Nursing Practice, Research and Education in the West

The Best Is Yet to Come

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Purpose: This paper celebrates the 60th anniversary of the Western Institute of Nursing, the nursing organization representing 13 states in the Western United States, and envisions a preferred future for nursing practice, research, and education.

Background: Three landmark calls to action contribute to transforming nursing and healthcare: the Patient Protection and Affordable Care Act of 2010; the Institute of Medicine report *Future of Nursing: Leading Change, Advancing Health*; and the report *Advancing Healthcare Transformation: A New Era for Academic Nursing*. Challenges abound: U.S. healthcare remains expensive, with poorer outcomes than other developed countries; costs of higher education are high; our profession does not reflect the diversity of the population; and health disparities persist. Pressing health issues, such as increases in chronic disease and mental health conditions and substance abuse, coupled with aging of the population, pose new priorities for nursing and healthcare.

Discussion: Changes are needed in practice, research, and education. In practice, innovative, cocreated, evidence-based models of care can open new roles for registered nurses and advanced practice registered nurses who have knowledge, leadership, and team skills to improve quality and address system change. In research, data can provide a foundation for clinical practice and expand our knowledge base in symptom science, wellness, self-management, and end-of-life/palliative care, as well as behavioral health, to demonstrate the value of nursing care and reduce health disparities. In education, personalized, integrative, and technology-enabled teaching and learning can lead to creative and critical thinking/decision-making, ethical and culturally inclusive foundations for practice, ensure team and communication skills, quality and system improvements, and lifelong learning.

Conclusion: The role of the Western Institute of Nursing is more relevant than ever as we collectively advance nursing, health, and healthcare through education, clinical practice, and research.

Key Words: nursing education • nursing practice • nursing research

Nursing Research, May/June 2017, Vol 66, No 3, 262–270

As we celebrate the 60th anniversary of the Western Institute of Nursing (WIN), dramatic changes in the population, in health, and in healthcare are occurring. This is an opportunity to consider the current status of and future directions for nursing practice, research, and education. In the Western United States, nursing and health in the 21st century are linked with the health issues of our 13 states (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming). Health data from the 13 states can inform WIN and its members in choosing strategies to prepare the next generation of nurse clinicians and scholars (Table 1).

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DOI: 10.1097/NNR.0000000000000218

Across the states, there are highs and lows in health promotion behaviors (i.e., smoking, obesity, physical inactivity, excessive drinking) linked to increased risks for noncommunicable diseases (e.g., cancer, cardiovascular disease, diabetes, and chronic respiratory disease) and for those living with HIV and suffering drug-related deaths. In addition, a range of conditions affect mental health (e.g., depression, Alzheimer's Disease). Depression is the third most common disease burden worldwide and impacts over one quarter of the U.S. population (Centers for Disease Control and Prevention, 2013). The prevalence of Alzheimer's Disease, which affects over 5 million Americans, is expected to double by 2050. Substance abuse, including use of opioids, is a growing concern as drug-related deaths have accelerated. Together, these issues impact the future in nursing practice, research, and education.

With the aging of the U.S. population, new demands are placed on both formal healthcare and the informal caregiving network (National Academies of Sciences, Engineering, and Medicine, 2016a). Despite the dramatic improvements in access to and quality of healthcare in the past 60 years, not all have

TABLE 1. Western State Health Rankings

State	Health[a,m]		Health risk behaviors[b,m]			Deaths[c,n]			Disease prevalence[b]			
	Overall	W/C	Smoking[d]	Obesity[e]	Inactivity[f]	Drinking[g]	Cancer	CVD	Drug[h]	Diabetes[i,m]	COPD[i,n]	HIV[k,o]	MI[l,p]
Alaska	**30**	**28**	**34**	24	10	**48**	**29**	9	**34**	3	**27**	15	**28**
Arizona	**29**	**43**	6	17	18	13	6	7	**41**	**27**	16	**34**	**26**
California	16	10	2	4	4	**29**	5	19	12	**26**	5	**39**	13
Colorado	10	14	15	1	1	**36**	3	2	**33**	1	8	21	19
Hawaii	1	7	8	2	12	**43**	2	4	10	12	3	22	11
Idaho	15	**26**	5	18	6	10	10	18	18	6	14	2	**45**
Montana	23	3	**32**	3	12	**47**	13	17	17	5	18	1	**27**
Nevada	**35**	**47**	**25**	15	18	12	22	**39**	**43**	21	**37**	**41**	3
New Mexico	**38**	**37**	**25**	19	14	6	4	11	**49**	**39**	**25**	19	**36**
Oregon	21	**27**	21	**28**	2	**34**	**26**	5	15	**31**	19	17	**47**
Utah	8	6	1	6	5	3	1	14	**47**	2	4	11	**50**
Washington	7	16	9	14	3	**27**	14	6	**25**	9	2	18	**46**
Wyoming	**25**	**29**	**34**	21	**25**	23	7	23	**37**	9	22	3	**37**

Note. Column entries are state ranks. Values in bold are rank ≥25 among the 50 states. COPD= chronic obstructive pulmonary disease; CVD = cardiovascular disease; HIV = human immunodeficiency virus; MI =mental illness; W/C = women and children. [a]Lower ranks indicate better health. [b]Lower ranks indicate lower prevalence. [c]Based on deaths per 100,000; lower ranks indicate fewer deaths. [d]Percentage of adults who are current smokers. [e]Percentage of adults with body mass index ≥ 30. [f]Percentage of adults reporting no exercise or physical activity. [g]Percentage of adults reporting binge or chronic drinking. [h]Drug injury of any kind, intentional and unintentional, suicide, homicide, or undetermined. [i]Percentage of adults reporting that a healthcare provider told them they have diabetes. [j]Age-adjusted prevalence. [k]Adults and adolescents, prevalence per 100,000. [l]Any mental illness during the past year among adults ≥18 years of age. [m]United Health Foundation, 2016. [n]Centers for Disease Control and Prevention, 2012. [o]Center for Behavioral Health Statistics and Quality, 2013. [p]The Henry J. Kaiser Family Foundation, 2014.

benefited equally from these advances. Progress has varied by gender and gender identity, racial, ethnic, and socioeconomic groups, veteran status, disability, and age, as well as by county (Agency for Healthcare Research and Quality, 2016; United Health Foundation, 2016). There is substantial evidence that social determinants of health—including poverty and education—contribute to these health disparities and inequities and are barriers to wellness (Marmot, 2015). The growing diversity of the population requires renewed efforts to develop interventions that address cultural differences. In addition, there are different demands for practice, research, and education based on geographic locations—especially in rural and urban settings. This article identifies forces shaping our profession in the Western U.S. states and presents a vision for future directions for practice, research, and education (see Figure 1).

LANDMARK CALLS TO ACTION

In recent years, three landmark calls to action are catalyzing change, affecting nursing and healthcare: The Patient Protection and Affordable Care Act of 2010; the Institute of Medicine (IOM) report, *Future of Nursing: Leading Change, Advancing Health* (IOM, 2010); and the report *Advancing Healthcare Transformation: A New Era for Academic Nursing* (American Association of Colleges of Nursing [AACN], 2016). Although there is uncertainty in 2017 about the future of healthcare financing, The Patient Protection and Affordable Care Act of 2010 expanded health coverage, drove changes in care around readmissions and hospital-acquired conditions, and introduced payment models that fostered innovation in care models that emphasize population health- and community-based and primary care (Emanuel, 2016). These models of care emphasize teamwork, interprofessional collaboration, care continuity and coordination, and illness prevention, offering significant opportunities for nurses to lead and contribute.

The IOM Future of Nursing report and associated Campaign for Action fostered progress in advancing full authority for advanced practice registered nurses (APRNs), led to more baccalaureate- and higher degree-prepared nurses, supported interprofessional collaboration and practice, emphasized the importance of diversifying the nursing workforce, and advocated for nurses to engage as full partners in redesigning healthcare. These areas of focus were affirmed, and new recommendations were added in the 5-year progress assessment on the *Future of Nursing* (IOM, 2016), particularly to focus on interprofessional and lifelong learning, interprofessional collaboration, leadership development, and diversity.

The AACN Academic Nursing report, based on surveys and interviews of nurses and other leaders at institutions within academic health centers and schools of nursing, recommended enhancing academic–practice partnerships and advancing integration of schools of nursing with healthcare organizations to achieve improved health outcomes and foster

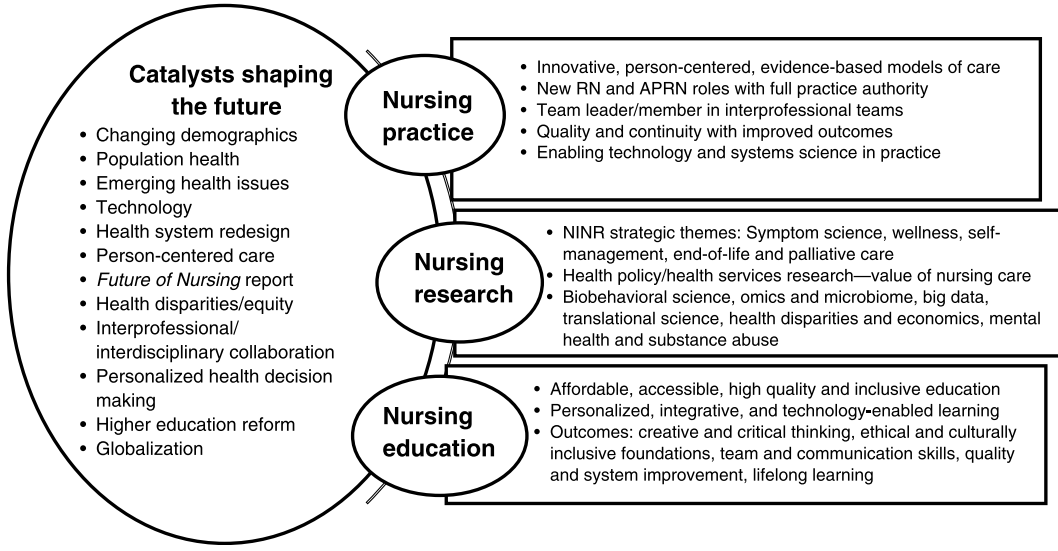

FIGURE 1. The future of nursing practice, research, and education.

new models of education, research, and care (AACN, 2016). The report envisioned academic nursing as a full partner in healthcare delivery, education, and research, fully aligned with and contributing to the clinical enterprise—rather than remaining largely separated professionally with limited opportunities for collaboration. This effort is stimulating schools of nursing and healthcare partners to enhance clinical practice of academic nursing, partner in preparing future nurses, and in the implementation of care models; invest in nursing research programs; and improve integration of research into practice.

New models for healthcare delivery have implications for nursing practice, research, and education. Quality matters. Numerous studies have shown that nursing care in Magnet hospitals is associated with better outcomes (McHugh et al., 2013) and that nurses and nursing care make important differences in patient mortality, quality of care, readmission, safety, patient satisfaction, and cost (Aiken et al., 2014; Brooten et al., 2002; McHugh, Aiken, Eckenhoff, & Burns, 2016). Expanded roles for registered nurses (RNs) in primary care that incorporate and integrate behavioral health show promise for improving care and improving patient outcomes (Bodenheimer, Bauer, Olayiwola, & Syer, 2015). With the strength of our connections among practice, education, and research fostered by WIN, opportunities abound to improve health and healthcare across our 13 states.

VISION FOR NURSING PRACTICE

Since the early days of the Western Council on Higher Education for Nursing, service (later termed practice) was included—along with research and education—as one of the areas of focus for what is now the WIN (McNeil & Lindeman, 2017). Jo Eleanor Elliott, Director, Western Institute Commission for Higher Education, referred to the "collaborative climate in the West" among member schools of nursing and their clinical agencies, a climate that no doubt fostered the commitment to a tripartite mission when other regional organizations separated out a specific focus on research (Elliot, 1992, p. 29). RNs and APRNs provide care across the care continuum, in acute, primary, community, public health, home, and long-term care settings, as well as manage transitions in care across care settings. The future outlook of nursing practice must be considered within the context of health conditions and continuing changes in healthcare delivery—with interprofessional and team-based practice—and growing expectations of consumers/patients not just as the center of healthcare, but as partners and cocreators of healthcare redesign in order to improve quality, access, outcomes, and value. For this article, the term nursing practice encompasses all clinical practice enacted by RNs and APRNs.

Among the 13 states represented by WIN, many have been sources of exemplary contributions to RN and APRN nursing practice and healthcare, developing the primary care nurse practitioner (NP) role (Keeling, 2015), independent practice for APRNs (Campaign for Action, 2016), and evidence-based models of care utilizing RN assessments and interventions (Kelly & Barnard, 2000; Olds, 2006). The beginnings of the NP role were initiated in Colorado, led by the nurse–physician team of Loretta Ford and pediatrician Henry Silver (Keeling, 2015). Ford and Silver sought to develop an expanded nursing role to meet the primary healthcare needs of children and families in rural areas. This purpose resonates with the *Future of Nursing* recommendation, emphasizing access to primary care and the expectation that healthcare professionals practice to the full extent of their education, training, and competencies (IOM, 2010). At the time of the release of the IOM report, 15 states and the District of Columbia had independent practice for ARNPs, with 10 of those states in the Western United States. Since that time and through efforts

resulting from the Campaign for Action, Nevada now has independent practice authority, and legislative efforts in 2017 are expected to reduce other barriers in Arizona, Hawaii, Nevada, and Utah (Campaign for Action, 2016). The Western states clearly have led the way for APRNs.

APRNs bring primary and specialty care knowledge and skills to population-based care across settings with outcomes comparable to physician care. A randomized clinical trial (Mundinger et al., 2000) showed no significant differences in patient health status when NPs and physicians had comparable authority, responsibilities, productivity, and administrative requirements. A recent systematic review of 69 studies from 1990 to 2008 (including 20 randomized controlled trials) on care provided by APRNs, indicated that NPs and certified nurse midwives practicing in collaboration with physicians achieved patient outcomes similar to or better than physician-only care. The analysis also showed that acute care clinical nurse specialists can reduce hospital length of stay and cost of care (Newhouse et al., 2011). Rural and other underserved areas often depend heavily on APRNs. Expected increases in population need for primary care and behavioral health across the lifespan, chronic illness management, and care continuity needs will drive demand for APRNs. In addition, APRNs prepared with a Doctorate in Nursing Practice degree will bring knowledge and expertise of improvement science to practice environments and lead continuous improvement of care.

Early community-based RN practice models also emerged from the Western United States. Maternal–child health exemplars include the Nurse–Family Partnership model, developed by an interprofessional team at the University of Colorado (Olds, 2006) and the Nursing Child Assessment Satellite Training assessment and intervention programs, now the Parent–Child Interaction Program, developed by Kathryn Barnard at the University of Washington School of Nursing (Kelly & Barnard, 2000). These groundbreaking evidence-based programs incorporated home-based RN assessments and interventions and have been utilized together to improve the outcomes of mothers and infants (Kitzman et al., 1997).

The renewed emphasis on primary care and care continuity is offering new opportunities for RN roles, such as in primary care, bringing professional nursing knowledge and skills, care coordination, and standard care practices together to establish interprofessional teams and meet acute, chronic, and preventive care needs (Bodenheimer et al., 2015; Josiah H. Macy Jr. Foundation, 2016). RNs have knowledge, competencies, and skills to achieve continuity of care for patient populations, as well as promoting health and preventing illness, and can be effective care team leaders and members in developing and improving models of care that demonstrate quality, impact health outcomes, and create value. Professionals must collaborate well with individuals and families, community health workers, and others involved in cocreating new models of care (Batalden et al., 2016). Healthcare systems are moving from conceptualizing care as transitions (e.g., hospital discharge) between sites of care to the notion of care continuity within a system network, in essence never viewing a patient as being discharged (Advisory Board, 2016). Keeping patients in-network through continuous care could offer significant opportunities for new models of practice that align the level of care with level of patient risk. For example, nurses could provide and manage care for a patient population across inpatient and outpatient/community settings when organizational policies facilitate such practice.

The future holds great potential for expanding the contributions of RNs and APRNs, improving care and outcomes, and containing costs, provided that nurses are willing and able to lead, contribute, innovate, and demonstrate value as healthcare delivery continues to change. RNs and APRNs, along with other professions, must be able to practice in a manner consistent with their education and expertise with full practice authority to fully contribute and optimize care. Russell-Babin and Wurmser (2016, pp. 25–26) used the term "top-of-license" practice, defined as "matching the right provider with the right skill set to provide the right level of care at the right time and place, [not] substituting less expensive healthcare providers for the primary purpose of saving money." Some of the barriers are at the organizational level, even when state practice acts provide full authority for both RNs and APRNs. Breaking through remaining barriers to full practice authority in some of the states in the West may require national, state, and organizational level changes that may only be possible through advocacy for health policy changes. Lessons learned from states with full practice authority could inform advocacy efforts in the lagging states.

VISION FOR NURSING RESEARCH

An amazing group of nursing leaders from the Western states have influenced nursing research over the past 60 years; a brief mention of these individuals is warranted. The history of the development of the National Institute of Nursing Research (NINR) includes nurses from the West (e.g., Nancy Fugate Woods) who were involved in the creation of the NINR and who were members of the Charter Study Section of NINR (Marie Cowan, Betty Chang; NINR & Cantelon, 2010). Others have received Pathfinder Awards from the Friends of NINR for their achievements, recognizing sustained contributions and multiple grants from NINR (Linda Phillips, Pamela Mitchell, Margaret Heitkemper, Carol Landis, Ida [Ki] Moore, Deborah Koniak-Griffin), and Protégé awards for promising new scientists (Hilaire J. Thompson, Christopher S. Lee). Thirteen have been inducted into the Sigma Theta Tau International Researcher Hall of Fame (Christine Miaskowski, Cynthia M. Dougherty, Betty R. Ferrell, Deborah Koniak-Griffin, Adeline Nyamathi, Linda Sarna, Joan Shaver, Margaret McLean Heitkemper, Kathryn Lee, Ann Bartley Williams, Nancy Fugate-Woods, Ida (Ki) Moore,

Kathryn E. Barnard, Marilyn J., Dodd, Pamela Holsclaw Mitchell, Janice M. Morse). Future leaders in nursing research from the West can build on the achievements of the past.

In speculating about the future for nursing research, a review of health issues in the Western United States (Table 1) provides a regional perspective of potential priorities. Rankings of overall health and the health of women and children indicate that the populations of some Western states could increase health promotion behaviors to reduce risk of noncommunicable disease and infectious disease. These issues can be linked with the new strategic goals for nursing science and themes for priority funding from the National Institute for Nursing Research: (a) symptom science: promoting personalized health strategies; (b) wellness: promoting health and preventing disease; (c) self-management: improving quality of life for individuals with chronic illness; and (d) end-of-life and palliative care: the science of compassion (NINR, 2016). Two areas that cut across all the themes are (a) promoting innovation: technology to improve health and (b) 21st century nurse scientists: innovative strategies for research careers.

Given the health issues in the Western United States, the NINR priority areas for funding have importance for research. Centers have emerged at numerous universities that have allowed scientists to build and expand programs of research. For example, in the area of symptom science, the Research Center for Symptom Management at University of California, San Francisco, has made many important contributions in growing the field (https://nursing.ucsf.edu/research-center-symptom-management). Many researchers in the West have focused programs of research addressing symptoms of menopause, cancer, cardiovascular disease, diabetes, and respiratory disease—descriptions of these are beyond the scope of this article.

The low ranking of selected health promotion activities in some Western states highlights the importance of efforts to reduce risk for disease and to promote quality of life. In some ways, the population in the West is healthier compared to other states in the United States. Smoking has declined, and more states have greater levels of physical activity. In several states, urgent action is needed to address mental illness, excessive alcohol use, and drug-related deaths. The drug epidemic should be a key priority of the West, as it is across the nation.

On the basis of current demographics in the states that are part of WIN, plans for the future must address issues related to health disparities associated with changing demographics. Many nurse researchers in the Western United States have appropriately focused on health disparities—for example, the University of California, Angeles, where the Center for Vulnerable Populations Research (http://www.nursing.ucla.edu/research/centers-of-excellence/cvpr-2/) focuses on reducing/eliminating health disparities experienced by vulnerable populations. With the prominence of the Hispanic/Latino population in many states, efforts are needed to expand representation of this population in future studies, as well as to diversity in the nursing workforce to increase the number of Latino nurses. Native American nurse researchers and studies in Native American communities in the West remain disproportionately small compared to the importance of these communities in the region.

Several universities in the West are addressing the needs of older adults and their families. Others focus on the LGBTQ population, who are at higher risk for health disparities due to social stigma and a variety of health issues, including increased risk for suicide, substance abuse, smoking, and HIV (HealthyPeople.gov, 2016), and deserve special attention from researchers in the Western states. Our region will also continue to feature special issues related to rural health.

Scientific discoveries influencing the understanding of health, disease, including symptoms, and new methods of diagnosis and treatment continue to advance. Nurse investigators have made important contributions in biobehavioral health fields that are foundational to clinical practice. NINR has recognized that nurses can play an important role in customizing strategies based on genes, lifestyle, and behavior, especially in the area of symptoms (NINR, 2015) as part of the "All of Us" National Institutes of Health research program that aims to recruit 1 million participants (National Institutes of Health, 2016).

Although large datasets are not new, the emergence of the electronic health record has enabled an explosion of information about health and healthcare characteristics. This is providing new opportunities for nurse researchers. Their involvement in identifying critical data elements will be important so that evidence will be available to examine the influence of nursing care on patient outcomes across settings.

Technology is already changing the ways of communicating nursing research. A future vision of nursing science must include how we communicate research findings to diverse audiences: nurses, researchers in other disciplines, health professional colleagues, policymakers, and the public. NINR has used the Director's Lecture as an effective strategy to highlight the work of outstanding scientists, including scholars from the Western states (Mary Woo, Barbara J. Drew, MarySue Heilemann). Virtual technology could enhance WIN capacity to disseminate and memorialize presentations.

Over the past 60 years, the number of nursing researchers in the West has increased, building the range and scope of studies. Since Donaldson and Crowley's landmark presentation on the discipline of nursing in 1977 at WIN (see also Donaldson & Crowley, 1978), researchers have advanced literature supporting nursing practice (WIN, 2007). Yet, healthcare problems and the issues nurses face are significant. On the basis of the unique set of population and health issues, nurses in the Western states will have an important regional perspective that can influence the nation and the world. The knowledge that future nurse scientists can provide will be critical in enhancing health promotion, addressing suffering from

chronic and infectious diseases, and mental illness, as well as supporting recovery from illness, improving quality of life, and reducing health disparities.

VISION FOR NURSING EDUCATION

States in the West have led in nursing education for many decades. WIN can be proud of major leaders and innovators in nursing education, starting with the vision and leadership of the Committee of Seven who outlined a strategy to advance nursing education (Coulter, 1963). Decades later, Patricia Benner (of University of California, San Francisco) and colleagues called for a radical transformation in nursing education, from admissions through curricular and clinical design (Benner, Sutphen, Leonard, & Day, 2009). Core to the recommendations are approaches that deepen the connection between classroom learning and clinical experiences, promoting application and synthesis of knowledge as it applies to the complexities of practice and the variation in human experience of health and illness. Reform is needed across all health professions to enhance interprofessional learning and focus on competencies, capitalizing on educational technologies and assuring faculty development, thus aligning education reform with healthcare delivery reform (Thibault, 2013).

Christine Tanner and her colleagues catalyzed the Oregon Consortium for Nursing Education, now a national model, that brought together educators from community colleges and universities across the state to create a shared curriculum that optimized faculty, clinical sites, and classroom resources while offering a seamless path for advancing educational attainment (Tanner, Gubrud-Howe, & Shores, 2008). This model addresses health disparities by providing a means for qualified applicants to remain in their communities for education and then to continue in practice. Importantly, it showed the power of collaboration in achieving innovation and excellence and aligned with a major recommendation of the *Future of Nursing* report to streamline education through better articulation (including course alignment and transfer agreements) with community colleges (IOM, 2010).

A stellar example of regional collaboration to advance doctoral education began in 2004, with the launch of NEXus (Nursing Education Exchange: Partnering to Increase the Capacity of Nursing PhD Programs; www.winnexus.org). This project increased Western regional capacity to offer doctoral nursing programs by sharing courses in a distance format, enhancing access to faculty across multiple organizations, and promoting efficient delivery of specialty content.

Educators of the largest healthcare profession have the opportunity to assure that the nurses we prepare for the upcoming decades are equipped to address both population health priorities and healthcare delivery challenges. Healthcare and education share the call for improvements in the areas of access, affordability, quality, inclusion, and equity. Rising costs of college and escalating student debt, coupled with declines in state support for universities, pose new challenges for schools of nursing. Diversity, equity, and inclusion are major goals in higher education to promote student success, a vibrant democracy, and an effective workforce (Association of American Colleges and Universities [AACU], 2016). The *Future of Nursing* report called for both transforming nursing education and increasing diversity in nursing. The Campaign for Action is bringing these recommendations to life, with increases in diversity among students, the proportion of nurses with baccalaureate degrees (now at 51%), and a doubling in the number of nurses with doctorates (from 8,267 in 2009 to 21,280 in 2014; Campaign for Action, 2016).

Our schools and colleges are nested in the broader context of higher education, and the learning outcomes identified by the AACU are highly aligned with nursing (AACU, 2010). The complexity of human health and wellness, and the therapeutics of our field, are ideally suited to innovative teaching methods, with endless possibilities for student engagement, teamwork, and critical thinking that not only increase their capacity in the field but also simultaneously promote personal, intellectual, and ethical development.

Technology is transforming higher education, with new resources for collecting and aggregating a wide array of data for analytic purposes and making materials available to faculty and students through open educational resources (Mintz, 2014). Decisions can be driven by data about students and their performance, the delivery and uptake of learning activities, and the outcomes of different approaches. Flipped classrooms, enabled by technology, shift the focus to application of content obtained prior to coming to class, online, or in preassigned activities. Virtual reality, collaborative tools, and simulation are in common use to promote learning clinical and communication skills.

The changes in healthcare and population health shift the competencies required to practice, teach, and conduct research effectively. Beyond clinical competencies, our graduates need to possess skills and expertise in leadership, cultural inclusiveness, health disparities, effective communication, collaboration and teamwork, health economics, and use of technology in care (National Academies of Sciences, Engineering, and Medicine, 2016b; Tervalon & Murray-García, 1998). With the emphasis on quality and value, our graduates must understand improvement methods and systems engineering, appreciate evidence based practice, and hold a strong commitment to engaging those we serve. Success in the rapidly changing healthcare system requires both flexibility and dedication to lifelong learning, and enacting leadership at every level.

Pedagogical approaches that use individual student learning style and preferences as a basis for design of the educational experience will optimize learning. A number of methods can enhance learning and cultural inclusiveness, including integrated case-based scenarios and simulation in which

students apply and synthesize knowledge in teams to appreciate the complexity of a problem and potential solutions. Well-designed scenarios offer the opportunity to hone analytical skills and develop capacity for compassionate and ethical care. Inclusion of other disciplines and professions in the classroom and clinical settings is essential to effective practice, education, and research. With the proliferation of methods for education, nursing education research is even more vital. For example, the evidence base for simulation and debriefing warrant further evaluation (Neill & Wotton, 2011).

Years ago, nursing leadership in WIN recognized that, "… the greatest single obstacle in nursing is the lack of nurses with preparation to do research" (Coulter, 1963). As noted then, and still true today, preparation of nurse researchers and faculty are vital for our profession. PhD enrollment is not keeping pace with the need for faculty and research for our practice. Recruitment, rigorous research training, and mentorship into a research career are high priorities for assuring a strong future for nursing research. Emerging focus areas for nursing science range from omics and the microbiome, biobehavioral science, big data, translational science, health economics, education research, health disparities, community-based interventions, and health policy research (Henly, McCarthy, Wyman, Heitkemper, et al., 2015; Henly, McCarthy, Wyman, Stone, et al., 2015; Villarruel & Fairman, 2015). Clearly, each doctoral program cannot address all areas of nursing science, suggesting greater focus within programs and increased collaboration across programs to build the science broadly. Partnerships with other health science PhD programs could enhance collaboration in team science and streamline research education.

The current and expected worsening faculty shortage heightens the urgency of recruiting talented students and colleagues in practice to faculty roles, including preparation for education in graduate programs. PhD students who value teaching and research and have had faculty mentorship are drawn to academia, whereas financial considerations and negative views of academia impede interest (Fang, Bednash, & Arietti, 2016). It is also an opportunity to develop new faculty roles that include practice and developing innovative approaches for faculty retention. The transformation envisioned, as well as the increasing diversity of our student population, requires investment in faculty development and opportunities for practice of both teaching and nursing. As we prepare students for a world of rapid change, faculty must also be nimble, flexible, culturally inclusive and act as lifelong learners to be ready to offer strong learning environments. Faculty will have to work more effectively as interprofessional colleagues to make crucial decisions about curriculum priorities that add value rather than more content so that students obtain foundational knowledge about current health issues of highest priority in global and local communities. Administrators of nursing schools and programs must promote the structures and processes that best support faculty, value the diversity of needs that faculty have, provide appropriate faculty development, and reward excellence in teaching. Substantial and strategic investments in technology are central to teaching for the future, capitalizing on partnerships, and promoting education research to assure value.

NURSING PRACTICE, RESEARCH, AND EDUCATION IN THE WEST: THE BEST IS YET TO COME

In planning for the future, are we addressing the compelling health and healthcare issues for nursing in the 13 states represented by WIN? As we pause to celebrate the WIN legacy of nursing practice, research, and education, we should contemplate where and how we should take our profession and our science for the future. WIN can lead our region in advancing nursing practice, education, and research to create a preferred future and improve health and healthcare for the 21st century. Several bold actions that WIN members could take include the following:

- Establish WIN as a clearing house of best practices for addressing major health conditions and health promotion behaviors and healthcare organizational policies to optimize RN and APRN practice.
- Launch a policy-focused effort within WIN for advocacy in health and health profession policy, including workforce issues in the Western United States.
- Organize results-focused forums for members to clarify problems, set priorities for addressing the problems, and collaborate to take actions to advance nursing practice, education, research, and policy in the Western United States to improve health and healthcare outcomes.
- Identify three top priorities for each mission of practice, education, research, and policy to galvanize coordinated efforts for maximum effort and impact.

Healthcare transformation—especially eliminating health disparities—will continue to offer significant opportunities for nurses to demonstrate impact through practice, research, and education in the 21st century. Our leadership and contributions are critical to the nation's health, and the actions we take today will shape our impact in the future. As we face the increasing demands in a time of fewer resources, collaborations across our region and beyond will assure that we continue to innovate and deliver excellence in nursing practice, research, and education. The call has never been louder, our collective strength has never been as impressive, and our responsibility is ever greater.

Accepted for publication February 3, 2017.

The authors would like to thank Marjorie Wells, PhD, RN, Project Director, University of California, Los Angeles School of Nursing, for her assistance.

Portions of this paper were presented at the Western Institute of Nursing, 50th Annual Communicating Nursing Research Conference, April, 2017, Denver, CO.

The authors have no conflicts of interest to report.

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