts could be developed to advise and mentor primary care site leaders and RNs, as well as to advise academic nursing programs in developing primary care curricula.

The four recommendations within this domain address initial support of RNs entering primary care, the creation of community-based development programs, support of academic progression of RNs in primary care, and creation of a community-based or statewide network to advance primary care nursing practice.

RECOMMENDATION 2 Provide initial education, support, and coaching for RNs entering primary care to acquire the specific knowledge and skills they will need.

2.1 Recruit and develop RNs to work with new hires. Identify RNs with broad-based knowledge in various chronic illnesses and pharmacology/medication management, as well as experience working in interprofessional practice teams. They also need skills providing client- and family-focused care using motivational interviewing/health coaching.

2.2 Assess the knowledge, experience, and capability of new hires to perform core primary care functions, and establish plans for competency-based development in specialized roles.

2.3 Conduct or support access to transition-topractice programs for newly licensed RNs upon hire. Programs should include education, supervision, and mentoring by an experienced primary care RN.

2.4 Support the transition-in-practice of experienced RNs who are new to primary care or moving to a different role by providing education, supervision, and coaching. Evaluate achievement of essential skills for safe practice in key functions. **RECOMMENDATION 3** Create or engage with regional coalitions and collaborative partnerships among primary care employers, with one or more academic nursing programs, to establish community-based transition-to-practice programs.

3.1 Assess nursing workforce needs across primary care organizations, identifying options for collaboration on program content, teaching methods, structure and scalability, and resources needed and available.

3.2 Identify core content and learning outcomes specific to RN roles in primary care, including essential knowledge and skills needed for various RN functions, evidence-based clinical practice, and working within interprofessional teams.

3.3 Provide on-site experienced primary care RNs as preceptors to support role transition, or access experts and mentors through a community-based transition-to-practice program.

3.4 Determine resources needed to develop and conduct the program, including short- and longterm funding sources. These may include shared resources or in-kind contributions; support for startup development through grants, foundations, or health plans; and sustainable funding streams.

3.5 Support the development and institutionalization of programs scaled to meet evolving needs through sustainable funding streams. Establish program registration fees to be paid by participating organizations that enroll RNs in the program, or paid directly by RNs in the community with interest in considering a career path in primary care.

3.6 Identify measures and metrics to evaluate program results, addressing the costs and benefits to employers. Include impact on nurse-sensitive quality measures, return on investment related to successful transition and improved retention of nurses, progressive demonstration of core competencies, improved utilization and effectiveness within interprofessional teams, and client health outcomes. **RECOMMENDATION 4** Advance the professional development of RNs currently practicing in primary care through academic progression and supporting career options in primary care roles.

4.1 Provide coaching, mentoring, and guided experience-based practice opportunities for RNs to extend competencies in specialized roles such as care management of a high-risk population, care coordination across health care systems and various levels of care, or to fill leadership roles.

4.2 Develop RNs with broad-based knowledge in various chronic illnesses, pharmacology, and medication management; experience working within interprofessional teams; and skills providing client- and family-focused care utilizing goal-directed self-management methods.

4.3 Provide support through clinical ladder mechanisms to recognize attainment of additional professional degrees and certifications.

4.4 Consider certification in ambulatory care nursing through the AAACN as may be applicable.

RECOMMENDATION 5 Develop a centralized statewide network to guide and advance primary care nursing practice through education, mentoring, development of resources and tools, identification and dissemination of best practices, and research.

5.1 Facilitate the development of a primary care nursing association to lead and carry out activities that support and advance education and practice in primary care nursing, including the identification and dissemination of best practices.

5.2 Establish a team of primary care nursing experts from academia and practice to advise and guide the development of primary care RNs, provide education, develop tools, identify and disseminate resources, and offer mentoring and consultation to primary care site leaders supporting the effective utilization of RNs in various roles.

DOMAIN 3 Educating Nursing Students in Primary Care

Traditionally, pre-licensure programs have focused on preparation for practice in acute care settings. However, almost 41% of newly licensed nurses employed in their first RN position are working in ambulatory care areas.

Historically, pre-licensure programs have focused on preparing RNs for hospital-based settings, emphasizing in-patient clinical learning experiences.³⁵ However, a growing number of RNs are practicing in diverse community-based and ambulatory care settings, with 43.9% of RNs employed outside of acute care inpatient and emergency settings.³⁶ Similarly, almost 41% of newly licensed RNs employed in their first RN position are working in ambulatory care areas, as reported in the *California Newly Licensed RN Employment Survey* conducted annually by *HealthImpact.*³⁷

These data and the report findings point to the need for curricula to prepare students with broad knowledge, skills, and experiences applicable to diverse practice settings, team-based models of care delivery, and nursing roles across the continuum of care, emphasizing health promotion. The National Advisory Council on Nurse Education and Practice report to congress, *The Roles of Nurses in Primary Care*, recommended that the Secretary of the Department of Health and Human Services and the US promote interprofessional primary care education and nursing in the primary care workforce as integral to improving population health.³⁸

Building partnerships between nursing schools and primary care practices to enhance nurse preparation offers mutual benefit. Nursing curricula and course content can be strengthened, while primary care sites are supported in fostering the development of experienced RNs who function as preceptors. The following two recommendations within this domain concern the preparation of pre-licensure nurses and the creation of partnerships with academic institutions.

RECOMMENDATION 6 Prepare students in RN prelicensure programs with broad knowledge, skills, and experiences applicable to diverse ambulatory practice settings and nursing roles across the continuum of health care settings, emphasizing health promotion and illness prevention.

6.1 Ensure principles of health promotion and illness prevention are included as central primary care concepts and core functions of all RN roles. Provide curricular content and clinical education experiences across all practice areas.

6.2 Promote the inclusion of various ambulatory practice settings across the continuum of care as essential to the preparation of the future nursing workforce; extend learning opportunities for primary care practice in particular.

6.3 Engage primary care organizations to establish clinical education affiliation agreements with sufficient capacity to accommodate cohort group rotations accompanied by faculty. Include options for individual student experiences to be supervised without faculty on-site.

6.4 Provide clinical education experiences for all RN students to apply concepts about key role functions in primary care through observational experiences (at a minimum), providing time within an existing cohort rotation for each student to be assigned with and supervised by an experienced primary care RN, or identifying a segment of time for the cohort group and faculty to be scheduled together within an existing clinical rotation.

6.5 Provide clinical preceptorship assignments in primary care settings as an option for students interested in primary care. Extend immersive experience and role development in this specialized area prior to academic nursing program completion and RN licensure, leading to successful transition to practice.

6.6 Identify, develop, and mentor RNs to function effectively as preceptors to supervise students in primary care settings, in collaboration with academic faculty.

6.7 Establish elective and capstone courses as dedicated pathways for newly licensed RNs considering primary care employment. Provide ambulatory care courses, tracks, or programs that include specialization in primary care within post-licensure RN-to-BSN or MSN programs.

6.8 Identify primary care sites with interest, need, or experience hiring newly licensed RNs; collaborate to strengthen educational experiences and practice readiness of students.

6.9 Develop continuing education courses in primary care for the community, or provide access to existing content for primary care RNs seeking professional development. This could be provided by post-licensure graduate RN programs that have dedicated courses or program tracks in these specialized areas.

6.10 Provide incentives to educate pre-licensure nursing students in primary care through mechanisms such as Song-Brown program grants, resources to support development and evaluation of pilot programs, and flexibility in BRN program approval. **RECOMMENDATION 7** Build partnerships with academic institutions, collaborating with nursing program leaders and faculty, to ensure a continuing source of well-prepared RNs with a baseline of knowledge and experience in primary care.

7.1 Engage with area nursing program leaders and faculty to support student learning through affiliation with the primary care site as part of students' pre-licensure education.

7.2 Provide experienced RNs as preceptors for nursing students assigned to primary care clinical education. Encourage and support nursing practice experts to consider teaching assignments as clinical instructors for pre-licensure nursing students in partner nursing programs.

7.3 Pilot a "dedicated education unit" within a primary care organization to provide a robust clinical immersion experience for students, as a potential pipeline to employment.

7.4 Establish mechanisms, such as project teams, task forces, and committees, for nursing faculty with primary care expertise to collaborate in contributing to evolving nursing practice and professional development.

The convergence of medical problems
 with social problems is where nurses
 step in to assess and prioritize needs,
 identifying solutions in collaboration with
 the patient and family.

- PRIMARY CARE CLINIC SUPERVISOR

DOMAIN 4 Developing Nursing Program Faculty with Primary Care Expertise

More than 90% of pre-licensure programs have a significant percentage of faculty with experience in primary care.

Given their current faculty composition, RN prelicensure programs are well positioned to rebalance curricula by integrating more ambulatory care content and primary care clinical practice opportunities. A significant number of nursing programs responding to the survey (91%) indicated having faculty with experience in primary care; 43.3% of which reported that more than 25% of their faculty have professional practice or teaching experience specifically in primary care.³⁹

However, pre-licensure programs face challenges in preparing students for practice in primary care settings. There is variation in the care delivery models used by practices, as well as limitations in RN availability and experience in roles in these settings to guide RN role development. Small practice sites may lack capacity to schedule cohort groups (typically 8–10 students) at one time accompanied by faculty.

The report findings pointed to a number of ways to advance RN preparation for practice in primary care. Faculty with primary care experience should mentor their colleagues and advise curricular changes. To expand clinical education, nursing programs should seek opportunities to build professional relationships with leaders and nursing experts in primary care settings.

Such curricular changes and expanded clinical education would also provide new opportunities for recruitment of practice experts to consider classroom or clinical teaching roles in primary care settings. This would augment the limited supply of faculty candidates to fill vacant positions, while extending the capability of the faculty team. Identifying organizations with potential for establishing or expanding clinical affiliations is pivotal to moving forward. These organizations should have progressive primary care practice models and clearly identified RN roles.

RECOMMENDATION 8 Ensure that the nursing faculty in RN pre-licensure programs includes those with knowledge, skills, and experience in primary care.

8.1 Assess the knowledge and experience of the academic faculty team related to primary care practice specifically and community care practice overall.

8.2 Identify needs and establish plans for faculty development, including coaching by primary care practice experts or recruitment of faculty with relevant competencies.

8.3 Engage faculty with primary care experience to coach and mentor faculty colleagues, as well as provide expertise in leading overall curriculum change.

8.4 Partner with an established primary care site and/or with nursing practice experts to advance faculty mastery in progressive primary care services and specialized nursing roles.

8.5 Explore ways to augment faculty capability through student learning experiences in primary care. Strategies include guest speakers, engaging nurses in various roles as practice experts co-teaching with faculty, and providing focused learning activities such as case studies and simulation.

8.6 Collaborate with affiliated primary care sites and/or nursing practice leaders to optimize instructional capability of faculty within clinical learning environments. Support and mentor current primary care RNs in developing teaching skills and clinical instructor roles to achieve shared academic-practice goals.

DOMAIN 5

Increasing Opportunities for Interprofessional Education and Development of Collaborative Team-Based Practice Models

Interprofessional education strengthens learners' knowledge, competencies, and attitudes, and has the potential to improve professional practice and clinical outcomes.

Interprofessional education is increasingly recognized as essential to academic development for all health professions. Likewise, interprofessional practice collaboration is gaining importance as a way to develop and improve high-performing teams. Both are foundational to the optimization of RN performance in primary care in collaboration with other primary care providers.

Primary care providers, including physicians, nurse practitioners, certified nurse-midwives, and physician assistants, are uniquely positioned to advance the use of interprofessional care teams to increase quality and expand practice capacity. Such teams enable the providers to function at maximum effectiveness by utilizing RNs within teams to perform functions such as care coordination and client/family education.

Research shows that interprofessional education strengthens learners' knowledge, competencies, and attitudes,⁴⁰ and has the potential to improve professional practice and clinical outcomes.⁴¹ A 2019 report by the Health Professions Accreditors Collaborative (HPAC), with the consultative assistance of the National Center for Interprofessional Practice and Education, provides a framework for academic institutions to develop robust interprofessional education plans.⁴²

The need for access to interprofessional education and team-based care is evident in the results of this project. Primary care RNs in direct care roles reported spending the greatest amount of time in three areas: patient intake assessment and triage, patient histories and screening, and treating patients according to provider orders using standardized procedures. The findings also indicate that RNs are underutilized and may lack opportunity to maximize their effectiveness through collaboration with providers or other members of the health care team.

Practice leaders and primary care RNs both reported that there are more opportunities to fully utilize RNs in care coordination and chronic care management by deploying them to work directly with providers as part of RN/provider co-visits, as well as to provide care for a defined panel of patients as part of an interprofessional team.⁴³

Effective utilization of RNs practicing in these broader functions would extend the capability of the practice to meet increasingly complex health care needs and outcomes, support the efficient use of provider time, and increase access and capacity for services.

RECOMMENDATION 9 Assess the utilization of RNs in various primary care roles and align the work with evolving team-based models of care to strengthen practice performance.

- 9.1 Within the scope of RN practice defined by California's Nursing Practice Act, identify and embed in job descriptions, policies, and procedures:
 - 9.1.1 The functions that can be carried out by licensed RNs within their independent scope of practice in California
 - **9.1.2** Collaborative functions performed within interprofessional teams
 - **9.1.3** Dependent functions delegated by authorized providers that require formal oversight

9.2 Adopt care delivery models that integrate RN-provider co-visits, expand nurse-only visits guided by standardized procedures, and deploy RNs in specialized roles in client/family education, health coaching, and telemedicine-supported encounters.

9.3 Arrange for RN-provider co-visits in which the RN conducts the initial assessment and selected components of the exam, after which the provider joins the visit to complete the examination, make a diagnosis, and establish a treatment plan.

9.4 Evaluate opportunities to expand RN roles that enable a practice volume increase, strengthen revenue opportunities through improved outcomes, or reduce cost in other areas such as avoiding financial penalties.

9.5 Implement RN services that increase client adherence to the plan of care in order to improve health outcomes, reduce reliance on other health care services, mitigate future costs, and fulfill the goals of payment models.

A complete listing of the recommendations and strategies for organizations providing primary care, academic nursing programs, and other stakeholders can be found in Appendix B.

Conclusions: Timely and Reachable Opportunities

This project documents the underutilization of RNs in California's primary care settings, both in numbers and in role assignment. It identifies a number of factors that underlie this problem, including inadequate development of primary care knowledge and skills in nursing curricula and challenges at the practice level, such as lack of resources for maximum development of RNs. The project found that many practices follow a traditional care model in which providers work independently with support from unlicensed staff.

The report highlights many opportunities for practices to expand their capacity and quality through teambased care models that include RNs. Practices are encouraged to reduce organizational restrictions on practice scope, shift role focus to care management and health promotion, and expand development for new RN hires as well as established RNs on the staff.

The research also focuses on the crucial role of prelicensure programs in preparing RNs for primary care practice, and offers many recommendations for enhancing their results.

Changes to both the preparation and utilization of RNs in primary care have become urgent in the face of the developing shortage of primary care providers and fast-accelerating demand for services. In addition to the research presented in this report, several national and state reports on the problems associated with primary care provider shortages have recommended solutions that are notably consistent.^{44–46}

The recommendations put forward in this report are intended to serve as a catalyst for the changes that are widely recognized as necessary. They provide actionable strategies to better prepare and optimally utilize RNs in primary care settings to improve outcomes and expand capacity. Based on the findings of this research, the project team presented recommendations they believe to be both timely and within reach.

Appendix A. Advisory Team

This report was prepared by HealthImpact with the support of the California Health Care Foundation and consultative assistance of an advisory team comprising academic and practice leaders across California. We thank them for their commitment to supporting the development of the nursing workforce in primary care, and for their valued contribution to this project.

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Appendix B. Recommendations and Strategies Sorted by Stakeholder Group

Development of recommendations addressing the strategic importance of preparing California's primary care nursing workforce is integral to the transformation of primary care practice. These recommendations are opportunities for change addressed specifically to organizations providing primary care services, including primary care site leaders, providers (physicians, nurse practitioners, certified nurse-midwives, and physician assistants) and RNs practicing in them. Additionally, academic nursing programs should adopt these recommendations to prepare the future nursing workforce.

RECOMMENDATIONS FOR ORGANIZATIONS PROVIDING PRIMARY CARE

RECOMMENDATION 1 Ensure that RNs practice to the full scope of their licensure, educational preparation, and experience, and are effectively utilized as integral members of the interprofessional care team.

1.1 Develop and adopt standardized procedures that reflect evidence-based practices specific to common health problems of clients treated by the primary care practice; use the processes outlined in the California Nursing Practice Act,⁴⁷ including the following:

1.1.1 Provide clear expectations for the training, experience, education, and evaluation of RNs approved to carry this work out; the expectations should address specific activities, competencies, and requirements for provider notification and communication.

1.1.2 Evaluate the effectiveness of standardized procedures for RNs in managing health care needs and outcomes, including the impact of these protocols on workflow, skill mix of personnel, and RN scope of work.

1.2 Utilize RNs with appropriate education and experience to supervise and/or provide preventive care services and contribute to population/panel management supporting healthier communities.

1.2.1 Require that chronic and routine preventive services follow evidence-based guidelines based on demographics of specific populations, individual characteristics of each client, and defined categories of risk. 1.2.2 Improve access for clients to more comprehensive care, including effective care management by providers and other health team members.

1.2.3 Expand panel capacity and capability through integration of RNs on the primary care team to increase access, including conducting co-visits with a provider,⁴⁸ enhance client experiences, improve chronic disease outcomes, and reduce emergency department (ED) encounters and hospitalizations.

1.3 Utilize RNs to provide complex care management to groups of clients identified to need and benefit from it, including those with multiple comorbidities, uncontrolled chronic or acute illness, high ED utilization, or significant social-environmental or economic challenges, as well as those experiencing transitions in care.⁴⁹

1.3.1 Apply ambulatory care standards of practice as applicable to RN roles in primary care settings.

1.3.2 Deploy RNs in roles that strengthen performance-driven outcomes and meet the quality metrics required by value-based payment methods.

1.3.3 Use RN care management and care coordination roles to support continuity of care, optimize health, and engage clients and families in self-care.

1.3.4 Enable RN-only services for established clients in selected services, including immunizations, prescription refills or dosage adjustments, treatment of specific infections, wellness visits, and health screenings guided by standardized procedures, or chronic care management of individual clients with a comprehensive plan of care in place.

1.4 Establish an environment, systems, and workflows that promote effective utilization of RNs in various specialized functions such as triage, care management, care coordination, patient teaching, and team coordination.

1.5 Identify and reassign tasks and functions that are currently performed by RNs but that do not require the knowledge and skills of a licensed RN.

1.6 Assess volume, workflow, core functions, systems, and composition of primary care teams in order to establish an effective environment for all team members, including RNs, to practice to their full potential.

RECOMMENDATION 2 Provide initial education, support, and coaching for RNs entering primary care to acquire the specific knowledge and skills they will need.

2.1 Recruit and develop RNs to work with new hires. Identify RNs with broad-based knowledge in various chronic illnesses and pharmacology/medication management, as well as experience working in interprofessional practice teams. They also need skills providing client- and family-focused care using motivational interviewing/health coaching.

2.2 Assess the knowledge, experience, and capability of new hires to perform core primary care functions, and establish plans for competencybased development in specialized roles.

2.3: Conduct or support access to transition-topractice programs for newly licensed RNs upon hire. Programs should include education, supervision, and mentoring by an experienced primary care RN.

2.4 Support the transition-in-practice of experienced RNs who are new to primary care or moving to a different role by providing education, supervision, and coaching. Evaluate achievement of essential skills for safe practice in key functions. **RECOMMENDATION 4** Advance the professional development of RNs currently practicing in primary care through academic progression and supporting career options in primary care roles.

4.1 Provide coaching, mentoring, and guided experience-based practice opportunities for RNs to extend competencies in specialized roles such as care management of a high-risk population, care coordination across health care systems and various levels of care, or to fill leadership roles.

4.2 Develop RNs with broad-based knowledge in various chronic illnesses, pharmacology, and medication management; experience working within interprofessional teams; and skills providing client- and family-focused care utilizing goal-directed self-management methods.

4.3 Provide support through clinical ladder mechanisms to recognize attainment of additional professional degrees and certifications.

4.4 Consider certification in ambulatory care nursing through the AAACN as may be applicable.

RECOMMENDATION 7 Build partnerships with academic institutions, collaborating with nursing program leaders and faculty, to ensure a continuing source of well-prepared RNs with a baseline of knowledge and experience in primary care.

7.1 Engage with area nursing program leaders and faculty to support student learning through affiliation with the primary care site as part of students' pre-licensure education.

7.2 Provide experienced RNs as preceptors for nursing students assigned to primary care clinical education. Encourage and support nursing practice experts to consider teaching assignments as clinical instructors for pre-licensure nursing students in partner nursing programs.

7.3 Pilot a "dedicated education unit" within a primary care organization to provide a robust clinical immersion experience for students, as a potential pipeline to employment. 7.4 Establish mechanisms, such as project teams, task forces, and committees, for nursing faculty with primary care expertise to collaborate in contributing to evolving nursing practice and professional development.

RECOMMENDATION 9 Assess the utilization of RNs in various primary care roles and align the work with evolving team-based models of care to strengthen practice performance.

9.1 Within the scope of RN practice defined by California's Nursing Practice Act, identify and embed in job descriptions, policies, and procedures:

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9.3 Arrange for RN-provider co-visits in which the RN conducts the initial assessment and selected components of the exam, after which the provider joins the visit to complete the examination, make a diagnosis, and establish a treatment plan.

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9.5 Implement RN services that increase client adherence to the plan of care in order to improve health outcomes, reduce reliance on other health care services, mitigate future costs, and fulfill the goals of payment models.

RECOMMENDATIONS FOR ACADEMIC NURSING PROGRAMS

RECOMMENDATION 6 Prepare students in RN prelicensure programs with broad knowledge, skills, and experiences applicable to diverse ambulatory practice settings and nursing roles across the continuum of health care settings, emphasizing health promotion and illness prevention.

6.1 Ensure principles of health promotion and illness prevention are included as central primary care concepts and core functions of all RN roles. Provide curricular content and clinical education experiences across all practice areas.

6.2 Promote the inclusion of various ambulatory practice settings across the continuum of care as essential to the preparation of the future nursing workforce; extend learning opportunities for primary care practice in particular.

6.3 Engage primary care organizations to establish clinical education affiliation agreements with sufficient capacity to accommodate cohort group rotations accompanied by faculty. Include options for individual student experiences to be supervised without faculty on-site.

6.4 Provide clinical education experiences for all RN students to apply concepts about key role functions in primary care through observational experiences (at a minimum), providing time within an existing cohort rotation for each student to be assigned with and supervised by an experienced primary care RN, or identifying a segment of time for the cohort group and faculty to be scheduled together within an existing clinical rotation.

6.5 Provide clinical preceptorship assignments in primary care settings as an option for students interested in primary care. Extend immersive experience and role development in this specialized area prior to academic nursing program completion and RN licensure, leading to successful transition to practice. **6.6** Identify, develop, and mentor RNs to function effectively as preceptors to supervise students in primary care settings, in collaboration with academic faculty.

6.7 Establish elective and capstone courses as dedicated pathways for newly licensed RNs considering primary care employment. Provide ambulatory care courses, tracks, or programs that include specialization in primary care within post-licensure RN-to-BSN or MSN programs.

6.8 Identify primary care sites with interest, need, or experience hiring newly licensed RNs; collaborate to strengthen educational experiences and practice readiness of students.

6.9 Develop continuing education courses in primary care for the community, or provide access to existing content for primary care RNs seeking professional development. This could be provided by post-licensure graduate RN programs that have dedicated courses or program tracks in these specialized areas.

6.10 Provide incentives to educate pre-licensure nursing students in primary care through mechanisms such as Song-Brown program grants, resources to support development and evaluation of pilot programs, and flexibility in BRN program approval.

RECOMMENDATION 8 Ensure that the nursing faculty in RN pre-licensure programs includes those with knowledge, skills, and experience in primary care.

8.1 Assess the knowledge and experience of the academic faculty team related to primary care practice specifically and community care practice overall.

8.2 Identify needs and establish plans for faculty development, including coaching by primary care practice experts or recruitment of faculty with relevant competencies.

8.3 Engage faculty with primary care experience to coach and mentor faculty colleagues, as well as provide expertise in leading overall curriculum change.

8.4 Partner with an established primary care site and/or with nursing practice experts to advance faculty mastery in progressive primary care services and specialized nursing roles.

8.5 Explore ways to augment faculty capability through student learning experiences in primary care. Strategies include guest speakers, engaging nurses in various roles as practice experts co-teaching with faculty, and providing focused learning activities such as case studies and simulation.

8.6 Collaborate with affiliated primary care sites and/or nursing practice leaders to optimize instructional capability of faculty within clinical learning environments. Support and mentor current primary care RNs in developing teaching skills and clinical instructor roles to achieve shared academic-practice goals.

SUPPORTING RECOMMENDATIONS FOR OTHER STAKEHOLDERS

RECOMMENDATION 3 Create or engage with regional coalitions and collaborative partnerships among primary care employers, with one or more academic nursing programs, to establish community-based transition-to-practice programs.

3.1 Assess nursing workforce needs across primary care organizations, identifying options for collaboration on program content, teaching methods, structure and scalability, and resources needed and available.

3.2 Identify core content and learning outcomes specific to RN roles in primary care, including essential knowledge and skills needed for various RN functions, evidence-based clinical practice, and working within interprofessional teams.

3.3 Provide on-site experienced primary care RNs as preceptors to support role transition, or access experts and mentors through a community-based transition-to-practice program.

3.4 Determine resources needed to develop and conduct the program, including short- and longterm funding sources. These may include shared resources or in-kind contributions; support for startup development through grants, foundations, or health plans; and sustainable funding streams.

3.5 Support the development and institutionalization of programs scaled to meet evolving needs through sustainable funding streams. Establish program registration fees to be paid by participating organizations that enroll RNs in the program, or paid directly by RNs in the community with interest in considering a career path in primary care. 3.6 Identify measures and metrics to evaluate program results, addressing the costs and benefits to employers. Include impact on nurse-sensitive quality measures, return on investment related to successful transition and improved retention of nurses, progressive demonstration of core competencies, improved utilization and effectiveness within interprofessional teams, and client health outcomes.

RECOMMENDATION 5 Develop a centralized statewide network to guide and advance primary care nursing practice through education, mentoring, development of resources and tools, identification and dissemination of best practices, and research.

5.1 Facilitate the development of a primary care nursing association to lead and carry out activities that support and advance education and practice in primary care nursing, including the identification and dissemination of best practices.

5.2 Establish a team of primary care nursing experts from academia and practice to advise and guide the development of primary care RNs, provide education, develop tools, identify and disseminate resources, and offer mentoring and consultation to primary care site leaders supporting the effective utilization of RNs in various roles.

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