EDUCATING TOMORROW’S NURSES
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Mount Saint Mary’s University (MSMU) Department of Nursing, funded by the UniHealth Foundation, conducted a study to explore future roles of nurses and potential changes in education that will be needed to assure a nursing workforce well equipped to meet future demands. As nurse educators respond to ACA driven changes in the health care delivery system and the 2011 IOM Report on the Future of Nursing, this research adds to the emerging body of indicators driving nursing education reform and further underscores several recent findings from the 2013 CINHC Nurse Role Exploration Project (http://cinhc.wpengine.netdna-cdn.com/wp-content/uploads/2013/10/CINHC-WhitePaperNurseRoles-FINAL-100920131.pdf).

MSMU nurse faculty researchers interviewed 34 purposefully selected healthcare leaders in a wide variety of primarily Southern California organizations. One-on-one in-depth interviews with nurse scientists, nurse educators, and healthcare leaders from hospitals, health systems, and public/community health clinics included 12 questions centered around three broad areas: current nursing staff and future needs of their specific organizations; their professional understanding of significant changes taking place in healthcare across the nation including the impact of these changes on future nursing roles and new and newly significant nursing roles; and the educational, policy and technical changes needed to support these emerging roles. The interviews were recorded and transcribed for analysis; statistical coding of the transcripts allowed common themes to be identified.

<table>
<thead>
<tr>
<th>Nursing Roles Needed for the Future</th>
<th>Primary Function</th>
<th>Examples of Knowledge and Skills Needed</th>
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| Advanced Practice Nurse            | Provide autonomous primary care to meet increasing workload resulting from ACA implementation | • Advanced Health Assessment, Diagnosis and Treatment  
• Community-Based Resources  
• Individual, Family and Community Education |
| Community Health Specialist        | Focus on population health including illness prevention and community safety including disaster preparedness and response. | • Culture and Diversity  
• Individual and Community Education  
• Disaster Preparedness  
• Community Resource Access and Utilization |
| Health Informatics Specialist      | Lead broader engagement with use of information and technology to efficiently and effectively address care challenges at all levels and environments | • Information Technology  
• Healthcare Informatics  
• Electronic Health Records  
• Communications Technology Integration and Coordination |
| System Care Coordinator            | Assume central role in coordinating healthcare agencies and professionals across the healthcare delivery continuum | • Personnel Management  
• Leadership of Interdisciplinary/Interprofessional Teams  
• Holistic Understanding of All Healthcare System Components |
| Healthcare Navigator               | Support and guide individuals and families in holistic approach to healthcare | • Healthcare Policy  
• Individual, Family and Community Education  
• Self-Care Principles  
• Utilization of Resources (particularly for progressive and chronic condition management) |
Four overarching themes emerged from the study:

♦ nursing students need more education, especially in technology, cultural diversity awareness and sensitivity, patient education, enhanced communication skills, multiple language skills, and business skills such as management, leadership, and finance/budgeting;

♦ nurses need greater experience in critical thinking, negotiation, teamwork, community settings, and navigation of the new and the emerging healthcare delivery environment;

♦ the healthcare changes will require nurses to have a frontline role and understand the continuum of care under the new wellness model of care which includes accountability, managed care, and preventive care; and

♦ policy changes for additional funding and incentives for new nurses to work in underserved areas, for training in autonomous nursing roles, and for greater exposure of young students to the nursing profession are required to support substantive transformation in healthcare.

The 2013 Survey of Nurse Employers in California reported “Hospitals characterized demand for experienced RNs as moderately strong…. RNs with experience as case managers, informatics nurses, clinical educators, department managers, or director-level experience are in demand.” (http://rnworkforce.ucsf.edu/sites/rnworkforce.ucsf.edu/files/CaliforniaEmployerSurvey2013_Report.pdf, Aug. 14, 2014, p. 43). This is a clear sign that the need for novel and creative approaches to nursing education is already imminent just to keep pace with the rapidly changing workplace environment.

Information from the MSMU research provides a framework within which progress toward educating future nurses can be assessed, specific content areas in nursing education needing further investigation and development will be needed, and discussion about strategies to incorporate content into already substantial nursing curricula can be developed. The five nursing roles identified in this study potentially have significant influence on graduate education for the future and all but the APRN role have significant impact on undergraduate nursing education.

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Educating Tomorrow’s Nurses

A Report to the UniHealth Foundation

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# Educating Tomorrow’s Nurses

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Educating Tomorrow’s Nurses

Introduction

A study funded by the UniHealth Foundation was conducted by Mount Saint Mary’s University (MSMU) nursing department to identify future roles of nurses and the education necessary to prepare for those roles. Thirty-four purposefully selected healthcare leaders in a wide variety of Southern California healthcare organizations were interviewed by MSMC faculty members. This report summarizes the study findings and recommendations to guide nursing education leaders in curriculum revisions and new program development to meet future healthcare needs. Five emerging and distinct roles were identified and described. Recommendations for all nursing education programs include curriculum content, experiences needed, and transition-to-practice/pre-service experience.

Background

In February 2013, Mount Saint Mary’s University (MSMU) made a request to the UniHealth Foundation for support of its exploration of the future roles of nurses and the impact on the education and preparation needed to develop a nursing workforce well equipped to meet the needs of the future. Mount Saint Mary’s has been a leader in nursing education since 1952 when it established California’s first baccalaureate of science degree in nursing program, fully integrated into the College’s liberal arts curriculum. As a leader in nursing education, Mount Saint Mary’s aim is to articulate the critical professional skills needed to transform nursing education so that nurses of tomorrow can positively and significantly impact patient care and advance population health.

In order to explore the vital roles that nurses can play in rapidly changing healthcare settings and an evolving healthcare system—and the critical skills needed to prepare effective nurse leaders—Mount Saint Mary’s University embarked on redesigning its five current nursing programs in order to prepare competent and caring nursing professionals of the future. As a first step in leading the preparation of future nurses for the impending changes in the healthcare system,
Mount Saint Mary’s nursing faculty undertook a research project to identify the knowledge, skills, and specializations needed of future nurses.  

Throughout fall 2013 and early 2014, nine nursing faculty conducted one-on-one interviews with 34 healthcare leaders in California, primarily located in Southern California. These in-depth interviews involved leaders selected for their areas of expertise from a broad cross-section of healthcare organizations and were structured around three aspects of the nursing leaders’ areas of expertise: the current and future needs of their specific organizations, their own professional understanding of significant changes taking place in healthcare across the nation, and their perspective on the roles of future nurses in providing high-quality and efficient healthcare.

In March, faculty met to discuss common themes emerging in their interviews, and transcripts of the interviews were coded to provide quantitative evidence of these themes. First, all of those interviewed recognize that needed change to healthcare in the U.S. is underway and that education and the preparation of nurses is only one, albeit an important, factor in promoting a healthy population in years to come. Two additional themes cited are the need for a well-functioning healthcare system and the need for a diverse healthcare workforce.

**Context**

In 2011, the Institute of Medicine (IOM) released its report on the nursing workforce titled *The Future of Nursing: Leading Change, Advancing Health,* which set the stage for considering the future of the nursing profession. With nurses comprising the majority of the nation’s healthcare workforce, the IOM recognized that nurses are well-positioned to lead change. The report recognizes that even as patient needs have become more complicated, the healthcare system is rapidly evolving away from acute care settings and tertiary care to a focus on health maintenance and chronic disease management in primary-care settings. Nurse leaders are critical to meeting the health needs of the individual and promoting population health. Further, a recent poll finds

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1 MSMC Planning grant on the Future Role of the Nurse, funded by the UniHealth Foundation, 2013.
3 Affordable Care Act of 2010
that the public’s most trusted source of information on the law comes from healthcare professionals, including nurses.\(^4\)

Recognizing needed systemic change in the healthcare system and the nursing profession, the Institute of Medicine spelled out four key messages that reinforce the critical role that nurses will have in producing safe and quality care for patients in the U.S. The IOM articulates eight specific recommendations, which are directed to policy makers, accrediting and professional oversight bodies, healthcare organizations, professional nursing associations, and others including nurse educators. Conceptually, these recommendations point to

- advanced practice registered nurse practice (Recommendation 1);
- leadership and involvement in collaborative efforts to improve the care of patients and to advance health (Recommendations 2, 7);
- implementation of transition-to-practice programs (Recommendation 3);
- increasing the education level of nurses and engaging them in lifelong learning (Recommendations 4, 5, 6); and
- building an infrastructure for the collection and analysis of interprofessional healthcare workforce data (Recommendation 8).

Particularly significant to nurse educators are how these recommendations inform the curriculum and experiences of nurses prior to employment. One of the four key messages of the IOM Report focuses on the specific need to transform nursing education: “Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression.” And, several of the recommendations above will rely on nursing education programs to better prepare nurses to operate in collaborative efforts, assume leadership roles, and assist in building an infrastructure that utilizes technology in collection, analysis and communication of data.

The Affordable Care Act (ACA) will be responsible for the most significant changes that will take place in healthcare. In essence, when fully implemented, the ACA will turn the current healthcare system on its head, with an emphasis shifting to preventative/primary care from the current acute/tertiary care model. Significant changes envisioned include:

\(^4\) Kaiser Health Tracking Poll: August 2013; accessed at http://;kff.org/health-reform/poll-fi9nding
• Change from an episodic to a population health model that focuses on preventative care and community health settings.

• An integrated delivery network emphasizing patient safety and wellbeing where the hospital is no longer at the center of healthcare system.

• Implementation of insurance exchanges leading to an increase in the number of insured patients and a shift to a continuum of patient care.

• An increase in coverage for healthcare producing a significant increase in diversity of the patient population, as well as, an increase in the demand for care from health professionals.

• The need for advanced practice nurses may increase more dramatically as some physicians refuse to accept government subsidized patients.

In addition to policy changes resulting from the ACA, there are societal trends—including management of chronic illness over longer lifetimes, an aging population, and the increasing use of technology to improve diagnosis, treatment, and data management—which are also promoting significant changes in healthcare system requirements.

In response to the changing U.S. healthcare system and patient characteristics, nursing roles must evolve in order to meet future demands. The specific goals of the grant were to identify how nursing education must respond in order to ensure capable and caring nurses for tomorrow. The results will inform and guide changes in nursing education programs at the College and in nursing education across the nation.

Thirty-four individuals from California health agencies, mostly located in Southern California, were specifically selected to participate in one-on-one interviews with MSMU’s faculty. These individuals included nurse scientists, nurse educators, and healthcare leaders from hospitals, health systems, and public/community health clinics. (Participating organizations are listed in Appendix A). Each participant was asked about the future role(s) of the nurse by reflecting on 12 questions organized around three broad areas (please see Appendix B for list of questions):

• Organization specific questions about the current nursing staff and the organization’s needs;
• **Healthcare in the U.S.** probing reflection about the most significant changes taking place in healthcare and the impact of these changes on roles of nurses; and

• **Future Nurses** including questions about new and newly significant roles of nurses and the educational, policy and technical changes needed to support these emerging roles.

The interviews were recorded and transcribed for analysis; statistical coding of the transcripts allowed common themes to be identified. A detailed list of themes resulting from analyses of the transcribed interviews by two independent statisticians is included as Appendix C.

The broad-stroke themes that emerged include:

1. **Nursing students need more education, especially in the following areas:** Technology (Information Technology/Informatics/Electronic Health Records); culture, diversity, sensitivity, language, ethnicity; patient education (especially motivational interviewing); communication skills; and business skills (management, leadership, finance/budget).

2. **Nurses need more experience in the following areas:** critical thinking, negotiation, business skills, teamwork, community settings, navigation of healthcare systems and impending changes to healthcare.

3. **Changes in healthcare will include:** an increase in demand where nurses will have a frontline role; and change in healthcare delivery from a system care to wellness model of care. Nurses will especially need to understand continuum of care: wellness model, accountability care, managed care, preventive care.

4. **Policy changes needed to support substantive transformation in healthcare include:** additional funding for nursing education, incentives for loan repayment for work in under-represented communities; autonomous nursing roles, and exposure of young students to the nursing profession as a career path.

These themes are discussed in the first two sections of this white paper:

• *Today’s Nurse* reviews the current nursing workforce and needs through the lens of the agencies/organizations involved in this study;

• *Transitioning to Tomorrow* summarizes the changes in healthcare through the reflections of participants on questions about healthcare in the United States and the roles of future nurses.
The last two sections of this white paper focus on educational preparation that will be necessary to support these roles:

- *Preparing Tomorrow’s Nurse* presents thematic reflections of participants on educational preparation of future nurses, combined with discussions of faculty who have begun to consider the study’s findings and the resulting impact of changes on nursing education.
- *Recommendations for Nursing Education* provides guidance for higher education institutions given the new roles of future nurses and education transformation needed to prepare students for those roles.

An analysis of the interview results may be found in Appendix D.

### Findings

#### Today’s Nurse

The roles of today’s nurses depend on the type of healthcare organization and the population it serves. A variety of nurses—from licensed vocational/licensed practical nurses, to registered nurses, educated at both the baccalaureate and associate-degree level, and advanced educated nurses—are considered integral to meeting today’s needs. These nurses are part of a healthcare team within the organization that may utilize a number of other care providers, including physicians, psychologists, physical therapists, dieticians, social workers and volunteers.

In this study, responses to the question about the roles of today’s nurses reflect the diversity of experiences with nurses in many different current roles. Respondents in this study indicated the largest numbers of nurses in their respective organizations are currently involved in direct care as floor nurses, outpatient nurses, patient health educators and nurse subcontractors.

Other healthcare settings require nurses to serve in K-12 schools, as part of disaster response teams, and in gathering forensic evidence.

Ninety percent of organizations surveyed currently use inter-professional and collaborative teams—both interdisciplinary within the nursing profession, and multidisciplinary teams across the medical field in their healthcare delivery.

The teams are organized primarily to:
• Integrate work flow, patient care, primary care provider, family physician and other services needed (e.g., dietician, occupational therapy, physical therapy, psychological, social services)
• Coordinate assessment of patient care
• Coordinate follow-up care and monitor progress
• Effect organizational change (e.g., patient wait times)
• Train new and transitioning caregivers

In this study, over 80% of participants note that nurses are considered to be an integral part of inter-professional teams in their organizations; several respondents noted that the nurses’ role in teams is often difficult to achieve in practice due to other demands on nurses’ time.

Only a quarter (23%) of respondents indicated that their existing nursing workforce meets their current needs, with two-thirds indicating a need for additional training/education for their current workforce; 10% of respondents mentioned other concerns. Those respondents who indicated a need for additional training/education for their workforce articulated a need for better development of nursing skills based on
• A holistic view of patient needs
• Breadth of experience, especially with older patients and diverse populations
• Community health involvement

And related skills focused on developing
• Communication
• Leadership
• Inter-professional teamwork
• Personnel management
• Data collection and management
• High quality healthcare delivery

**Transitioning to Tomorrow**
Some of the impending changes in the healthcare system reported by study respondents include:
i) a greater emphasis on wellness and primary care; ii) a shift from fee-for-service to fee-for-
value; iii) an emphasis on patient safety; iv) the rise of insurance exchanges; and v) an increase in the number of insured patients. Participants acknowledged that nurses will provide critical leadership in transitioning from an illness to a wellness model of healthcare, in accommodating the increasing demand on healthcare professionals, and in shifting the focus from acute care settings to population health management. Statements such as “Nurses will be the face of health in the community,” they will be the “choreographers of care,” and they will “face the challenge of meeting needs of patients by utilizing available resources while keeping costs down”—give an indication of the enormous importance of nurses in shepherding this transition and effectively serving tomorrow’s population.

**Evolving Nursing Responsibilities and Roles**

The study points to five key roles of future nurses to help fulfill the demands placed on them in the new healthcare environment. These roles are: 1) **advanced-practice nurses** will serve in autonomous primary provider roles; 2) **community health specialists** will focus on community health and illness prevention as well as increase nurse disaster preparedness and response; 3) **health informatics specialists** will utilize technology to make patient and health information more accessible; 4) **system care coordinators** will be familiar with all aspects of holistic patient care and connect patients with needed services; and 5) **healthcare navigators** for individuals and families will know all available resources and policies to educate families about self-care, which will be vitally important for preventive and chronic condition care management.

Within each of these five broad nursing categories, there may be a need for more specificity of nursing roles; however, a closer analysis of participant comments about responsibilities suggests the following elaboration of the five broad roles outlined above.

- **Advanced practice nurses** (APRNs)\(^5\) will be called upon to alleviate the increased demand for healthcare as the ACA opens access to individuals. In these roles, advanced practice nurses will become primary care providers, especially in community-based settings and as primary care partners. As healthcare is decentralized by moving from tertiary-care facilities into communities, advanced practice nurses will need to work with greater autonomy in diagnosing and treating a broader range of health issues.

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• As envisioned, nurses on the front line as **community health specialists** will open expanded roles for RNs. Community and patient education in culturally-based communities will need to be delivered by health personnel sensitive to underlying community cultures and be aware of resources in delivering messages of health and well-being.

• The use of technology in healthcare has been primarily tools designed and used by physicians and healthcare managers. The role of the **health informatics specialist** involves integrating the management of information and communication technologies with the practice of nursing in promoting health of people, families, and communities. There is increased need to effectively communicate information to support safe patient-centered care. This information will need to be accurate, thorough, intelligible and accessible to patients, families and communities. Additionally, information and communication technologies are needed to provide patient information to the healthcare network across all care venues. Nurses are needed who can analyze consumers’ and the inter-professional healthcare teams’ need for health information, who can build the data files, and who can make that information accessible to all stakeholders.

• **System care coordinators** will be needed to integrate services across the healthcare continuum in order to deliver comprehensive and timely care to individuals, families and communities. To do this effectively, nurses must be familiar with all aspects of holistic patient care—social agencies, mental health services, physician and specialists services—and their areas of responsibility. Additionally, nurses will be better prepared to provide the critical link between needed services if they understand underlying causes and progress of disease, as opposed to diagnoses based only on symptoms displayed.

• In light of decentralized healthcare delivery, nurses will be needed who can assist patients, families and communities in navigating among the various providers to address specific patient needs. The **healthcare navigator** for individuals and families will need to be aware of available resources and healthcare policies and be able to communicate this information to educate individuals and families with respect to self-managed care. This will be particularly important at the primary care level in the case of progressive and chronic disease management.
Table 1. Emerging and Expanding Nursing Roles

<table>
<thead>
<tr>
<th>Nursing Roles Needed for the Future</th>
<th>Primary Function</th>
<th>Education Level Necessary</th>
<th>Examples of Knowledge and Skills Needed</th>
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</thead>
</table>
| Advanced Practice Nurse            | Provide autonomous primary care to meet increasing workload resulting from ACA implementation | MSN DNP (preferred) | • Advanced Health Assessment, Diagnosis and Treatment  
• Community-Based Resources  
• Individual, Family and Community Education |
| Community Health Specialist        | Focus on population health including illness prevention and community safety including disaster preparedness and response. | BSN Post-BSN certification | • Culture and Diversity  
• Individual and Community Education  
• Disaster Preparedness  
• Community Resource Access and Utilization |
| Health Informatics Specialist      | Lead broader engagement with use of information and technology to efficiently and effectively address care challenges at all levels and environments | BSN Post-BSN certification MSN | • Information Technology  
• Healthcare Informatics  
• Electronic Health Records  
• Communications Technology Integration and Coordination |
| System Care Coordinator            | Assume central role in coordinating healthcare agencies and professionals across the healthcare delivery continuum | BSN Post-BSN certification | • Personnel Management  
• Leadership of Interdisciplinary/Inter-professional Teams  
• Holistic Understanding of All Healthcare System Components |
| Healthcare Navigator               | Support and guide individuals and families in holistic approach to healthcare | BSN Post-BSN certification | • Healthcare Policy  
• Individual, Family and Community Education  
• Self-Care Principles  
• Utilization of Resources (particularly for progressive and chronic condition management) |

The findings of this Mount Saint Mary’s University (MSMU) study resonate with those reported by California Institute for Nursing & Health Care (CINHC) in its Nurse Role Exploration Project.6 This project sought to define the new roles which they identified as the most important

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6 Berg, J., Dickow, M, Nurse Role Exploration Project: The Affordable Care Act and New Nursing Roles, California Institute for Nursing & Health Care (CINHC), September 25, 2013.
for RNs to meet in the future. They found consensus around five broad roles for future nurses (see table 2 for comparison):

**Table 2. Summary of Nursing Roles Findings of MSMU and CINHC Studies**

<table>
<thead>
<tr>
<th>MSMC White Paper</th>
<th>CINHC White Paper</th>
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<tr>
<td>Categories of nursing roles that must evolve to meet future demands of the changing healthcare system</td>
<td></td>
</tr>
<tr>
<td>In order of frequency mentioned in study</td>
<td>New nursing roles to meet rapidly expanding health care services needs in California associated with the ACA</td>
</tr>
<tr>
<td>In order reported in study</td>
<td>Care Coordinator including population health management and tiered coordination</td>
</tr>
<tr>
<td>More nurses must be prepared as advanced-practice nurses to serve in autonomous primary provider roles, in order to meet the increased workload with increased access afforded by the ACA.</td>
<td>Faculty Team Leader moving inter-professional nursing education to community settings</td>
</tr>
<tr>
<td>Nurses will need to become community health specialists as the prevention of illness and community safety become primary foci; included will be increasing nurse roles in disaster preparedness and response.</td>
<td>Informatics Specialist – roles in design, data interpretation, and tele-health applications</td>
</tr>
<tr>
<td>Broader education will be needed to understand the potential of technology, leadership and collaboration in problem solving, especially with respect to becoming health informatics specialists</td>
<td>Nurse/Family Cooperative Facilitator bringing virtual and in-person health care to people where they live and work (re-emergence of the “district” or “visiting” nurse role)</td>
</tr>
<tr>
<td>Nurses will take a central role in coordinating health agencies and professionals across the healthcare delivery continuum as system care coordinators.</td>
<td>Primary care partners – providers in community health settings (not specifically APRNs) e.g., school-based clinics</td>
</tr>
<tr>
<td>Nurses will assist patients in a holistic approach to healthcare as primary care partners and healthcare navigators for individuals and families.</td>
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The following is a further comparison of the roles defined in the two studies.
• Care coordinator—this includes coordinating healthcare team members or communities on best choices for wellness. The MSMU study also identifies **system care coordinator** as an important role for future nurses.

• Faculty team leader—these nurses will be at the heart of changing how RNs are educated so that nurses will be better prepared to function in cross-disciplinary teams responsible for delivering integrated healthcare. In the MSMU study, participants acknowledged that baccalaureate and graduate nursing students must be better prepared to serve as team leaders of cross-disciplinary teams but this was not identified as a specific discrete new role.

• Informatics specialist—these roles envisioned “informatics design, application, and interpretation across settings” In the MSMC study, this role was termed **health informatics specialist**.

• Nurse/family cooperative facilitator—The CINHC study identified these roles as “connecting with people where they live and work” to assist in promoting healthier lifestyles. This role is related to the **community health specialist** identified in the MSMC study.

• Primary care partner—CINHC identifies this new role for RNs in community and family settings, in providing “education, coaching and support for people with complex illnesses”. This role is most closely related to the **healthcare navigator** for individuals and families identified in the MSMC study. Those nurses providing independent primary care are also identified as **advanced practice nurses** in the MSMC study.

Participants in both the CINHC and the MSMU study expressed that a successful transition to a more effective and efficient healthcare system will rely heavily on nursing professional expertise. Importantly, both public policy and technology tools will complement and support changes in the education needed for nurses to be successful in new and evolving roles.

*Policy Support*

Respondents in this study had limited comments regarding policy support. This may have resulted from: lack of clarity as to whether the questions were directed at institutional or public policy; or as a result of an incomplete understanding by the interviewees of what now exists or might exist in this period of changing healthcare policies. However, changes to public policy
that were identified as important to facilitating future nurses to effectively fill these evolving roles include:

- Financial compensation that will mitigate disparity in pay between nurses employed by acute care institutions and nurse educators.
- Greater support for nurse education in the form of scholarships or forgivable loans that incentivize students to practice in underserved communities and, especially in those communities where nurses have a deep cultural connection.
- Additional incentives for those with second language skills.
- Reimbursement for disease prevention and health promotion activities.
- Clarity in nursing roles and scope of practice both for the advanced practice nurse and for the registered nurse.
- Regulations that allow and encourage nurses to work to the level of their professional education.
- Pay based on clearly differentiated practice roles.
- The view of nursing care as a revenue center, not a cost center for the institution.

**Technology Support**

When asked about ways in which technology can support nurses in each of these roles, most respondents said that technology is an important tool that will permit increased accessibility to information, and allow a greater and more efficient flow of information among the healthcare network. Specifically, technology will

- Bring people together
- Allow nurses to be mobile and spend time in the community
- Give patients and families access to information
- Facilitate information sharing
- Help to integrate an extensive continuum of care
- Permit effective decision making
- Require software programmers who are also clinicians.
Preparing Tomorrow’s Nurse

Several new and increasingly significant nursing roles have been identified to assure healthcare quality and efficiency: primary care provider, health promotion/disease prevention specialist, community health educator, nursing researcher, and care coordinator and navigator across healthcare settings. Participants in this study added additional specific roles needed to provide quality care in the emerging healthcare system more focused on primary care and on a more diverse and aging population. Additional future and increasingly significant specific nursing roles include:

- Advanced Practice Nurse
- Case Manager
- Disaster Response Nurse
- Environmental Health Nurse
- Epidemiological Nurse
- Forensics Nurse
- Home Care Nurse
- Informatics Specialist
- Magnet Consultant
- Nurse Administrators, including Chief Nursing Officers
- Nurse family cooperatives with nurses as a patient navigator
- Nurse Leader
- Nurse Educator
- Patient Educator as a Healthcare Coach, self-care for chronic disease
- Public Health Nursing
- Tertiary care nurse (Hospital, Nursing Home, Hospice). All professionals in this study acknowledged that the educational preparation of nurses must change in order to better prepare nurses to meet emerging needs.
Challenges and Lessons Learned

There were some challenges in conducting the study. First, even though the interviewees were specifically selected for their knowledge of broad healthcare issues and specific areas of healthcare so the study would elicit diverse perspectives, and some prospective interview candidates were hesitant to meet because they felt they were not the right contacts to speak on this subject. Many times the interviewer was able to convince them that we valued their particular opinion but other times the faculty member interviewed the person nominated by the original interviewee selected.

Also, the team purposefully selected interviewees from different backgrounds to understand a variety of perspectives. However, it was difficult to identify broader themes and draw conclusions from these different responses. Some of the themes were even contradictory, appealing to one organization and not appealing at all to others. During the actual interviews, some of the non-nursing healthcare leaders such as physicians were less likely to feel that they had anything to contribute to the discussion on nursing education. There was also a greater tendency to have a limited perspective, focusing on their organization’s existing and future needs as opposed to envisioning the “broader picture.” This made it difficult to analyze public policy responses and develop specific policy recommendations.

Lastly, in some non-acute care settings where nurses were expected and traditionally had broader roles and responsibilities, the research team discovered that nurses were not seen as the team leader or coordinator of total care. Nurses were generally found to be focused on medication issues and referrals rather than providing direct patient care or coordinating care among numerous providers. Only nurse practitioners primarily had direct patient contact but they were often perceived as physician extenders rather than having their own practice and coordinating care beyond the patient’s initial visit. Since nurses have traditionally been educated to view and care for their patients holistically, this trend toward less patient access and contact is worrisome. What clearly emerged from the interviews was that adoption and implementation of the Affordable Care Act is a slow process that will require significant time to change the system to a patient-centered total care model that focuses both on comprehensive treatment and preventive care.
Recommendations for Nursing Education

When asked about ways in which nursing education must change, responders were asked to focus on education that will better prepare nurses for the rapid changes in the healthcare system, roles outlined above, and the aging and increasingly diverse population needing healthcare. Although the interviewees were selected because of the different healthcare backgrounds, experiences, and organizational involvement, they agreed on the following points: 1) nursing education and preparation are important factors in promoting future healthy populations; 2) there is a need for a well-functioning healthcare system; and 3) a diverse healthcare workforce is needed to represent the increasingly diverse U.S. population.

Four overarching themes emerged from the study: 1) nursing students need more education, especially in technology, cultural diversity awareness and sensitivity, patient education, enhanced communication skills, multiple language skills, and business skills such as management, leadership, and finance/budgeting; 2) nurses need greater experience in critical thinking, negotiation, teamwork, community settings, and navigation of the new and the emerging healthcare delivery environment; 3) the healthcare changes will require nurses to have a frontline role and understand continuum of care under the new wellness model of care which includes accountability, managed care, and preventive care; and 4) policy changes for additional funding and incentives for new nurses to work in underserved areas, training in autonomous nursing roles, and greater exposure of young students to the nursing profession are required to support substantive transformation in healthcare.

In addition to any nursing-specific courses, nearly one-third of participants in the study indicated that tomorrow’s nurse would need stronger leadership skills and nearly a quarter indicated that strengthening many skills derived from a broad-based education will be important: critical thinking, and a focus on oral and written communication skills. An important skill mentioned often was the need to include the development of an appreciation of and sensitivity to patients of diverse cultures.

Other general suggestions concerning nursing roles and responsibilities include maintaining certified nursing assistants and licensed vocational nurses to provide needed support roles for
health care provider teams, access to seamless academic progression that will widely increase the BSN and higher-educated workforce for the future, preparation of more nurses with certification requiring advanced work at the graduate level including advanced practice nurses, clinical nurse specialists, nurses with a master’s in public health or public health nursing, nurse supervisors, psychiatric nurse practitioners, and nurse educators, clarification of the roles of nurses at each preparatory level, and the provision of more pathways for nurses to achieve professional growth.

These responses, taken in the context of the interview, point to three areas of nursing education to be addressed: Curriculum content, experiences needed and transition-to-practice programs/pre-service experience.

**Table 2. What types of education and preparation will nurses need to be successful in future roles?**

**Curriculum Content**

- Cross-training with other professions in interdisciplinary practice
- Critical thinking and clinical judgment skills
- Cultural sensitivity awareness and training for work with diverse populations
- Leadership and management development
- Acquisition of strategies for effective patient and family education
- Technology knowledge and skills including informatics and the use of technology to facilitate processes, including electronic health records
- Knowledge of community programs and resources, with a focus on the continuum of care
- Assessment skills including physical, environmental, and psychosocial
- Holistic approach to care including the patient, family, and caregivers and psychosocial and spiritual needs
- Communication skills such as Motivational Interviewing, listening, clarity of spoken and written language, and skills specific to communication with diverse cultural groups
- Greater emphasis on pathophysiology to understand disease causes and processes
- Inclusion of public health issues and population-based care, including statistics and epidemiology
- Stress the needs of special and growing US populations: aging, dementia, chronically-ill
• More emphasis on the role of research and use of data in developing evidence-based best practices.
• Additional depth and certification at post-secondary level for advanced practice nurses to fill specific roles as healthcare informatics specialist, system care coordinator, community health specialist, and healthcare navigator/primary care partner.
• Increased business skill set, such as managing and negotiating skills
• Understanding of behavioral cues in aging patients and those unable to completely explain their needs
• Increased opportunities for advanced practice nursing education
• Skills working on teams
• Language proficiency
• Health promotion skills and strategic planning

Experiences needed
• Clinical experiences outside the acute care setting
• Patient educator experiences to develop competencies including strategies to help people develop and implement behavior plans to live healthy lifestyles
• Experience in community roles
• Work with resources available in the community

Transition-to-Practice Programs/Pre-service experience
• Residency programs before employment
• Experience within community settings and organizations
• Working with inter-professional teams as part of a comprehensive healthcare system

The following is a summary of the recommendations for inclusion in all nursing programs.
• Holistic approach to patient care;
• Diversity and cultural sensitivity education;
• Interdisciplinary collaboration and teamwork;
• Broad knowledge of nursing informatics integrated across the curriculum;
• Business skills including financial and management skills;
• Patient management skills for aging patients;
• Disaster preparedness;
• Academic-service partnerships for transition to practice programs;
• Language proficiency;
• Communication skills including motivational interviewing;
• Clinical judgment and reasoning; and
• Self-care management for chronic conditions.

The challenge for educators is to determine what can be reduced or eliminated from the current curriculum in order to add the content areas described above.

The report makes recommendations for post-baccalaureate education for the specific roles described in the study. The report does not specify whether this education should be offered as graduate programs, certificate programs, or continuing education for current providers. The specific roles described in the report are the following.

• Health informatics specialists;
• System care coordinators;
• Healthcare navigators for individuals and families;
• Community health specialists; and
• Advanced practice nurses.

Summary

This paper reports on a study by Mount Saint Mary’s University that focused on the future roles of nurses in the changing healthcare environment and the education needed for those roles. Interviews were conducted by Mount Saint Mary’s faculty members with 34 Southern California healthcare leaders. General recommendations for all nursing education programs focused on three areas: curriculum content, experiences needed, and transition-to-practice programs/pre-service experience. The study points to five key roles of future nurses to help fulfill the demands placed on them in the new healthcare environment. These roles are: 1) advanced-practice nurses; 2) community health specialists; 3) health informatics specialists; 4) system care coordinators; and 5) healthcare navigators for individuals and families.

These recommendations will hopefully inspire nursing educators across the nation, as they will at Mount Saint Mary’s University, to give careful thought and consideration to the impact of imminent changes in healthcare on their nursing education programs. While nursing education is not the only factor necessary for a successful transition to a more accessible healthcare system, a nursing workforce that is properly prepared to embrace the change is critical to a healthier future for the nation.
Appendices
Appendix A

Organizations Represented in the Interview Process

<table>
<thead>
<tr>
<th>Type of Organization</th>
<th>Name of Organization</th>
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<tbody>
<tr>
<td>Academia</td>
<td>California State University, Los Angeles</td>
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<tr>
<td></td>
<td>UCLA School of Nursing</td>
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<td></td>
<td>UCLA Health Ethics Center</td>
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<td></td>
<td>Mount Saint Mary’s University</td>
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<td>Organizations</td>
<td>California Action Coalition Co.</td>
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<tr>
<td></td>
<td>Partners in Care Foundation</td>
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<td></td>
<td>Alzheimer’s Association</td>
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<td></td>
<td>AltaMed Grand Plaza PACE</td>
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<tr>
<td>Clinics/Homes/DayCare</td>
<td>The Children’s Clinic</td>
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<td></td>
<td>Venice Family Clinic</td>
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<td>A Day Away ADHC</td>
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<td></td>
<td>OPICA Adult Day Care</td>
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<td>OneGeneration ADHC</td>
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<td></td>
<td>Westside Children Center</td>
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<td></td>
<td>Los Angeles Jewish Home for the Aging</td>
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<td></td>
<td>Silverado Senior Living</td>
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<tr>
<td>Hospitals/Medical Centers</td>
<td>St. Francis Medical Center</td>
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<tr>
<td></td>
<td>Eisner Pediatric &amp; Family Medical Center</td>
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<tr>
<td></td>
<td>Turner Healthcare Services</td>
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<td>St. Vincent Medical Center</td>
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<td>Cedars Sinai Medical Center</td>
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<td></td>
<td>California Hospital Medical Center</td>
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<td></td>
<td>Little Company of Mary</td>
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<td>Providence TrinityCare Hospice</td>
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<tr>
<td>Healthcare Systems</td>
<td>Providence Health &amp; Services California</td>
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<td>Providence Health &amp; Services, Southern California</td>
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<td>VA Long Beach Healthcare System</td>
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<td></td>
<td>Kaiser Permanente, Southern CA Region</td>
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<td>Government Agencies</td>
<td>Los Angeles County Dept. of Public Health</td>
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<td></td>
<td>LAUSD Division of Student Health and Human Services</td>
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Appendix B

 UniHealth Grant Interview Questions: Future Role(s) of the Nurse

Organization Specific Questions
1) Please describe the current role(s) of nurses in your institution/organization.
2) Do these roles satisfy the institution’s current needs? If yes, please explain how nurses help fulfill specific needs. If not, please explain why not and how nurses could help address your institution’s current needs/challenges.
3) Does your existing nursing workforce require additional education and preparation to meet current needs? If yes, please describe the additional training needed and how it would be beneficial.
4) Does your organization have experience with inter-professional collaboration and communication?
5) In your opinion, how will your nursing workforce be able to address your organization’s future needs? What kind of education and preparation will nurses need to alleviate or address these future challenges?

Healthcare in the U.S.
6) In your opinion, what are the most significant changes taking place in healthcare? Are there changes you would like to see in the next five years?
7) Some of the identified healthcare changes include: i) a greater emphasis on wellness and primary care; ii) a shift from fee for service to fee for value; iii) an emphasis on patient safety; iv) the rise of insurance exchanges; and v) an increase in the number of insured patients.
   a) How do you see the role(s) of the nurse evolve as a result of these changes so that they could meet future demands?
8) The nursing workforce consists of a variety of nurses at different educational and preparation levels and therefore in different nursing positions: CNA, LVN, ADN, BSN; and at the graduate level: Nurse Practitioner, Clinical Nurse Specialist, Nurse Educator. Please provide your opinion on each of the positions:
a) What do you believe should be the required preparation and experience for each of these nursing roles?
b) Can public policy assist and support these different nursing roles? If so, how?
c) What role can technology play to support nurses in each of these positions?

**Future Nurses**

9) Several new significant nursing roles have been identified to increase healthcare quality and efficiency: primary care provider, health promotion disease prevention specialist, community health educator, nursing researcher, and care coordinator across healthcare settings.
   a) Would you include any other significant roles to this?
   b) What type of education and preparation will nurses need to be successful in these roles?
   c) What can public policy do to make these roles possible?
   d) How can technology support nurses in each of these roles?

10) With the growth in population and an increasingly diverse society, please answer the following questions based on the specific population you work with:
   a) How should the future nursing role evolve to meet the needs of an increasingly diverse society?
   b) What type of education and preparation will future nurses require to address the unique needs of these different groups?
   c) Could public policy changes assist in this process?
   d) Are there other diverse groups that you identify that would be important for future nurse preparation?

11) Do you have any other comments that you would like to share?

12) Do you have any questions or suggestions for me about this research?
Appendix C
Themes Emerging from Interviews and Faculty Discussions

Overarching theme: systemic change needed. The current system has been unchanged for many years. California needs to develop some type of agreement in which certifications/licensures can go beyond state lines.

I. Education/Experience Needed by Future Nurses

- Clinical informatics specialist
  - experts in technology
  - Students trained in informatics do not need the 4-6 week training on IT like other students do. Therefore they can focus more on other needed training at their sites.
- Understanding behavioral health of aging population, dementia, Alzheimer patients
  - Discern behavior cues not as ‘bad behavior’ but as cue to deeper issue
  - End of life care
    - Empathetic and understanding
  - Dementia – understand how to cope, educate and assist patients
    - The Alzheimer’s Act Early diagnosis
- Overall skill sets:
  - Communication skills- oral and written practiced within the team and peers
  - Negotiation
  - Critical Thinking
  - Diversity
    - Gender, age, cultural, religious, and possible community understanding (poverty stricken “war zones”)
  - Cultural competence
  - Sensitivity training
    - Socio economic understanding
  - Language skills
  - Collaboration/teamwork
    - Self-awareness and limitations
      - Nurses/students should be taught to be aware of their limitations so that they do not get overwhelmed and
continually say “yes” to work they might not be able to complete.

- Better bedside manner /empathy
  - Excellent customer service should be practiced at all levels
- Mental health understanding
  - Motivation interviewing
  - Mental health in general of patients

- Business experience
  - Understand the changes in healthcare reimbursement and payer mix
  - Know and understand different insurance plans, options, managed care plans, ethical and legal policy issues that are involved
  - Economics
  - Understand costs associated with medical care from personnel to supplies
  - Business side of medical care
    - Understand how to manage complex healthcare arena
  - Management and supervisory training for nurse managers

- Know how to be a patient educator
  - Educate patients for a healthy life style that promotes health and disease prevention through self-care and behavioral changes
    - Preventive care model
    - Understanding of wellness and healthy living
    - Encourage Motivational Interviewing to not only teach healthy living but to actually carry it out

- End of life care
- Safety training, prevention of accidents and infections
  - Access resources for various outcomes during a disaster

- I.T. skills
  - Strong I.T. skills to help with electronic health record -know how it works, design system, but have clinical knowledge. Data capture, computer interaction, optimize workflow
  - Students should prepare prior for technology
    - Issues
      - The lag from technology learning curve has caused current nurses to hold off on teaching or learning more about new technology
      - LVN’s and CNA’s are introduced to technology but other than that they need extensive training when they begin working on site.
    - Preparation for operational world/work environment
Residencies/internships beginning in their first year to compensate

- An idea to overcome lack of experience: Internships out in the field should begin the first year of school in the BSN programs.
  - Since they are not prepared for much of the work they can still acclimate to the environment and help in other areas or shadow.

Increased level of maturity

- Education for clinical judgment utilizing simulation and an academic electronic health record system
- Experience and self-awareness of capabilities
  - Experience in community settings
    - Nurse practitioners will play larger roles in this area
  - Dementia care/Alzheimer care, diabetics and chronic disease care
    - Know underlying pathology of disease, not just symptoms
    - Know best practice for best outcome with patients and family
      - Family will most likely need the most explaining and education
  - Holistic patient care- get to know your patient
    - Know family, motivational interviewing skills, know their insurance, environment, home life, about their care giver, their prescriptions, psychosocial and cultural issues, and community resources in order to refer
    - Know the resources that fit patient and continue to contact patients – part of customer service

II. Overall Changes in Healthcare System that will shape future nurse roles

- Knowledge of Healthcare System and Policies for good care coordination
  - Affordable Care Act
  - Alzheimer’s Act
  - Significant impending changes that could have various outcomes
    - Changes in nursing staff needs
    - More responsibility is almost guaranteed for nurse practitioners
    - Lower-level staff positions may become obsolete
    - Hospital will no longer the main center for treatment
      - Community outreach/care
    - 2 nursing boards in CA, becoming one
  - Hospitals and organizations electronic systems
    - Getting people enrolled for benefits
    - Organizations getting paid
• **Fee for service**
  o In many fee-for-service plans, nurses are billed through the physician’s reimbursement and not independently for their service
  o Many providers are moving away from fee for service to capitated funding, similar to an HMO.

  ▪ Communication is difficult- need overhaul of record system
  ▪ Nurses coming out of college don’t have adequate experience in using electronic health record (EHR)

• **EHR training is taking time away from other valuable training on site. Students should be learning more about this technology and the new data entry systems.**
  o Nurses will take on a larger role due to increased access to healthcare

  ▪ Nurses to take on larger roles
    ▪ Running their own practices or as “medical home” teams
    ▪ Education of patients and families
  ▪ Minimum entry level degree BSN
    ▪ AA students need more training/field work but it doesn’t seem especially as more hospitals and medical centers seek magnet status

  ▪ There not be enough primary care physicians
  ▪ Primary care physicians might retire earlier with overwhelming numbers of patients and changes incurred by the type of holistic demand of healthcare and changes in reimbursement for care

  ▪ Nurse practitioner and clinical nurse specialist are likely physician extenders
  ▪ Need residency program for advanced practice nurses- 2 years of supervision
  ▪ With this policy will have to change in allowing greater role expansion
  ▪ Roles for all nurses will be defined, delineated, expanded
  ▪ BSN nurses will be in greater demand
    o BSN change to the minimum entry status
  ▪ Bridge program for C.NA, A.DN and LVN nurses, although nurses at lower levels will be still be needed to perform lower level functions; online RN to BSN programs especially needed
  ▪ Role definition needed
    o Know what can be delegated to other staff/team members to lighten the nurse load
• Nurses will have to know what they bring to the table, they will have advocate for themselves, know their voice, role, value, and be an agent of change
  o Understand their limitations and what leeway they have when treating patients
• Nurses to be reimbursed for services
  o Electronic Health Record (EHR)
    ▪ Currently not streamlined, often has redundancies, difficult to use/learn-need persons to overhaul and recreate it for medical professionals- ideally person needs to have clinical background as well as programming experience. Streamline system and process
    ▪ Electronic does well with providing reminders, triggers, pop-ups, the potential for communication in hospital and community settings is great. Accumulating data, eliminating error, provide data for data driven decision making
  o More nurses will be needed in community settings- decrease of inpatient care
    ▪ More highly educated nurses will be needed
    ▪ Technology will be able to help nurses become more mobile, accessible and technology can empower the patient to have information at finger tips.
  o Care coordination- continuum of care
  o Shift from fee for service to fee for value. Care will be results oriented
  o Significant increase in demand
• Need workforce diversity- incentivize
  o Gender diversity
  o Ethnic diversity
    ▪ Multicultural understanding and empathy
    ▪ Language skills
  o Hire from within community
    ▪ Encourages dedication and possible passion for the work
    ▪ Even if the cultural background is not the same, care givers from the same community will better understand patient needs and beliefs
  o Provide incentives for young students early on to choose nursing as a career path
    ▪ Provide incentives for those students who become nurses to go back into their community and work
III. Public Policy Support for Future Nurses

- Funding changes
  - Work done by the nursing staff is generally lumped into a daily rate of hospital care; the real cost of nursing care is needs to be broken out so that nurses can be reimbursed fairly for their work.
    - Many nurses are doing more than what their jobs require and much of the time do not get paid as independent practitioners for the extra work.
  - Incentives for increased education
    - Reasonable rates on loan repayment or loan forgiveness for time devoted to underserved communities
    - Funding for those who speak another language, especially Spanish, Sign, Russian, Armenia, Chinese or Korean.
  - Funding to improve overall population health by focusing on disease prevention and health promotion
    - Salaries of nurse educators need to be more “on par” with clinical nurses – because salaries for nursing faculty are so much lower than for clinical practice, nursing is a “hard to hire” discipline.
- Promote community awareness and cultural/religious understanding
- Support efficacy of quality care
- Promote nursing at elementary/middle school level
  - Minority/poverty stricken diverse communities
- Allow expanding of nursing roles to cover various family needs
- Open healthcare to undocumented or families that ObamaCare does not cover
- Residency/internship requirements for licensing of nurses, similar to medical residencies for physicians
Appendix D

UniHealth Grant Interview Questions: Future Role(s) of the Nurse

Qualitative Analysis

ORGANIZATION SPECIFIC QUESTIONS

1) Please describe the current role(s) of nurses in your institution/organization?
   a. The level of nursing staff reported depended on the type of organization
   b. List of nursing level types: advance practice nurse, nurse practitioner, RN, A.DN, LVN/LPN, medical assistant(MA), public health nurse, CNS, charge nurse, case manager, clinical nurses, nurse subcontractor, nurse admin, care manager, nurse educator, nurse navigator, patient care assistant(PCA), certified nursing assistant(C.NA), certified home health aid (CHHA), volunteers, parish nurse, nurse midwives, MFT, med tech, clinical nurse educator, ambulatory, nurse informaticist, transplant nurse
   c. Services offered: floor care, direct patient care, ambulatory acute care, tertiary care, hospice care, hospital, consulting firm, adult day care, palliative care
   d. Percentage of nurses by level:
      i. 38% report using RN(s)
      ii. 9% report using public health nurse(s)
      iii. 9% reporting using Clinical Nurse Specialists
      iv. 26% report using nurse navigator, nurse midwives, parish nurse, charge nurse, nurse educator, nurse informaticist, transplant nurse, faculty (<1% for each type represented)
      v. 29% report using LVN(s)- this includes 1 LPN-(license practical nurse)
      vi. 20% report using advance practice nurses
      vii. 23% report using nurse practitioner(s)
      viii. 23% reporting using assistants: C.NA(s), MA(s), CHHA(s), PCA(s), med tech
      ix. 23% report using care/case managers, nurse managers
      x. 5% report using volunteers
      xi. 41% report using direct care, floor nurses, contract nurses, nurse subcontractors, direct care giver, ambulatory nurses, nurse SW team, MFT, outpatient nurses, patient health educator
Q1. Nursing roles at various organizations. Largest populations reported are direct care, floor nurses, outpatient nurses, patient health educators and nurse subcontractors.

<table>
<thead>
<tr>
<th>Percentage of Utilized Nursing Role Types</th>
</tr>
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<tbody>
<tr>
<td>Direct, floor, ambulatory, outpatient nurses, patient health educator, subcontractors</td>
</tr>
<tr>
<td>Registered Nurse</td>
</tr>
<tr>
<td>Case/Care Manager, Nurse Manager, Nurse Admin</td>
</tr>
<tr>
<td>LVN/LPN</td>
</tr>
<tr>
<td>Faculty, Nurse Navigator, Parish Nurse, Nurse Educator, Charge Nurse, Nurse Midwives, Nurse...</td>
</tr>
<tr>
<td>C.NA, MA, CHHA, PCA, Med Tech</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
</tr>
<tr>
<td>Advance Practice Nurse</td>
</tr>
<tr>
<td>Clinical Nurse Specialists</td>
</tr>
<tr>
<td>Public Health Nurse</td>
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</table>
2) Does this role(s) satisfy the institution’s current needs? If yes, please explain how nurses help fulfill specific needs. If not, please explain why not and how nurses could help address your institution’s current needs/challenges?
   a. 59% said yes the roles meet current institutional needs
      i. Nurses work in interdisciplinary teams
      ii. Need more educators for senior center- have two nurses who meet needs
      iii. Well-rounded program, right people in right jobs. Need a compliance nurse and to figure out how to staff for future
      iv. Nurses work at top of their license
      v. Nurses meet needs, increasing need for public health nurse skills, community engagement, population based health
      vi. For the most part needs are met. LVN high turn-over, A mix of skills are needed; advance practice nurse(APN) to be role extender
      vii. Advance practice nurse(APN) is provider, RN is administrative roles
      viii. Using experience, education, collaboration, teamwork, diverse roles, preventative care to meet staff needs
   b. 29% said “no” the roles do not meet current needs
      i. Nurses need knowledge of community based organizations, overlap into disciplines
      ii. Know/understand psychosocial needs, mental health, behavioral health, impact of adverse childhoods
      iii. MA not performing basic job function, lack communication skills
      iv. Need good technical, communication, sensitivity skills w/patients, families, colleagues
         1. Leadership skills, understand how to manage complex health arena (economics), customer service skills
            a. Patient/family centered care
         2. Motivational interviewing skills
         3. Understand how to look at holistic patient care, social determinants of health, patient literacy, language barriers
         4. A lot of on the job training- more experience needed
         5. More community experience required for success and well-prepared nurses
      v. Not enough nurses
      vi. Nurse practitioner(s) do not have enough experience.
      vii. Promote further education
         1. Need integrated education
         2. Need quality trained educators- higher level degree (masters)
         3. A.DN nurses do not meet need of educational level required
         4. C.NA nurses not fully apprised of all patient care needs
         5. BSN entry level minimum- 6% of participants reported this requirement
   c. 12% no response/no opinion
Q2. 59% of respondents reported that nurses in their current roles meet their needs. The other categories are respondents that either skipped the question or didn’t answer the question.

![Bar chart showing percentages of respondents who believe their role(s) satisfy the institution's current needs.]

3) Does your existing nursing workforce require additional education and preparation to meet current needs? If yes, please describe the additional training needed and how it would be beneficial?
   a. 65% of participants stated there is a need for additional training and or education
      i. 1 participant noted preference for BSN prepared nurses
      ii. Move A.DN nurses to BSN, develop nurse leadership, advance academic preparation, blend online with classroom instruction
         1. Improve resources for A.DN nurses to obtain BSN. Need more funding resources
      iii. Broader vision of patient needs- holistic patient care
      iv. Computer training, IT training, metrics
      v. Nurses with field experience- especially with older patients-dementia
      vi. Need managerial skills, leadership skills, inter-professional collaboration,
         1. Emphasis on safety practices, sanitation practices, prevention
         2. Patient family education
         3. lack management experience, RN, LVN go into leadership roles too early
         4. need customer service skills
         5. communication skills – nurses more focused on technical aspects than communication
         6. will need re-training in future
         7. community planning, community health improvement
      vii. Nurse practitioner (NP) need close supervision skills first couple years in practice-residency
      viii. Not enough nurses and doctors to meet increase in demand
   b. 23% reported their existing workforce does meet their current needs
c. 12% no response/no opinion

Q3. Additional education. The “other” category are participants who skipped this question.

Does your existing workforce require additional education and preparation to meet your current needs?

4) Does your organization have experience with inter-professional collaboration and communication?
   a) In what ways do different professionals and/or staff collaborate and work in teams in your organization?
      a. 91% of participants mentioned Inter-professional, collaboration, interdisciplinary, multidisciplinary teams
         i. Integrated into work flow, care team to work with patient, primary care provider, family
         ii. Collaboration with other professionals, assessment/follow-up, contact with primary physician and other services such as physical therapy and occupational therapy
         iii. Creating teams to meet needs- change team, training teams (i.e. multidisciplinary team comes together to effect change- patient wait times)
         iv. Cross collaboration on patient assessment, daily meetings, independent review of assessment, by RN, social worker, PT, OT, dietician, psychologist
         v. Use black belt six sigma to look at processes
         vi. World Health Organization (WHO) inter-professional guidelines.
            1. Use clinical simulations to bring professionals together
2. Use clinical simulations/scenarios with to bring professionals working together- physicians/nurses write scenarios then bring groups together

vii. Cross collaboration interdisciplinary team- physician led, coordinate members down to volunteers.

b) Are nurses expected to be part of these teams, and if so, to what extent?
   a. 70% reported yes
      i. Nurses are leaders, liaison, integral part of team, critical
   b. 3% reported “ideally”
      i. Difficult due to demand for nurses time
   c. 26% no response/no opinion

c) Do you feel nurses are integral members of multidisciplinary teams?
   a. 82% reported yes
      i. Nurses are team leaders, quarterback, implementer, patient advocate, team center

d) Do you foresee or know of public policy changes that will foster nurses’ roles in multidisciplinary teams?—seemed to be a difficult question for participants to answer
   a. 13% mentioned ACA-Affordable Care Act, accountability care, population health (overall themes-Continuum of Care/Changes in Regulation and law)
      i. Increase in demand, long-term care
      ii. Nurses will be fulfilling larger role- greater education will be required, education on end-of-life issues
      iii. Cost saving improvements in quality
   b. 20% mentioned role expansion, extending practice
      i. RN and LVN to have larger leadership role- be liaison to staff and physician-ensure follow up
      ii. Expand autonomous practices of nursing in population based settings
   c. 10% patient centered care, and for nurses to be change agent- drive agenda to be at the table when decisions are to be made
   d. 56% reported not sure, don’t know, no response/no opinion

e) What, if anything, should nursing education programs do to better prepare nurses for increased work in multidisciplinary teams?
   a. 35% reported collaboration and teamwork skills are needed
   b. 27% reported additional education in the areas of:
      i. Communication, knowledge of community resources, critical thinking, business skills, leadership, management, assessment skills
      ii. Integration with other schools (i.e. medical, pharmacy, physical therapy) to build collaborative relationships early on
      iii. Differentiated curriculum- and integrated with other professional schools
      iv. Information technology – common language data proficiency
   c. 3% recommend residency and recertification requirements
   d. 3% recommended the need for connections within the community for resource familiarity, be familiar with community
   e. 29% no response/no opinion
Q4a. 62% of participants reported inter-professional collaboration, 17% reported interdisciplinary teams, 12% reported multidisciplinary teams and 9% no response/no opinion.

In what ways do professionals and/or staff collaborate and work in teams in your organization?

Q4b. Two graphs. 70% of the participants responded that nurses are expected to be a part of those teams. This question had an “other” category rate due to a number of participants skipped this question.

Are nurses expected to be part of teams?
Q4b. The second graph highlights how the nurses are utilized within teams.

![Bar chart showing the extent to which nurses are part of teams.]

Q4c. 82% participants reported ‘yes’ to this question. The 18% reported “other” category.

![Bar chart showing nurses as integral members of multidisciplinary teams.]
Q4d. This question on public policy had a high amount of non-response, which explains the high percentage in the “other” category. 20% of respondents reported role expansion as a need for public policy.

Do you know of any public policy changes that will foster nurse roles in multidisciplinary teams?

- Incentivized Changes: 3%
- Don’t need policy change: 3%
- Critical Thinking: 3%
- Continuum of Care: 6%
- Changes in Regulation & Law: 9%
- Role Expansion: 20%
- Other: 56%

Q4e. 35% of participants rated Inter-professional collaboration as a high area of need for nursing preparation. The “other” category has a high response rate, several participants skipped this question.

What should nursing programs do to prepare nurses for increased work in multidisciplinary teams?

- Interprofessional Collaboration: 35%
- Other: 29%
- Broader Education: 17%
- Communication Skills: 6%
- Critical Thinking: 6%
- Business Skills: 3%
- Community Health: 3%
- Patients Families Communities: 3%
- Residency/Internship Requirement: 3%
5) In your opinion, how will your nursing workforce be able to address your organization’s future needs? What kind of education and preparation will nurses need to alleviate or address these future challenges?
   a. 62% reported more education, training, and experience
      i. 38% reported more education and higher education needed
         1. Preventative care
            a. In-home safety, patient environment
         2. Clinical education
         3. More simulation/interactive education/training
            a. Create pathways to higher education
            b. Case manager and care manager
      5. Holistic patient centered care
      6. Population based care
      7. Transition to managed care, evidence-based care
      8. Business skills- understanding of economics of health care
   ii. 27% reported more training needed
      1. Sensitivity, diversity, awareness
      2. Communication
      3. Collaboration with other disciplines
      4. Leadership/management/supervisory training
      5. Critical thinking skills
      6. Understanding aging population
      7. Written and oral communication skills
      8. Negotiation skills
      9. Customer service
   iii. 10% reported more experience needed
      1. Working with community
      2. Know community resources
      3. More maturity
      4. More confidence, personal self-awareness, independence
      5. Decreased use of inpatient care- population health
      6. More on the job experience- residency/internship
         a. NP and A.DN
      7. Nurses need to drive agenda, understand what they bring to the table, find their voice, their role
   b. 17% reported increase in demand, transition to managed care, the need for sustainability models, the need for recertification.
      i. Not enough professionals to meet upcoming demand. Nurses will have critical role.
      ii. Will serve broader populations, will need experience working with other disciplines-collaborative processes
   c. 17% no response/no opinion
Q5. Leadership skills 32% and broader education 23% were reported traits of needed education and preparation for nursing students.

**What kind of education and preparation will nurses need to address future challenges?**

<table>
<thead>
<tr>
<th>What kind of education and preparation will nurses need to address future challenges?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Skills</td>
</tr>
<tr>
<td>Broader Education</td>
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<tr>
<td>Higher Education</td>
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<tr>
<td>Communication Skills</td>
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<tr>
<td>Critical Thinking</td>
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<tr>
<td>Holistic Care</td>
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<tr>
<td>More Experience</td>
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<tr>
<td>Customer Service</td>
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<tr>
<td>Patients Families Communities</td>
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<tr>
<td>Simulation Training</td>
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<tr>
<td>Specialization Training</td>
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<tr>
<td>Aging Population</td>
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<tr>
<td>Care Coordination</td>
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<td>Community Health</td>
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<tr>
<td>Continuum of Care</td>
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<tr>
<td>Increased Demand</td>
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<tr>
<td>Informatics</td>
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<tr>
<td>Interprofessional Collaboration</td>
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<tr>
<td>Recertification Requirement</td>
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<tr>
<td>Safety</td>
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<tr>
<td>Sustainability</td>
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**HEALTHCARE IN THE U.S.**

6) In your opinion, what are the most significant changes taking place in healthcare? Are there changes you would like to see in the next five years?
   a. 88% reported Affordable Care Act (ACA), changes in regulation and law, episodic care to population health, increase in demand (overall themes: changes in regulation & law, continuum of care)
      i. ACA is going to increase access to health, significant increase in demand
          1. Not enough providers to meet demand
          2. Policy will have to change in providing more rights/privileges to providers to practice more fully.
              a. Nurse practitioner will be physician extender
3. Need for reimbursement and funding for caregivers to provide the level of care needed for the frail, elderly, dementia, and Alzheimer’s patients.

4. Need parameters to provide minimum services, benchmarks for quality of service

5. Providing a preventative wellness care model while keeping costs down. Don’t have systems in place to meet need. Capitated care to provide all healthcare costs per individual.
   a. How to provide evidence-based practices while saving money and providing good service to patient

6. Professionals will need to focus on preventative care

7. Need to learn how to navigate managed care. Lack of communication between systems (medi-cal and medi-care). Will have to find a better way to coordinate care, access to care, coordination between programs, and access for mental health care.

ii. The way care is delivered is going to change from an episodic model to a population health model focusing on preventative care (illness model>wellness model). A more holistic approach to care will be needed
   1. Hospital is no longer center of health care. Evolve to integrated delivery network.
   2. Decreased use of inpatient care. Focus on population health, keep patient outside of hospital
   3. Continuum of care
   4. There will need to be a redistribution of providers from specialty care to primary care – not enough providers to manage need

iii. There will be not enough professionals to deliver care. Nurses will play a critical role
   1. Will need to find a way to get people access to providers
   2. With increase in aging population, chronic disease management, biopsychological aspects of dementia; more specialized education will be needed
   3. Education resources will be needed for the newly insured
   4. Nurses will need to have strong business sense
   5. A shift from fee-for-service to continuum of care. It will be results oriented, population health management.

b. 3% reported BSN minimal entry level degree
   i. BSN needs greater foothold within healthcare. RN will need to see bigger patient picture- not just immediate patient need. Overhaul education process to determine how to provide better education to leader to better training to lead to better care

c. 3% reported California has two boards of nursing- lack of communication
   i. Different boards have different rules and regulations. Only need 1 board of nursing that will allow the monitoring of role migration and utilization of staff at appropriate level
   ii. No license sharing between two states due to two boards of nursing.

d. 3% value of service will need to be improved
i. Provide better care for less money
ii. Increase value
iii. Improve outcomes

e. 3% broader education
   i. Broader education will be required
   ii. There will be a need for nurses in different capacities
   iii. Technology training is essential
   iv. More funding for education-bridge gap for those don’t have financial resources
   v. A.DN doesn’t have full scope of nursing practice- need more BSN nurses

Q6. Two-graphs. Graph 1 addresses the most significant changes taking place in healthcare. Graph 2 addresses the changes participants would like to see within the next five years.

<table>
<thead>
<tr>
<th>Changes in regulation &amp; law</th>
<th>62%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Demand</td>
<td>38%</td>
</tr>
<tr>
<td>Continuum of Care</td>
<td>29%</td>
</tr>
<tr>
<td>Community Health</td>
<td>18%</td>
</tr>
</tbody>
</table>
7) Some of the identified healthcare changes include: i) a greater emphasis on wellness and primary care; ii) a shift from fee for service to fee for value; iii) an emphasis on patient safety; iv) the rise of insurance exchanges; and v) an increase in the number of insured patients.

a. How do you see the role(s) of the nurse evolve as a result of these changes so that they could meet future demands?

   i. 24% reported nurses will have to work at the top of their license
       1. Nurses will be on front line, will provide critical role
       2. Drive shift from illness model to wellness model, with increased demand and capitated care, population health management will be focus. Nurses will be choreographer of care. Navigator of care, patient centered care
           a. Nurses will need more training in communication skills under extreme pressure

   ii. 20% reported preventative care and disaster preparedness
       1. Decrease use of inpatient care by providing preventative care
       2. Need to be involved in educating patients and families for preventative care
       3. Motivational interviewing skills, patient-centered care, patient-safety, social determinants of health, home environment
       4. Nurses will be needed to interface with safety professional in community

   iii. 13% reported community care, holistic patient care, disaster preparedness
       1. Shift from acute hospital to community care
       2. More residency programs will be needed for higher educated nurses- nurse practitioner, nurse case manager, nurse navigator. BSN will be vital to community roles
       3. Patient education will be essential, safety and prevention, public health nurse, community nurse
       4. More collaboration across disciplines will be essential
iv. 18% reported broader education needed
    1. Will need to re-educate current healthcare professionals
    2. Will need end of life care education
    3. Broader education to meet mental, physical, spiritual needs
    4. Technology
    5. Listening skills, customer service, compassion, clinical expertise, critical thinking

v. 13% reported changes in regulation and law, changes in episodic to system care
    1. Role of nursing will change, focus on health promotion and education, nurses will be the face of health in communities
    2. Nurses will need to understand the changes and meaning of those changes within healthcare, different types of payment
    3. What will the role of nurses be under this system? Role definition and who is going to do all new things that need to be done?
    4. Challenge will be to meet need of patient, look at all available resources and deliver high quality care while keeping costs down
    5. Improve quality of care at the individual, system, and population levels, be an agent of change, more critical and analytical thinkers needed

vi. 6% reported independence of nurses needed
    1. Nurses will need ownership over professional practice, monitor their own practice at nurse practitioner level

vii. 3% no response/no opinion
Q7. 35% of participants reported nurses roles will likely evolve around Continuum of care, which also includes topics such as: preventative care, wellness model, managed care, and accountability care.

8) The nursing workforce consists of a variety of nurses at different educational and preparation levels and therefore in different nursing positions: CNA, LVN, ADN, BSN; and at the graduate level: Nurse Practitioner, Clinical Nurse Specialist, Nurse Educator. Please provide your opinion on each of the positions:

a) What do you believe should be the required preparation and experience for each of these nursing roles?
   
a1. 29% reported BSN as entry level minimum
   a1i. Diverse roles such as C.NA will be needed.
   a1ii. C.NA, LVN are good support roles- there is role confusion
   a1iii. Role definition essential
   a1iv. Nurse practitioner, clinical nurse specialist, nurse educator need graduate level education
   a1v. Need more bridge programs for A.DN and LVN to get to BSN level
   a1vi. Need more advanced level nurses- advance practitioner are going to play critical role in healthcare delivery as we move forward
   a1vii. Residency programs before seeing patients alone
   a1viii. More advance nurses needed, more BSN needed
b. 53% reported more education, experience, and training needed
   b1. Sensitivity training
ii. Work with elderly, dementia care
iii. Nurses to work at top of license
iv. Patient/family education
v. Referral to community programs
vi. Nurses need more experience, more maturity
vii. Training in continuum of care
viii. Need communication skills
ix. More experience with HER and technology
c. 13% reported role diversity is needed
   i. All nursing levels needed to address needs
d. 3% reported that their roles are meeting their requirements and experience comes along the way
e. 3% no response/no opinion
b) Can public policy assist and support these different nursing roles? If so, how? seemed to be a difficult question for participants to answer
   a. 38% reported role clarification, expansion, identification
      i. Define functions at all levels
      ii. Nurses are more cost effective provider
      iii. This will allow nurses at different levels to perform appropriate functions
      iv. Nurse practitioner, nurse specialists are role extenders for physicians
   b. 18% reported additional funding/reimbursement
      v. for supportive programs, residency programs and recertification
      vi. reimbursement for roles including community health workers
      vii. freedom to deploy people more freely
c. 13% reported ACA, continuum of care
d. 9% reported BSN minimum entry level
e. 7% reported ‘yes’ (with no other information)
f. 3% reported curriculum unification- make unified guidelines across curriculum so all students receive same education
g. 3% reported HIPPA – loosen policy around HIPPA
   viii. Nurses need more training in E.HR they don’t get the hands-on-experience they need
h. 3% reported consensus on professional agreement
i. 3% reported support for roles
j. 3% reported need for mental health policy
k. 24% don’t know, no, no response categories
c) What role can technology play to support nurses in each of these positions?
   a. 79% Technology will promote and enable
      i. Accessibility, mobility, telemedicine, communication, education, informatics
      ii. It will provide accessibility and mobile for nurses- via laptop, iPad, video
      iii. Track patients as monitoring device for medications, weight, etc.
      iv. Automate processes, eliminate redundancies, will help to make processes more efficient
v. E.HR will help nurses manage populations through triggers and reminders
vi. Remote, online education will allow nurses to continue to work and study
vii. Technology will also help make healthcare more accessible for the remote patients
viii. Share and communicate information quickly with physicians and community facilities will help to reduce errors and provide clearer documentation
  1. Help ensure accurate diagnosis and treatment
  2. Promotes efficiency, identify gaps in data, areas for improvement, information sharing
ix. Informatics
  1. Need nurses to help support technology
  2. Need I.T. skills and clinical knowledge
  3. Barriers with HIPPA
b. 3% reported E.HR not fully efficient- systems not fully efficient, time consuming for nurses
c. 18% no response/no opinion

Q8a. 29% reported that a BSN degree should be a minimum, 21% also reported that nursing students need more experience, maturity and sensitivity. Conversely, 12% of respondents reported that diverse nursing roles are needed.
What do you believe should be the required preparation/experience for nursing roles?

- BSN Minimum: 29%
- More Experience/Sensitivity/Maturity: 21%
- Broader Education: 15%
- Diverse Roles Needed: 12%
- Role Clarification: 12%
- Higher Education: 12%
- Internship/Residency Requirement: 9%
- Communication Skills: 9%
- Meets Requirements: 6%
- Specialized Training: 6%
- Patients Families Communities: 3%
- Psychosocial skills: 3%
- Work at top of license: 3%
- Nurse Practitioner to fill demand: 3%
- Critical Thinking Skills: 3%
- Understand changes in healthcare: 3%
- Leadership Skills: 3%
- Skill Competency: 3%
- Holistic Care: 3%
- Continuum of Care: 3%
- Informatics Skills: 3%
- Funding: 3%
Q8b. 38% of respondents reported that role clarification/expansion is needed to support nurses. This question also had a high “other” rate.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Role Clarification/Expansion</td>
<td>38%</td>
</tr>
<tr>
<td>Other</td>
<td>24%</td>
</tr>
<tr>
<td>Funding/Reimbursement</td>
<td>18%</td>
</tr>
<tr>
<td>Interprofessional Collaboration</td>
<td>9%</td>
</tr>
<tr>
<td>Changes in law &amp; regulation</td>
<td>9%</td>
</tr>
<tr>
<td>BSN Minimum</td>
<td>9%</td>
</tr>
<tr>
<td>Certification/Recertification Requirement</td>
<td>6%</td>
</tr>
<tr>
<td>Work at top of license</td>
<td>3%</td>
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<tr>
<td>Informatics Training</td>
<td>3%</td>
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<tr>
<td>Residency/Internship Requirement</td>
<td>3%</td>
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<tr>
<td>Understand changes in healthcare</td>
<td>3%</td>
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<tr>
<td>Loosen HIPPA regulations</td>
<td>3%</td>
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<tr>
<td>Curriculum Unification</td>
<td>3%</td>
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<tr>
<td>Continuum of Care</td>
<td>3%</td>
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</table>

Q8c. 44% reported that technology plays a part in support with documentation and 38% reported greatly accessibility of information.

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Documentation</td>
<td>44%</td>
</tr>
<tr>
<td>Assessibility</td>
<td>38%</td>
</tr>
<tr>
<td>Mobility</td>
<td>29%</td>
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<tr>
<td>Electronic Health Record</td>
<td>29%</td>
</tr>
<tr>
<td>Other</td>
<td>18%</td>
</tr>
<tr>
<td>Informatics Training</td>
<td>18%</td>
</tr>
<tr>
<td>Online Learning</td>
<td>12%</td>
</tr>
<tr>
<td>Automate Processes</td>
<td>9%</td>
</tr>
<tr>
<td>Technology Curriculum</td>
<td>6%</td>
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<tr>
<td>Metrics</td>
<td>6%</td>
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</table>
Several new significant nursing roles have been identified to increase healthcare quality and efficiency: primary care provider, health promotion disease prevention specialist, community health educator, nursing researcher, and care coordinator across healthcare settings.

a) Would you include any other significant roles to this?

   a) Many different roles:
      i. Advance practice nurse
      ii. Disability coordinator
      iii. Mental health care provider
         1. Infant mental health
      iv. Nurse trainer
      v. Case manager
      vi. Nurse/family cooperatives
         1. Patient navigator
      vii. Informatics specialist
      viii. Nurse navigator
      ix. Master’s in Public Health
      x. Technology nurse
      xi. Healthcare coach
      xii. Nurse Leader
      xiii. Nurse administrators
      xiv. Nurse informatics, health promotion, disease prevention, community health educator as overarching role as a population based nurse
      xv. Quality Improvement

b) What type of education and preparation will nurses need to be successful in these roles?

   a) 38% higher education, broader education, informatics (IT)
      i. Need cross-training with other professions
      ii. Critical thinking skills
      iii. Need to know resources, psychosocial skills, assessments (physical and in-home)
      iv. Understand bigger patient picture- family, caregiver situation, transportation needs. Know patient
      v. Increased business skill set, managing and negotiating skills
      vi. Understand behavioral cues in dementia/Alzheimer patients
      vii. Higher education for advance practice nurse, nurse practitioner, clinical nurse specialist
      viii. More technology training
      ix. Working in teams
      x. Language proficiency

b) 7% reported more experience needed
   i. Field experience
   ii. Motivational interviewing, listening, communication skills
iii. Be patient educator- help people with behavior plans to learn to live differently

c) 10% reported more community experience needed
   i. Experience in community roles
   ii. Know resources in community
   iii. Health promotion

d) 12% reported BSN minimal entry

e) 12% no response/no opinion

f) 9% reported internship/residency requirement

c) What can public policy do to make these roles possible?
   a) 41% reported funding/reimbursement policies
      i. Funding for nurse educators to receive compensation
      ii. Unequitable care for different geographical locations
      iii. Nurse reimbursement
      iv. Provide scholarship for nurses
      v. Loan repayment/reimbursement for residency
      vi. Funding attached to programs
      vii. Reimbursement for providing population based care
   b) 18% reported independent scope of practice
      i. To clarify roles and allow nurses to practice outside of hospital/clinic
      ii. Allow for expanded functions
      iii. Define how nurses function
   c) 3% reported unionization is an issue
   d) 38% reported ‘no’ or no response/no opinion

   d) How can technology support nurses in each of these roles?
      a) 53% reported technology will provide accessibility, efficiency, greater
         information flow, improve assessment, and the summarization of information
         i. Bring people together
         ii. Allow nurses to be mobile and spend time in community
         iii. Accessibility for families to have information
         iv. Information sharing
         v. Integrated throughout continuum of care
         vi. Effective decision making
         vii. Programmer that are also clinicians are needed
      b) 47% reported ‘no’ or no response/no opinion
Q9a. 24% of respondents reported additional roles would be the community health educator and worker.

### Identifying nursing roles to increase healthcare quality and efficiency

<table>
<thead>
<tr>
<th>Role</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Community Education/Community Health Worker</td>
<td>24%</td>
</tr>
<tr>
<td>Clinical Informatics Specialist</td>
<td>18%</td>
</tr>
<tr>
<td>Care Coordinator</td>
<td>15%</td>
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<tr>
<td>Nurse Leader/Administrator</td>
<td>15%</td>
</tr>
<tr>
<td>Nurse/Patient Navigator</td>
<td>12%</td>
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<tr>
<td>Case/Care Management</td>
<td>9%</td>
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<tr>
<td>Disease Specialist</td>
<td>9%</td>
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<tr>
<td>Advance Practice Nurse</td>
<td>6%</td>
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<tr>
<td>Health promotion/Disease Prevention</td>
<td>6%</td>
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<tr>
<td>Mental Health Care Provider</td>
<td>6%</td>
</tr>
<tr>
<td>other</td>
<td>6%</td>
</tr>
<tr>
<td>Alzheimers Specialist</td>
<td>3%</td>
</tr>
<tr>
<td>Disability Coordinator</td>
<td>3%</td>
</tr>
<tr>
<td>Healthcare coach</td>
<td>3%</td>
</tr>
<tr>
<td>Infant Mental Health</td>
<td>3%</td>
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<tr>
<td>Masters in Public Health</td>
<td>3%</td>
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<tr>
<td>Nurse Practioner</td>
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<tr>
<td>Nurse Trainer</td>
<td>3%</td>
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<tr>
<td>Nursing Professors</td>
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<tr>
<td>Peer Educator</td>
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<tr>
<td>Primary Care Partner</td>
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<tr>
<td>Quality Insurance</td>
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</table>
Q9b. 21% of respondent’s reported that nurses need higher education and 12% reported a broader overall education is needed.

<table>
<thead>
<tr>
<th>What type of education/preparation will nurses need to be successful?</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher Education</td>
<td>21%</td>
</tr>
<tr>
<td>Broader Education</td>
<td>12%</td>
</tr>
<tr>
<td>BSN Minimum</td>
<td>12%</td>
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<td>Community Health</td>
<td>12%</td>
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<tr>
<td>Informatics Training</td>
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<tr>
<td>Other</td>
<td>12%</td>
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<tr>
<td>Residency/Internship Requirement</td>
<td>9%</td>
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<tr>
<td>More Experience</td>
<td>6%</td>
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<tr>
<td>Patients Families Communities</td>
<td>6%</td>
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<tr>
<td>Psychosocial Skills</td>
<td>6%</td>
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<tr>
<td>Resource Training</td>
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<td>Safety Training</td>
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<tr>
<td>Alzheimer/Dementia Training</td>
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<tr>
<td>Communication Skills</td>
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<tr>
<td>Critical Thinking Skills</td>
<td>3%</td>
</tr>
<tr>
<td>Language Proficiency</td>
<td>3%</td>
</tr>
<tr>
<td>Leadership Skills</td>
<td>3%</td>
</tr>
<tr>
<td>Multidisciplinary Skill Set</td>
<td>3%</td>
</tr>
<tr>
<td>Social Skills</td>
<td>3%</td>
</tr>
<tr>
<td>Specialized Training</td>
<td>3%</td>
</tr>
</tbody>
</table>
Q9C. 38% reported that more funding is necessary to make additional roles possible. In addition, 38% of respondents reported “other”, this was a highly missed/skipped question.

What can public policy to help make additional nursing roles possible?

<table>
<thead>
<tr>
<th>Policy</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding</td>
<td>38%</td>
</tr>
<tr>
<td>No/Other</td>
<td>38%</td>
</tr>
<tr>
<td>Independent Scope of Practice</td>
<td>18%</td>
</tr>
<tr>
<td>BSN Minimum</td>
<td>3%</td>
</tr>
<tr>
<td>Reimbursement</td>
<td>3%</td>
</tr>
<tr>
<td>Role Clarification</td>
<td>3%</td>
</tr>
<tr>
<td>Unionization</td>
<td>3%</td>
</tr>
</tbody>
</table>

Q9D. A high percentage of respondents were in the “other” category, 47% a high number of participants skipped this question. Majority of respondents reported that technology will provide greater flow of information, accessibility, efficiency, improved assessment, and the ability to summarize information.

How can technology support nurses in their roles?

<table>
<thead>
<tr>
<th>Support</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No/Other</td>
<td>47%</td>
</tr>
<tr>
<td>Greater Information Flow</td>
<td>21%</td>
</tr>
<tr>
<td>Accessibility</td>
<td>15%</td>
</tr>
<tr>
<td>Efficiency</td>
<td>6%</td>
</tr>
<tr>
<td>Improve Assessment</td>
<td>6%</td>
</tr>
<tr>
<td>Need Programmers</td>
<td>3%</td>
</tr>
<tr>
<td>Summarize Information</td>
<td>3%</td>
</tr>
</tbody>
</table>
10) With the growth in population and an increasingly diverse society, please answer the following questions based on the specific population you work with:

a) How should the future nursing role evolve to meet the needs of an increasingly diverse society?
   a. 97% reported
      i. Cultural, diversity, sensitivity, ethnic, generation, sensitivity, gender training
      ii. Increase diversity in workforce
      iii. Outpatient training in community
      iv. Hire from within community
      v. Cultural competency
         1. Religious or cultural concerns
      vi. Broader education
      vii. Nursing needs to be equally diverse
      viii. Language competency
   b. 3% no response/no opinion

b) What type of education and preparation will future nurses require to address the unique needs of these different groups?
   a. 58% cultural, sensitivity, racial, ethnic, sensitivity, diversity, language training
      i. Deal with cultural issues- cultural competency
      ii. Focus on whole patient- understand societal nuances
      iii. Work in community
      iv. LGBT, cultural stigmas of chronic disease
      v. More native speakers
      vi. Dealing with dying patients
      vii. Sensitivity training
      viii. Language training – including sign language
   b. 21% reported broader education
      i. BSN minimal requirement
      ii. Prepare nurses to understand ecological and determinants models of health
      iii. Understand background of population the nurse is serving, contributing factors to their health that go beyond absence or presence of a disease
      iv. Geriatrics, end-of-life care, advance directives, hospice
      v. Mental health training
   c. 21% no response/no opinion

C) Could public policy changes assist in this process? seemed to be a difficult question for participants to answer
   a. 37% reported funding, loan repayment, reimbursements
      i. Outreach to populations, intervention
      ii. Loan initiatives, loan forgiveness programs, funding opportunities for the disadvantaged
      iii. Loan programs with reasonable fees, government to help out institutions with fees
iv. Reimbursements that allow care to patients that go beyond treatment of disease to management of whole person
b. 7% report additional training in work place, cultural, diversity, ethnic/racial, gender training, language
c. 3% attract diversity in the nursing workforce
d. 3% allow nurses to take on expanded functions
e. 3% the 12 hour shifts nurses have to work- long hours lead to errors and burnout
f. 3% reported transparency in the value of money dedicated towards nursing education and other health care workers
g. 3% report create opportunities for ethnically diverse populations to choose nursing as a profession
h. 3% report prevention in life long delays
i. 3% report ‘yes’ but don’t know specifics
j. 35% report in ‘no’ or no response/no opinion
d) Are there other diverse groups that you identify that would be important for future nurse preparation?
   a. 12% reported -aging population
   b. 6% reported specific populations by race/ethnicity: Jewish, Russian, Polish, Armenian, Egyptian, Middle Eastern, Persian, Israeli, Spanish
c. 6% reported- extreme poor, those living in remote areas
d. 6% reported- disabled
e. 6% reported - LGBT
f. 3% reported- those with mental health issues
g. 3% reported- the incarcerated
h. 3% reported- the religious
i. 6% reported- men- cultivate gender diversity
j. 3% reported- patient safety and sensitivity to patient needs
k. 50% no response/no opinion
Q10a. Almost half of respondents report that greater work force and community diversity is needed in order to meet the needs of a diverse society.

How should the future nursing role evolve to meet the needs of a diverse society?

- Workforce/Community Diversity: 47%
- Cultural Competency: 38%
- Sensitivity Training: 29%
- Language Competency: 12%
- Broader Education: 9%
- Generation Training: 9%
- Communication Skills Training: 6%
- Community Health: 3%
- Comprehensive Roles: 3%
- Expose school age children to nursing profession: 3%
- Outpatient Training: 3%

Q10b. 32% of participants reported that nurses need cultural training in working with diverse group. 21% reported a broader education is needed.

What type of education will future nurses need to address the needs of diverse groups?

- Cultural Training: 32%
- Broader Education: 21%
- Other: 21%
- Diversity Training: 6%
- Language Training: 6%
- Sensitivity Training: 6%
- BSN Minimum: 3%
- Certificate Requirements: 3%
- Mental Health Training: 3%
- Racial/Ethnic Competency: 3%
Q10c. 35% of respondents went into an “other/No” category. 26% reported more funding/reimbursement policies.

<table>
<thead>
<tr>
<th>Could public policy assist this process?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No/Other</td>
</tr>
<tr>
<td>Funding/Reimbursement</td>
</tr>
<tr>
<td>Loan Repayment</td>
</tr>
<tr>
<td>Role Expansion/Clarification</td>
</tr>
<tr>
<td>Training</td>
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<tr>
<td>Diverse Workforce</td>
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<tr>
<td>Enforce Expectations</td>
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<tr>
<td>Open Access to Healthcare</td>
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<tr>
<td>Prevention</td>
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<tr>
<td>Support Professional Opportunities</td>
</tr>
<tr>
<td>Technology</td>
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<tr>
<td>Working hour regulations</td>
</tr>
</tbody>
</table>

11) Do you have any other comments that you would like to share?
   a. Nurses to be agent of change- train/prepare nurses about the importance of their voice in educating legislators
   b. BSN minimum- hospitals will be driving this change not academia
   c. Adjust education curriculum. Interview-front line nurses for this study
   d. 15% reported change training
      i. Nursing training has to change- get think tanks involved
      ii. Training needs to be different than in past. See more integration of public health, population health, and health principles put into nursing education
      iii. Teach nurses to partner with Alzheimer’s Association, nurses have important role. Nurses provide the settings for those with cognitive impairment, public policy to improve care, nurses to triage, and have knowledge of evidence –based resources
      iv. Nurses need training in case management, care management, know differences in community, and need to understand pharmaceutical implications. Nurses need to training to see the whole picture.
      v. Pay for training, pick the right people, support for nursing educators, technology, management training, use all different levels/resources to work with patient
   e. Cultivate gender diversity
   f. It’s a dynamic time with many challenges and opportunities
   g. Know cultural changes, societal changes, nursing homes poorly managed, increasing aging population, psychological, dementia – teach signs of dementia
   h. Interview clinical nurses
i. Nurse executive is backbone of practice for delivery of care
j. Nurses need to be in community first
k. More transparent communication, replication of efforts already existing white paper, would have been better to collaborate efforts
l. 35% had no other comments