



Blowing Open the Bottleneck:

Designing New Approaches to Increase Nurse Education Capacity

A white paper written by

Jennifer Joynt
&
Bobbi Kimball

May 2008

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I. EXECUTIVE SUMMARY

This paper was commissioned by the Robert Wood Johnson Foundation; the Center to Champion Nursing in America; and the U.S. Department of Labor, Employment and Training Administration to provide background for participants attending the national Nursing Education Summit in June 2008.

The purpose of this paper is to provide a concise but comprehensive understanding of the complexity of nursing education capacity and to inform Summit participants of pioneering solutions currently in development across the nation. The paper is designed to stimulate innovative thinking and help multi-stakeholder teams develop and implement creative solutions to the challenge of insufficient nursing education capacity.

A Challenging and Compound Problem

With government analysts and nursing experts predicting significant nursing shortages in the next twenty years, pressure on the nation's nursing educational programs to educate more nurses in a more efficient manner is mounting. But US nursing education programs face significant barriers to increasing their capacity. Most notably, a growing shortage of qualified faculty severely limits the ability of nursing schools to expand. Underlying factors driving the nurse faculty shortage include, but are not limited to, aging faculty, increased time to enter graduate education, time to complete graduate education, heavy faculty workload, low faculty wages and lack of a robust faculty pipeline.

In addition, schools are already competing for a limited number of clinical education sites and instructors. Expanding nursing school enrollment will only increase the pressure to find available space, time, and faculty for the requisite clinical education of nursing students.

Finally, nursing programs are also facing the challenge of revising their curricula and educational approach to better match the realities of clinical practice in the 21st century, including the need to continuously improve the quality and safety of health care.

Innovative Efforts Already Underway

Nursing leaders throughout the country have started to develop strategies to increase nursing education capacity. The majority of these efforts take one or more of the following approaches to the challenge of educating more nurses.

1. *Creating strategic partnerships to align and leverage stakeholder resources.* Leaders from hospitals, nursing schools, industry, government, and philanthropy are joining forces in various consortiums and collaboratives to develop and implement programs to increase capacity in nursing educational programs. These partnerships run the gamut, from hospitals funding nurse faculty positions to multiple organizations coming together to create a new nursing school to joint ventures with regional, economic, or workforce development bodies that engage multiple stakeholders. By bringing together organizations with shared interests

and working to identify common goals and action steps, each organization contributes its unique resources in a way that both advances its organizational goals and the broader goals of the partnership. Consumers of health care are Nursing's most natural and powerful allies and should be actively engaged in advocacy efforts at local, state and national levels.

2. *Increasing nurse faculty capacity and diversity.* The nurse faculty shortage is a significant barrier to increasing a school's enrollment capacity. Efforts to increase the number of faculty have focused on creating accelerated higher degree programs and targeting clinical practice nurses for faculty development. Another successful strategy includes interdisciplinary collaboration among colleges to leverage scarce faculty resources. Incentives to increase faculty diversity by recruiting and supporting minorities and men exist but need considerable expansion.
3. *Redesigning nurse education.* In response to the challenge of increasing capacity, some leaders are rethinking the entire process of how nurses are educated in order to identify more efficient and effective educational strategies. Innovative ideas here include using simulation technology to substitute for some aspects of clinical education; redesigning clinical education to utilize the expertise of practicing nurses; and creating dedicated educational units for the education of tomorrow's nurses.
4. *Flexing policy and regulation.* Finally, many of the efforts to increase nurse education capacity recognize and capitalize on the role played by government, regulatory, and accrediting organizations in nurse education. These efforts include gaining special government funding for program development and expansion.

Many of the activities underway around the country are combining these four approaches in unique programs that are a good fit for a given clinical, educational, and cultural environment. The innovative solutions currently in play will most certainly serve to stimulate additional ideas and improvements.

The Window of Opportunity is Open

The American nursing shortage is real. And now is the time to engage all stakeholders in addressing the limitations inherent in our current nursing educational system. However, despite the urgent need to implement solutions to the nursing shortage, today's nursing leaders should not miss the opportunity to fundamentally rethink how nurses are and should be educated and how nurses are and should be deployed in the workforce. The window for transformation in nursing education is open, and the future of nursing in America may well depend on the actions of today.

II. THE NURSE EDUCATION BOTTLENECK: OVERVIEW OF THE PROBLEM

The United States is on track to hit a record nursing shortage in less than twenty years. The nursing shortage is expected to reach 500,000 RNs by 2025, according to a new report¹. This is a more optimistic view than the one presented by a 2006 analysis by Health Resources and Services Administration (HRSA), which projected a shortage of more than one million nurses by 2020.² Of course, the ultimate existence and size of the nursing shortage will depend on innovative actions taken to blow open the nursing education bottleneck and achieve true transformation.

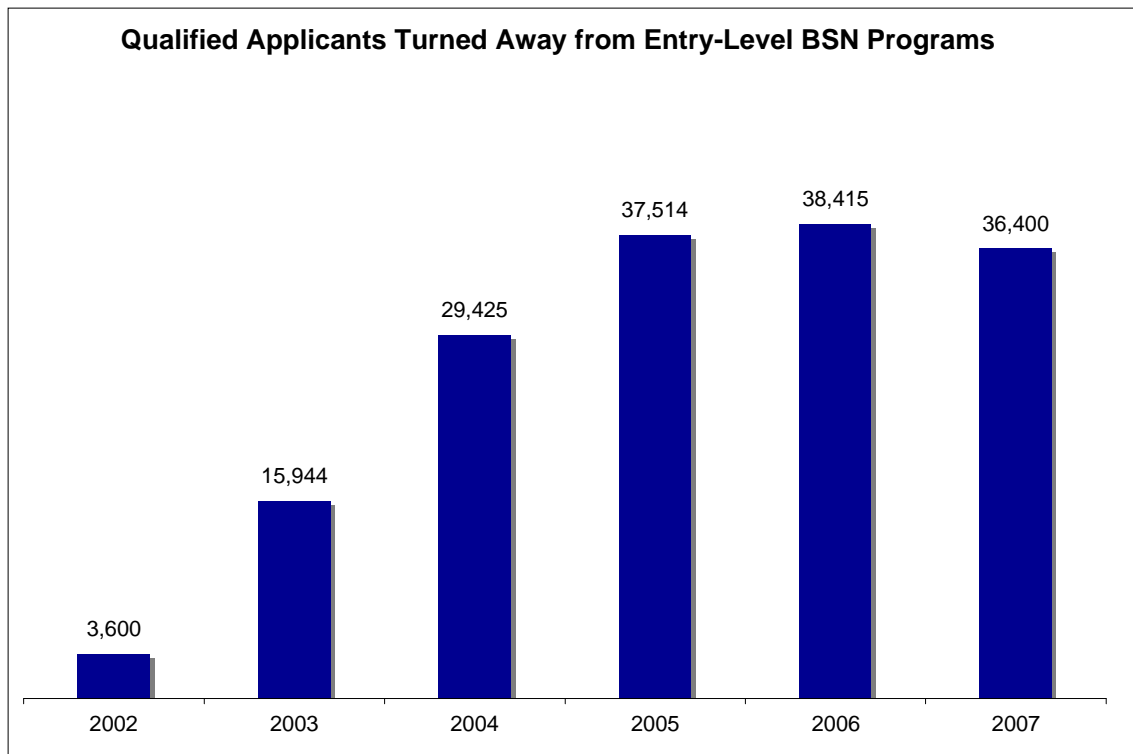
Many regions throughout the country are feeling the pinch of not enough nurses to fully staff hospitals and multiple other care settings. A July 2007 report by the American Hospital Association noted that U.S. hospitals alone currently face 116,000 RN vacancies nationwide.³

Growth in the demand for nurses is fueling current and projected nursing shortages, as patient populations grow older, sicker and more complex at the same time that the age of currently employed nurses continues to increase. In March 2004, the average age of the RN population was 46.8 years of age, up from 45.2 in 2000, according to the 2004 National Sample Survey of Registered Nurses.⁴ Various surveys report that over half of today's employed nurses plan to retire within the next 15 to 20 years.⁵ Analysts at the US Bureau of Labor Statistics project that more than 587,000 new nursing positions will be created through 2016 and that more than one million new and replacement nurses will be needed by 2016.⁶

The problem, simply put, is that the supply of new nurses is not keeping pace with rising demand fueled by the aging population, particularly the "baby boomer" generation. Following enrollment declines in the mid to late 1990s, enrollment in nursing programs has been on the increase this decade. Since 2001, the number of graduates from pre-licensure RN programs has grown, reaching a high of 292,238 students in 2005-06. And the nation continues to add new prelicensure programs, with an increase of 150 programs from 2005 to 2006. Graduates from prelicensure RN programs have been following a similar trend, increasing every year since 2002 and reaching 92,123 in 2005-2006.⁷

Despite progress in increasing nursing program enrollments and graduations, significant numbers of interested and qualified applicants to nursing school have been turned away each of the past five years. In 2006, the National League of Nursing reported 88,000 qualified applications to all (community college and university) nursing programs were turned away due to insufficient capacity.⁸ AACN data indicates that over 36,000 qualified applicants to entry-level baccalaureate nursing programs were turned away in 2007. (Exhibit 1.)⁹

Exhibit 1.



Source: American Association of Colleges of Nursing

Beyond the challenge of increasing capacity to educate all qualified nursing school applicants, nursing programs are also challenged to make curriculum revisions. The 2003 Institute of Medicine report, “Health Professions: A Bridge to Quality,” calls for educational institutions to ensure that their health educational programs help students “develop and maintain proficiency in five core areas:

- Delivering patient-centered care,
- Working as part of interdisciplinary teams,
- Practicing evidence-based practice,
- Focusing on quality improvement and
- Using information technology.”¹⁰

As nursing programs work on solutions to increase capacity, they are also simultaneously revising their curricula around the IOM core competencies. In response, the AACN developed The Essentials for Baccalaureate Nursing Education, a required set of standards for accreditation by the Commission on Collegiate Nursing Education, which will impact how all baccalaureate nursing education programs are structured. The Robert Wood Johnson Foundation has funded Quality and Safety Education for Nurses (QSEN), to assist programs to integrate these competencies into the undergraduate and graduate nursing curricula to a greater degree.

Nursing Education in the United States: A Brief Historical Perspective

Nursing education in the United States traces its roots to the Nightingale School of Nursing, which opened in London in 1860. The one-year technical curriculum focused

on understanding anatomy and physiology, competency in specific skills and moral character; graduates of the program were awarded an official nursing certificate.

The rise of professionalism that characterized modern nursing began to emerge throughout western democracies in the second half of the nineteenth century, with the establishment of legally defined educational standards coupled with professionally controlled entry and regulation of practice.¹¹ Up until the middle of the 20th century, nurses remained dependent on the hospital for both education and practice.¹²

Following the post World War II hospital boom, the Brown Report of 1948 articulated the case for nursing education programs that would prepare nurses to enter the profession at clearly defined levels of competency and experience.¹³ While many of the report's bold recommendations were never enacted, the shift from hospital diploma programs to college and university education of nurses had begun and loosened connections between practice sites (hospitals) and education emerged as a consequence.

Prior to 1950, two educational tracks were available: diploma and baccalaureate degree programs. In response to shortages, Mildred Montag proposed a nursing program that envisioned a technical nurse: more limited in scope than a professional nurse, but broader in scope than a practical nurse. In 1951, the National Education Association adopted a resolution that colleges and universities establish programs of professional and technical nursing. While the many paths of entry into the profession of nursing have provided opportunity and supply, the lack of definition, career progression and commensurate professional rewards have contributed to the cyclical and structural shortages of nurses.

More recently, the increased visibility and demand for APRN roles has resulted in a shift in master's programs and the reduction of many education courses common in earlier clinical master's programs. To address this issue, some schools are now re-creating MSN teacher preparation tracks or offering post-master's certificate programs. Likewise, with an increased focus on nursing research and increasing school rankings, doctoral programs are inconsistent in providing teaching preparation (i.e. curriculum development, program evaluation, pedagogical research). Nursing PhD graduates are generally expected to secure funding and serve as nursing researchers, as opposed to nursing educators. Recognizing the educator role as an advanced practice role, the NLN has defined specific faculty development competencies and issued a position statement on the preparation of nurse educators, which asserts that both clinical preparation and teacher preparation are necessary for those pursuing faculty roles.¹⁴

All nurses are indoctrinated with the philosophy that a primary nursing responsibility is that of teacher to patients and families, but the role of "nurse as teacher" needs expansion and structural reinforcement to embrace future entry-level and graduate nurses. And the ability to refocus registered nurses as teachers of the nation's future nursing workforce will be essential to any effort to expand nursing educational capacity.

III. TAKING A CLOSER LOOK: DRIVERS OF LIMITED CAPACITY

While the numbers of nursing programs and student enrollment has increased at a steady rate over the past decade, educational infrastructure has failed to keep pace. Most experts agree that the key limiting factors include a shortage of faculty and clinical education sites.

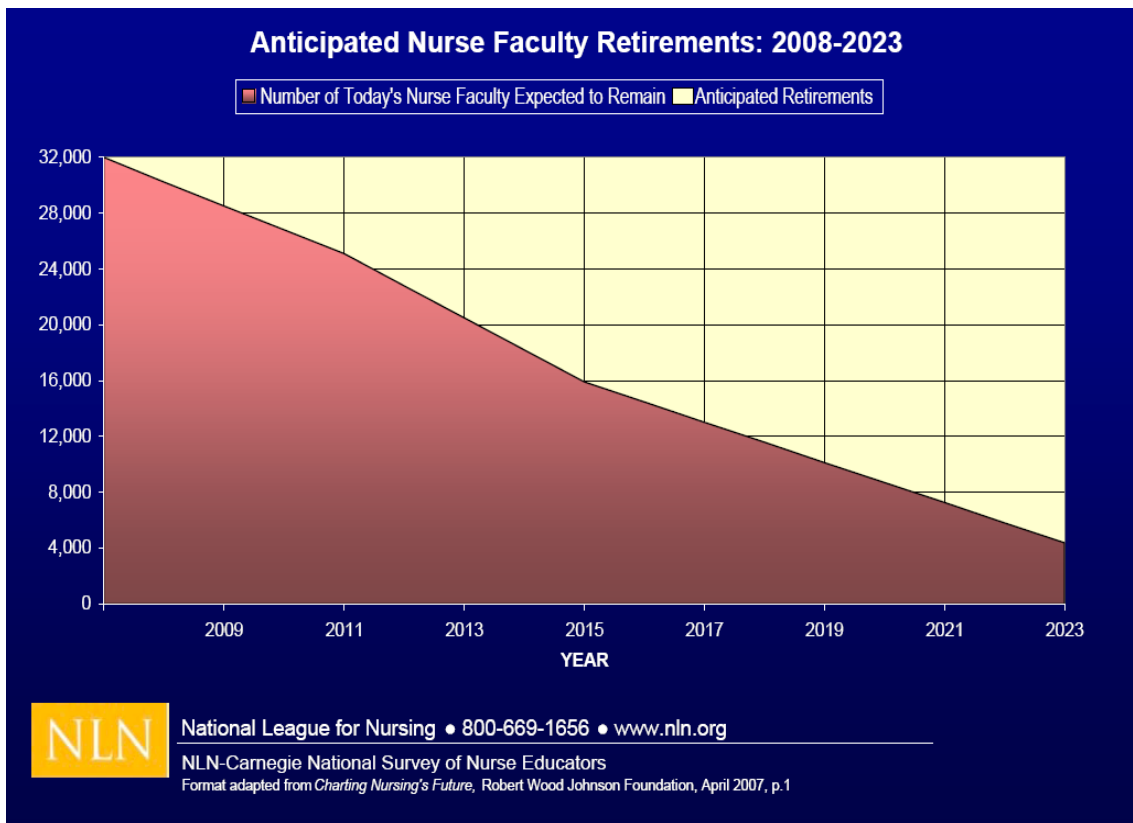
Nurse Faculty Shortages Limiting Enrollment Growth

One of the most significant factors limiting nursing school capacity is the insufficient number of nurse faculty to teach the growing number of interested nursing school students. While the number of faculty has grown over the last few years from 24,320 FTEs in 2003 to 32,379 FTEs in 2006, faculty shortages are regularly cited as a barrier to increasing nursing school enrollment.¹⁵ A 2007 survey of baccalaureate nursing schools found that 71.4 percent of schools indicated faculty shortages as a reason for not accepting all qualified applicants.¹⁶ There is widespread agreement that the primary bottleneck at this point in time is the faculty shortage.

In a July 2007 AACN survey, only 17 percent of nursing schools reported no vacancies and no need for additional faculty. Slightly over 12 percent reported no vacancies but expressed the need for additional faculty, and 71 percent reported vacancies. Based on the survey responses AACN estimates a national nurse faculty vacancy rate of 8.8 percent at baccalaureate and/or graduate programs and 2.2 faculty vacancies per school.¹⁷ But the problem is not only limited to university programs. An NLN report published in 2006 reported that the total average faculty vacancy rate was 5.6% at ADN program colleges and 7.9% at BSN and higher degree programs.¹⁸

Aging Nurse Faculty Likely to Worsen the Problem

The most recent AACN data reveal that the average ages of doctorally-prepared nurse faculty holding the ranks of professor, associate professor, and assistant professor were 59.1, 56.1, and 51.7 years, respectively. For master's degree-prepared nurse faculty, the average ages for professors, associate professors, and assistant professors were 58.9, 55.2 and 50.1 years, respectively. Considering that the average age of nurse faculty retirement is 62.5¹⁹; with 48 percent of nurses over the age of 54, a large wave of retirement is expected within the next ten years. Half of nursing school faculty indicate they plan to retire within ten years (Exhibit 2).²⁰



Short Faculty Career

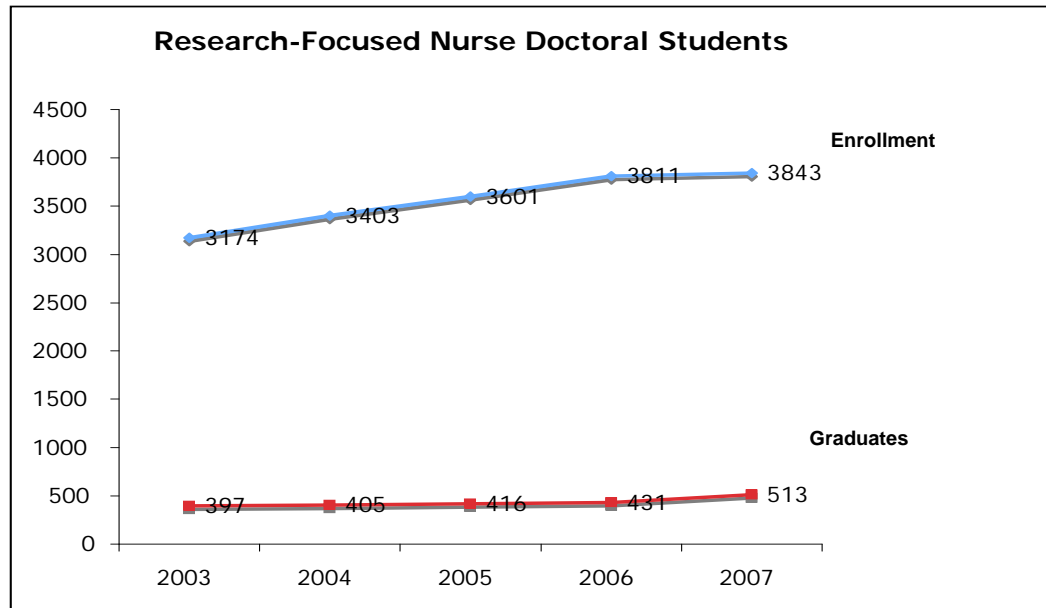
Interested nurses typically pursue faculty roles at a later age than other health professions. In 2002, the median age of recipients awarded a nursing doctoral degree was 47.3 years, with half of the new doctorates between the ages of 45 and 54. That translates into only 15 years as a working faculty member.

Nursing doctoral students spent 8.8 years on average registered in a doctoral program. The average elapsed time from entry into a master's program to completion of a nursing doctorate was 10.5 years.²¹ Over half (52 percent) of nursing students enrolled in research-focused doctoral programs are part-time students, which likely contributes to the lengthy elapsed time in doctoral programs.²² An additional contributing factor is the conventional wisdom in the nursing profession that individuals need significant clinical experience before pursuing graduate degrees. Unlike other health professions, nursing tends to produce educators in a sequential rather than simultaneous manner.²³

Perhaps the more challenging issue, though, is the apparent lack of interest in becoming a nurse educator. The operative questions are 1) why aren't more individuals choosing to pursue higher education necessary to become nurse faculty, and among those who do complete a graduate degree, 2) why do a significant number choose clinical practice over academia? A number of reported misperceptions regarding prestige, job satisfaction, and concerns about "taking nurses away from patient care" persist and need to be addressed in a meaningful way.

While enrollment in and graduations from research-focused doctoral programs have been increasing over the last five years, the number of programs remains small (at just over 100), as does the number of students and graduates. In 2007, 3,843 students were enrolled in research-oriented doctoral programs, but over half of them were part-time students. Only 531 students graduated with research-oriented doctorates (Exhibit 3).²⁴

Exhibit 3.



Source: American Association of Colleges of Nursing

In contrast, enrollment in master’s programs in nursing has grown swiftly across the last five years, from 34,680 students in 2003 to 56,277 students in 2007. Graduates from these programs have also increased at a similar rate, from 9,329 graduates in 2003 to 13,673 graduates in 2007.²⁵ Most nurses attend graduate school to acquire advanced clinical skills and return to patient care or administrative roles after graduation. .

Part of the problem here is the same challenge of insufficient nursing education capacity. Significant numbers of qualified applicants to graduate programs are turned away each year for the same reasons that entry-level RN students are turned away. In 2007, according to AACN data, 3,048 qualified applicants to master’s programs in nursing were rejected, as were 313 qualified applicants to doctoral programs.²⁶

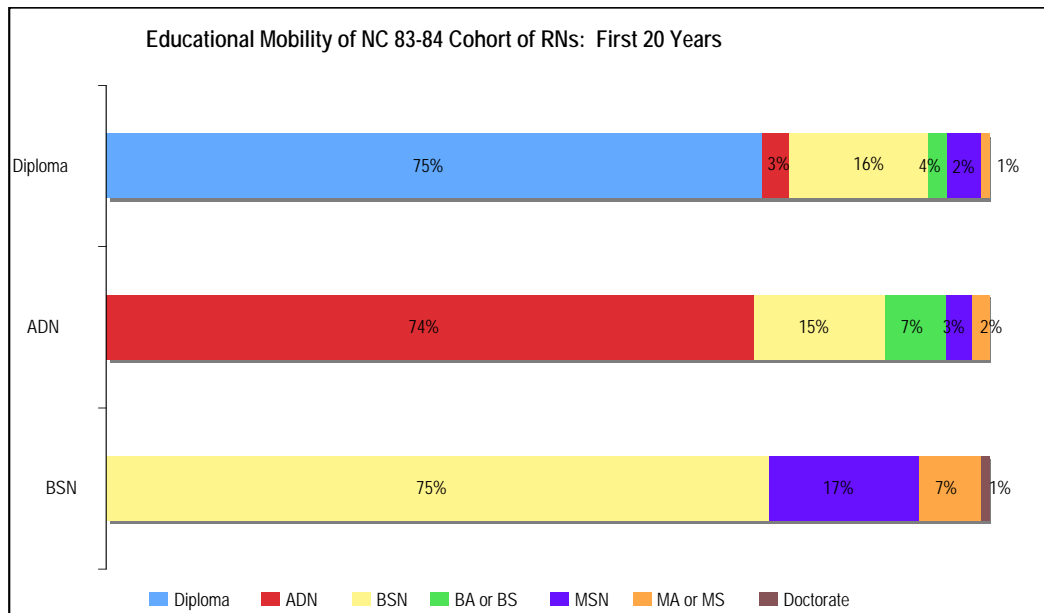
Even among those who pursue the requisite education to become nurse faculty, there is a significant migration of individuals to other non-educational professional opportunities. More than one-fifth of 2007/2008 nursing doctoral graduates reported plans to work in settings other than schools of nursing; specifically, 115 of the 513 graduates intend to work in hospitals, ambulatory settings, or other organizations instead of assuming faculty positions.²⁷ Other data corroborates a decrease in the portion of nursing doctorates working in schools of nursing. From 1992 to 2000, the percentage of nurses with nursing doctorates employed in nursing schools with BSN and higher degrees declined from 68 percent to 49 percent.²⁸ Furthermore, additional nurse faculty choose to leave academia for positions in nursing service, private sector, or private practice.

An Anemic Nursing Faculty Pipeline

The pipeline for nursing faculty is an additional problem. The most traveled path to becoming a nurse faculty member is BSN to MSN to doctorate; however, there is significant drop-off between each of these steps, even at the beginning. Nearly two-thirds of entry-level nurses begin their careers with an associate’s degree or a diploma, rather than a BSN. Of nurses who begin with an associates degree, a relatively small percentage pursue additional education, and very few achieve master’s or doctoral degrees. Even those nurses who begin their careers with a BSN rarely choose to pursue a doctorate, although a significant portion will pursue master’s degrees.

HRSA’s National Sample Survey of Registered Nurses reveals that BS RNs are four times more likely (16.8%) to pursue a graduate degree in nursing than an AD RN (4.3%).²⁹ Data from North Carolina demonstrates that up to one-quarter of RNs who begin with a BSN gain an MSN, MA or doctorate, compared to only two to five percent of RNs who begin with an ADN or diploma (Exhibit 4).³⁰

Exhibit 4.



Source: American Journal of Nursing

In 2004, nationwide, over two-thirds of registered nurses began their careers with either an associate’s degree or a diploma; only 32 percent of RNs began with a baccalaureate degree or higher.³¹ If the North Carolina data is indicative of a national pattern regarding the pursuit of higher education, the current pipeline for producing nursing faculty is anemic, at best.

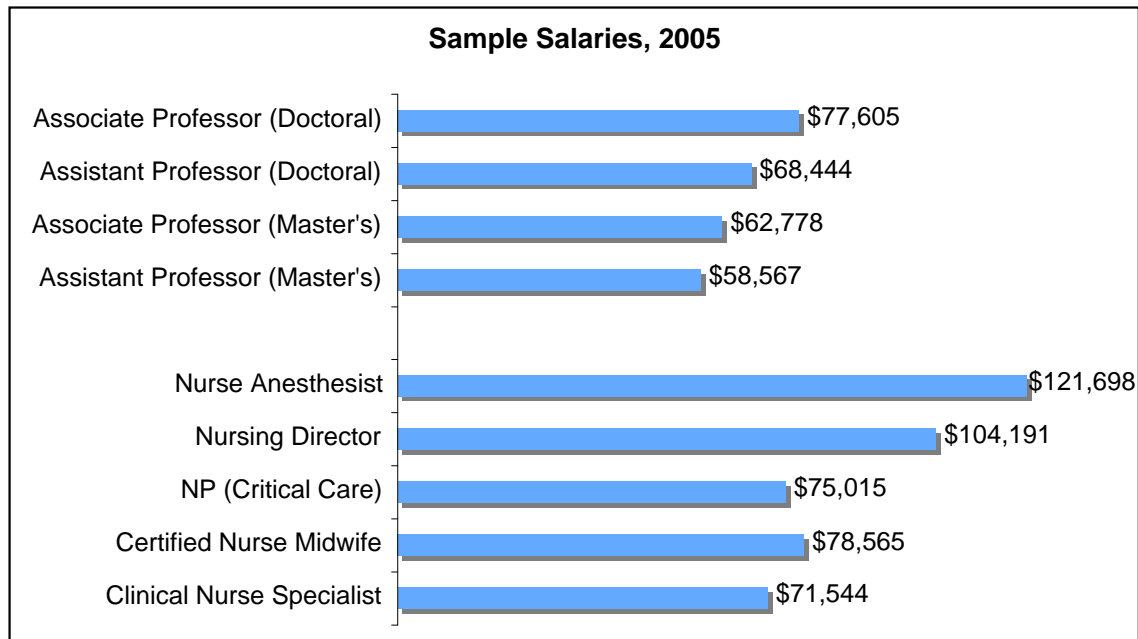
Significant Income Gaps Serve as Disincentives

Relatively low nursing faculty salaries in comparison to clinical practice and administrative salaries are a significant driver of both low entry figures and reported exits from academia. The nursing shortage has led to significant increases in salaries for nurses in clinical practice, while nurse faculty salary growth has remained flat.

AACN's recent survey indicated that master's prepared associate professors earned an annual average salary of \$66,588.³² This does not compare favorably with 2007 salary survey data reported by ADVANCE for Nurse Practitioners in which master's prepared nurse practitioner earned an average of \$81,517 annually.

Results of a 2005 AACN comparison of academic and non-academic salaries are presented in Exhibit 5.³³

Exhibit 5.



Source: American Association of Colleges of Nursing

Not surprisingly, the 2007 NLN/Carnegie survey found that nurse faculty were least satisfied with their salaries, compared to 15 other factors; over half of respondents were either very or somewhat dissatisfied with their salary. As further evidence, of faculty who indicate they were likely to leave their jobs in the next five years, over 50 percent cited "more compensation" as a reason for departing. In addition, 36 percent indicated "more flexibility to balance work/life issues" and 30 percent indicated "reduced workload" as reasons to leave nurse faculty positions.³⁴

Additionally, nurses considering pursuing higher education for an academic career face significant tuition costs and foregone income for the years they spend pursuing their degrees. While nursing faculty compensation adjustments alone will not solve the nursing education capacity problem, the value of the educators must be acknowledged and rewarded in order to move forward.

Additional Challenge of Heavy Workloads

Beyond salary considerations, nurses who have chosen to work as faculty often find heavy workloads in academia, balancing a full load of teaching, research, clinical practice, clinical supervision of students and other activities. Over the past five years, workload has increased in response to increasing enrollment. Full-time nurse educators

in RN programs report working 53 hours a week on average when school is in session and nearly 25 hours per week during break periods. Nearly half of nurse educators, 45 percent, expressed dissatisfaction with their current workload, and more than 25 percent of those who were likely to leave their job cited workload as a reason.³⁵

Lack of Diversity in Nursing School Faculty

Many of the drivers limited the numbers of nursing school faculty are also limiting the number of faculty from diverse racial and ethnic groups. Data from the 2006 NLN/Carnegie National Survey of Nurse Educators reveal that only seven percent of nurse faculty are minorities. Asians and African Americans represent one and three percent of nurse faculty, despite the fact that they represent three and five percent, respectively, of the general RN workforce.³⁶

The community college pipeline underscores the need for faculty diversity. In California, a 2006-7 report states that 60% of all Hispanic college students were enrolled in two-year colleges, as were 50% of African Americans, Asian/Pacific Islanders and Alaskan Native students.³⁷ In the School of Health Professionals at the Community College of Baltimore County (CCBC) Maryland, minority students make up 38 to 42 % of the total (CCBC's School of Health Professionals graduated 212 RNs last year).³⁸

The need for a diverse nursing school faculty is increasingly important, as research continues to link minority health disparities to a lack of cultural competence on the part of health care providers. Diverse faculty members can serve as important role models and mentors to the next generation of nurses, both helping increase the numbers of diverse students pursuing nursing and helping all students develop greater cultural understanding and competency.

Insufficient Clinical Education Capacity and Instructors

An insufficient number of clinical sites and clinical instructors is also limiting the expansion of nursing school capacity. Growing enrollments in nursing schools have largely been met by the same supply of clinical rotation sites and slots, leading to significant competition for clinical placements. This constraint is a factor at both community college and university nursing programs.

Just under 60 percent of baccalaureate programs indicated “insufficient clinical sites” as a reason for not accepting all qualified applicants. In addition, 30 percent cited “insufficient clinical preceptors” as a reason for not accepting all qualified applicants.³⁹ In a recent survey by the Florida Hospital Association, 67 percent of respondents indicated that they would be able to expand their programs if more clinical locations were available⁴⁰.

Part of the challenge is that it is often difficult for hospitals to absorb the traditional clinical rotation of one faculty member and eight to ten students on a unit without causing disruption and cost to the hospital in terms of distracted staff time and decreased efficiency. As patient acuity and safety concerns have risen, nursing students are increasingly limited in the responsibilities they can assume due to the potential risks of inexperience.

In addition, over half of baccalaureate programs indicated “insufficient classroom space” as a reason for not accepting all qualified applicants.⁴¹

Throughput of Nursing Students to Satisfied, Full-Time Employees

The limited number of nursing school slots increases the pressure to ensure that students progress through their education in a timely and effective fashion. Unfortunately, many schools fail to provide sufficient resources to ensure that all qualified nursing students graduate in a timely fashion. The intersection of these issues combined with the lack of consistent and rigorous admission standards also contributes to dropout rates.

Finally, turnover rates in the first year of employment are high for new nurses, as many individuals find themselves challenged by the reality of clinical practice in hospitals today. This does not assume that the burden lies completely with nursing education programs, as practice settings have an equal but important role in ensuring a smooth transition from classroom to work environment. A three-year study funded by the Robert Wood Johnson Foundation on the work experience of newly licensed nurses in the acute care hospital setting examines potential turnover based on work environment characteristics, attitudes and opportunities. Initial results from the study underscore the importance of understanding the drivers of dissatisfaction on employment patterns of newly licensed nurses in efforts to reduce hospital related turnover through better orientation and management.⁴² Any effort to increase the number of nursing school graduates will not be successful unless those graduates become licensed nurses who enter and remain active and productively engaged in the nursing workforce for years to come.

IV. FOUR APPROACHES TO EFFECTIVE SOLUTIONS.

While the challenge of increasing nursing education capacity is multi-faceted and involves many formidable obstacles, the encouraging news is that many health care stakeholders are beginning to address the problems in a variety of innovative ways. Four effective approaches to increasing nursing education capacity have been identified.

1. Creating Strategic Partnerships to Align & Leverage Stakeholder Resources.

First and foremost, since a nursing shortage has profound impact on many different organizations, entities, and especially consumers of healthcare, any effort to address this shortage is likely to require the active involvement of multiple stakeholders. At a minimum, when addressing issues of limited nursing education capacity, close involvement of nursing education programs and clinical practice settings is essential. But in order to truly leverage the power, unique resources and assets of all stakeholders in the nursing education capacity issue, a broader coalition must be convened. Some partners are obvious, such as employers of nurses, educational organizations and agencies of higher education. However, the real opportunity for innovation and change may require casting a broader net to include community organizations, regional/state development or workforce bodies or companies that design and manufacture learning technology.

Consumers of health care are Nursing's most natural and powerful allies and should be actively engaged in the issues. The **Center to Champion Nursing in America (CCNA)** - a joint initiative of AARP, the AARP Foundation and the Robert Wood Johnson Foundation - was launched in 2007 to address the growing nursing shortage that threatens access to health care and quality of care across the nation. Serving as a focal point for advocacy and educational efforts at both state and national levels, CCNA will bring together influential voices from health care, business and consumer groups to speak out about the link between nursing and quality health care, and the need to support nursing in America.

Across the country, many individual schools of nursing and hospitals have developed partnerships in order to fund and develop faculty, financially support nursing students, and/or provide additional education space and instructors for program expansion.

One interesting and comprehensive partnership is the **LEARN (Leveraging Existing Academic Resources in Nursing)** project, through which **University of Texas (UT) at Arlington and Texas Health Resources (THR)** are developing an accelerated entry-level BSN program. Beginning in May 2008, the 15-month program will enroll current employees of THR; THR will pay student tuition and books in exchange for a two-year employment commitment.

The program will leverage expert UT Arlington faculty by providing all classroom lectures via iPod technology to students. THR will provide clinical faculty and open up new space for clinical education for the program. All of the clinical education will be provided by THR, which will save students and faculty the 12 to 16 hours they often spend in orientation at new practice sites. The clinical faculty will be master's prepared

faculty employed by THR but supported by faculty at UT. In addition, each student will be assigned a staff RN as a coach/mentor for the entirety of the program. Each coach will meet with her/his student at least once per month and will receive a \$500 stipend per semester.⁴³

In Michigan, **Henry Ford Health Care System, Ford Motor Company, and Oakland University School of Nursing** have formed a collaboration to offer an **accelerated BSN program for displaced autoworkers**. The program has two tracks: a one-year BA to BSN program, and a three-year entry-level BSN program for those without a bachelor's degree.⁴⁴

The **New Jersey Chamber of Commerce** has taken a leadership role by forming a partnership with the Robert Wood Johnson Foundation called **The New Jersey Nursing Initiative — So a Nurse Will Be There for You** that will educate more nurses to assume faculty roles. In addition, the New Jersey Chamber of Commerce is looking for businesses to join its Business Alliance for Nursing, a coalition of business leaders that will work with Trenton to increase funding for nurses and nurse faculty and tell their representatives that rising health care costs surface as increases in the health insurance premiums that businesses pay for each employee, or as a lost business opportunity.⁴⁵

In a number of communities, multiple schools and hospitals are coming together, often with the financial support of foundations, industry and government organizations, to create innovative solutions to expanding educational capacity.

For example, the **ADN Regional Collaborative** is a partnership between **five colleges and seven hospitals in Southern California**; the organizations have come together in an effort to expand capacity in nursing programs. The schools have developed a common curriculum for the first year of the nursing program. Funding for the program has been provided jointly by the hospitals (each contributing \$100,000) and the philanthropic foundations (e.g. the Weingart Foundation, the Annenberg Foundation, Foundation of NSNA through Johnson and Johnson), with the Hill Rom Corporation contributing 18 beds to the program for simulation activities.⁴⁶

Each of the five schools contributes 20 students from its waiting list each year to the program. Didactic classes are taught by live interactive videoconferencing in three of the hospitals, while three hospitals also house clinical skills labs for use by the students.

In Tucson, Arizona, the **Hospital Council of Southern Arizona** partnered with **Grand Canyon University** to create an **accelerated BSN program** for Tucson-area students. HCSA created a nine-hospital consortium to create funding and clinical education space for the 30 students enrolled in each cohort of the accelerated program. Local hospitals interview the students to identify students they will support financially in exchange for an employment commitment after they graduate. In addition, local hospitals provide space for clinical and classroom education for the students.⁴⁷

In the face of increasing nursing school enrollments and the need to find more clinical placements for these students, nursing programs and hospitals in many communities have banded together to develop centralized systems for scheduling clinical placements. A pioneer in this area is the **Centralized Clinical Placement System (CCPS)** in the San

Francisco Bay Area. Originally funded by the Gordon and Betty Moore Foundation, CCPS is an internet-based system for scheduling and managing clinical placements of nursing students (colleges and universities) in Bay Area hospitals.⁴⁸ The process is straightforward: hospital users enter information online concerning available units and times for clinical rotations; school users make requests for clinical placements at specific hospital units; and hospital users accept or reject the requests. All of this takes place online and in real time.

Today, over 30 schools of nursing and over 55 hospitals use the CCPS.⁴⁹ An interim review of the program by UCSF suggests that the system has enabled a ten percent increase in nursing school enrollment. Fully 70 percent of Bay Area schools believe that CCPS helped facilitate program expansion.⁵⁰ To date, three other communities have purchased CCPS through a licensing agreement.

StudentMAX[®] is a similar centralized clinical placement software system that has helped increase clinical placement capacity in the **Oregon** and **Southwest Washington** region and throughout the regions of the 10 states licensed to use StudentMAX[®]. In Oregon and Southwest Washington, there has been an increase of utilization of clinical placements of 25%.

Additional examples of creating strategic partnerships to align and leverage stakeholder resources are provided in the four case studies that begin on page 25.

2. Increasing Nursing Faculty Capacity and Diversity

As the earlier section made clear, the shortage of qualified nursing faculty is one of the most significant barriers to increasing nursing education capacity. Leading organizations are addressing the shortage of qualified faculty in a variety of ways, from creating accelerated education programs to leveraging practicing nurses as clinical staff to increasing the incentives to work in faculty roles.

Increasing Nursing Faculty Capacity

In an effort to increase the number of nursing faculty in the San Francisco Bay Area, the **University of California, San Francisco** developed a three-year **Accelerated Doctoral Program (ADP)**. With funding from the Gordon and Betty Moore Foundation, the ADP will produce 42 PhD-prepared faculty members. The program targets nurses with MSN degrees but also accepts exceptional BSN candidates. Graduates of the program are required to accept and hold academic teaching positions in the Bay Area for a minimum of three years. To date, 10 students have completed the program and begun teaching. An additional 27 students are enrolled, and the final five students are scheduled to enroll.⁵¹

Many other nursing programs are also developing and offering accelerated educational programs to help educate new faculty efficiently. According to AACN, 63 educational institutions offer fast-track master's programs and accelerated doctoral programs.

In 2002, with funding assistance from Blue Cross Blue Shield of Florida, five nursing schools formed the **North Florida PhD Nursing Consortium** in order to increase student access to doctoral education through a cooperative PhD degree in nursing science. The cooperative degree extends the reach of the University of Florida's doctoral program to students attending Florida A&M University, Florida State University, the University of North Florida and the University of West Florida. Students attend the cooperative doctoral courses on their home campus, via an interactive audio-visual system. To date, seven students have graduated with a PhD, and another 10 are currently enrolled in the cooperative PhD program.⁵²

Targeting the shortage of clinical faculty, the **Adjunct Clinical Faculty Training Program** is an intensive education program for practicing RNs funded by the Gordon and Betty Moore Foundation and administered by the California Institute for Nursing and Health Care (CINHC). CINHC partnered with **San Francisco Bay Area** schools and hospitals to provide the education and identify qualified RNs for the program. The goal of the program is to increase the number of clinical faculty in five Bay Area counties, by educating experienced MSN and BSN RNs working in hospitals to become clinical instructors. The program includes 32 hours of didactic education, an online assignment, and 45 hours of student teaching in a clinical setting. Faculty from Samuel Merritt College, San Francisco State University and Holy Names University provide the didactic education.

Participants who complete the program can receive three master's level units through California State University San Marcos or 45 hours of continuing education credit. In return, each graduate of the program is required to teach 15 to 24 hours per week or one

clinical course per semester/quarter for three semesters/quarters each year over a three-year term. To date, 48 RNs have been educated through this program, with another 12 RNs targeted this year.⁵³

Another innovative program targeting the nursing faculty shortage is the development of the **Practice-Scholar Role in Midland, Michigan**. This program is being developed through the national Partners Investing in Nursing's Future (PIN), a new national initiative to develop and test solutions to American's nursing shortage led by the Robert Wood Johnson Foundation and the Northwest Health Foundation. With the support of a regional partnership of foundations, educational institutions, and health care organizations, 16 registered nurses will become Practice-Scholars, a role involving varying proportions of the three areas of practice, education, and learning in the appropriate level of advanced education.

Another example of creating new clinical faculty is offered by **Cedars-Sinai Medical Center (CSMC)**, where master's-prepared staff nurses provide clinical education for students in the newly developed **Master's Entry Clinical Nurse (MECN)** program at University of California Los Angeles (UCLA). Master's-prepared nurses teach students for two days a week for eight to ten weeks. Since most of the nurses in this role serve in either a supervisory or clinical support function, CSMC was able to absorb the hours they spent educating students without having to bring in additional nurses.

UCLA faculty came on-site to prepare CSMC nurses to take on this role, especially focusing on how to conduct post-conference sessions with students. CSMC staff provided additional education and support to the new clinical educators. CSMC helped UCLA develop the curriculum for the MECN program, which integrates on-site clinical education throughout both years of the program. The MECN program also incorporates Transforming Care At the Bedside principles and design targets into specific courses.⁵⁴

The **Community College of Baltimore County (CCBC)** received a Community Based Job Training Grant from the Department of Labor to develop an education ladder from NA to MSN. Many community college students come to their local institutions for career change and a significant percentage already have Bachelor's degrees. Based on an innovative and successful Physician's Assistant Program with Towson University, an "**Associates to Masters Nursing Program**" has been designed with the explicit goal of producing nursing faculty. Students with a Bachelor's degree earn the ADN at CCBC and continue to Towson for the MSN.⁵⁵

In an effort to improve recruitment and retention of nursing school faculty, **Grand Canyon University** in Phoenix, Arizona raised the salaries of its nurse faculty by at least 25 percent. Faculty at colleges of nursing are often the lowest paid of all the colleges within a university; yet, there is significant competition for nurses with graduate degrees.

Increasing Nursing Faculty Diversity

In an effort to address the shortage of minority faculty, a few organizations are sponsoring scholarships and fellowships. For example, AACN and the Johnson & Johnson Campaign for Nursing's Future have developed the **Minority Nurse Faculty Scholars** program, which provides financial support to graduate nursing students from minority backgrounds who agree to teach in a school of nursing after graduation.⁵⁶

Building on their Faculty Scholars Program, the Robert Wood Johnson Foundation (RWJF) has joined with the American Association of Colleges of Nursing (AACN) to create the **Robert Wood Johnson Foundation New Careers in Nursing**, a scholarship program to help alleviate the nursing shortage and increase the diversity of nursing professionals. Through grants to schools of nursing, the program will provide scholarships to college graduates without nursing degrees who have been admitted into accelerated baccalaureate and master's nursing programs.

Through the New Careers in Nursing program, funds to support up to 1500 scholarships of \$10,000 each will be awarded to selected schools of nursing annually over a three-year period. A school of nursing may apply for between five and 30 scholarships per year to be awarded to students from underrepresented groups in nursing or disadvantaged backgrounds. Schools must demonstrate that the availability of scholarship funds will expand enrollment in accelerated nursing programs. Up to 75 nursing schools will be selected through a competitive application process.⁵⁷

Some universities, recognizing that the lack of faculty diversity spans all professions, have broadened their organizational mission statements to lay a foundation for recruitment goals. In 1996 the state of Florida created the **Florida Fund for Minority Teachers** to attract promising minority students into teaching careers. “A diverse faculty that represents targeted minorities is an effective tool in recruiting and retaining minority students,” says Dr. Hattie Bessent, EdD, MSN, RN, FAAN. Minority students “need mentoring, they need role models, and they need to aspire to leadership positions.”

The Substance Abuse and Mental Health Services Administration of the U.S Department of Health and Human Services provides grants to encourage and facilitate the doctoral and post-doctoral development of minority nurses, psychiatrists, psychologists, and social workers through its **Minority Fellowship Program**.⁵⁸

Additional examples of increasing nursing faculty capacity and diversity are provided in the four case studies that begin on page 25.

3. Redesigning Nursing Education

Many are using the challenge of increasing nursing education capacity as an opportunity to rethink the design and delivery of nursing education. Not content to simply increase the number of students processed through the same educational model, these nursing schools and hospitals are exploring effective ways to transform nursing education in order to produce more nurses but also better qualified and more satisfied nurses.

Innovative ideas include:

- Leveraging new simulation and distance-based learning technology;
- Redesigning nursing school curriculums in order to more effectively and efficiently integrate clinical learning and practice into nursing education
- Embedding clinical quality and patient safety focus into nursing education
- Sharing curriculum, tools, and faculty across schools
- Reconsidering faculty roles and backgrounds

Hundreds of online degree completion programs are now available, and 195 educational institutions offer accelerated BSN programs, according to AACN.

In 2003, the **University of South Florida (USF)** transformed the way it educates entry-level BSN students by creating a **Clinical Collaborative** model, through which students are grouped into small cohorts (10 to 12 students) and assigned to one hospital for the entirety of their clinical education experience.⁵⁹ USF works with the majority of hospitals in the Tampa area. Rather than placing all students in a cohort on one unit, students can be spread throughout the hospital, where staff nurses closely supervise their education. Since students receive education at one hospital, they are able to learn and fully utilize the hospital's IT systems, in line with the IOM core competencies.

Staff nurses at each hospital serve as mentors, working with students in a one-on-one relationship over the course of a semester. As students rotate to different units within the hospitals, they work with different preceptors, allowing the student to gain exposure to different styles of patient care in different specialties within the same hospital. A USF-based faculty member supervises the clinical rotations, but the staff nurses play a much greater role in the clinical education of nursing students than in the traditional nursing educational model. USF also supports the mentors through a dedicated education program that provides information about learning styles, teaching, coaching and evaluating students. For every 70 hours of precepting, each preceptor receives tuition credit for a three credit hour course.⁶⁰

Many nursing schools are experimenting with the rapidly advancing technology in the area of simulation. A pioneer in this area is **the University of Texas (UT) at Arlington**, which opened the **Smart Hospital** in August 2007. UT Arlington has rebuilt its nursing education programs on the belief in simulation as a pedagogy, through which nursing students from day one of their education can engage in active and self-directed learning.

The Smart Hospital is a 33-bed physical hospital, with 10 beds in a learning resource area used for foundational skills and 23 beds designed to mimic an actual hospital setting. Simulation-based learning is embedded into all nursing classes at UT Arlington, and each

faculty member follows their students from the classroom to their clinical education in the Smart Hospital. The methodology places an emphasis on practice and repetition of deliberate skills, and all activities are videotaped for use in debriefing sessions between faculty and students. UT Arlington students also complete traditional clinical rotations in hospitals, but the expansive use of simulation reduces the school's demand for scarce clinical placements while also allowing nursing students to practice skills first in a safe environment.⁶¹

Michigan's Oakland University's Institute for the Advancement of Nursing and Healthcare is partnering with **Ascension's St. John Health** to develop **Transforming Nursing Education**, a multi-faceted educational initiative. The goal is to better groom new nurses for their roles with hospital teams and better prepare nurses to thrive in stressful and complex medical environments found in modern hospitals and other settings. The joint program aims to address the gap between academic preparation and workplace realities by linking a series of progressive components:

- Curriculum Enhancements
- Virtual Clinic
- Proprietary Cohort
- Precepted Clinicals
- Onboarding Support Program
- Preceptor Development
- RN to MSN Nurse Educators

The program endeavors to leverage the initial investment from the university and hospital partners to secure grant funding with the goal of increasing retention of new nurses by 60 percent and realizing savings upward of nearly \$2 million in potential human resource cost recovery.⁶²

University of California, Davis was awarded \$100 Million to develop **The Betty Irene Moore School of Nursing**, an innovative new nursing school in Sacramento to prepare future nurses to lead inter-professional teams in an increasingly complex and ever-changing health care system. In step with the IOM directives, the curriculum will emphasize leadership, scientific rigor and multi-disciplinary education. Initial plans include rigorous admissions standards, a curriculum integrated with both UC Davis' School of Medicine and Graduate School of Management, and residency training for bachelor's degree candidates. All degree programs will incorporate UC Davis' expertise in public health, telemedicine and health technology as further evidence of inter-disciplinary collaboration. The goals are to graduate nurse leaders, educators, and researchers who will make positive, long-term systemic impacts on health care in California and throughout the nation.⁶³

With regard to the challenge of transition from education to the workplace for newly licensed nurses, **AACN**, in partnership with the **University HealthSystem Consortium**, has developed and advocated for one-year **nurse residency programs**. These programs have proven to be effective at increasing significantly first year nurse retention significantly while increasing the new nurse's confidence and role satisfaction. A recent evaluation of this program, reported that the first year retention rate in systems that have these residency programs was 94.3%.⁶⁴

Additional examples of nursing education redesign are provided in the four case studies that begin on page 25.

4. Flexing Policy and Regulation

Across many of the previous examples and the forthcoming case studies, policy, regulatory or accrediting organizations have played an important supporting role in the implementation of a change. In some cases, policy and regulatory advocacy has played a primary role in increasing nursing education capacity in a state or region.

For example, in **Maryland**, state legislation created the **Nurse Support Program**, through which a 0.1% increase to the rate structure of all Maryland hospitals helps fund efforts to increase nursing school faculty and enrollments. Annually, approximately \$8.8 million will be available to fund innovative efforts at Maryland's nursing schools (e.g. graduate nursing faculty scholarships, new nursing faculty fellowships, online master's education programs for staff nurses to serve as clinical instructors).⁶⁵

Many state legislatures are targeting policy to increase nursing faculty. In **Colorado** two such bills were enacted. The **Nursing Teacher Loan Forgiveness Program** offers a maximum of \$20,000 in loan forgiveness to students pursuing a master's or doctoral degree; recipients commit to teach for five years in a Colorado nursing school.⁶⁶ The **Nursing Faculty Fellowship Program** would help schools fill vacant positions by offering fellowship payments of up to \$10,000 for three years (*funding pending*).

In 2006, in response to pressure from a taskforce of representatives from academia, health care industry and government, the **Mississippi** state legislature awarded a **\$6000 raise** to the 500-nurse faculty members in the state's public colleges and universities.⁶⁷

The **New Jersey State Nurses Association and the New Jersey Organization of Nurse Executives** have jointly developed "**BSN in 10 (S620)**" legislation, sponsored by state senator Joseph Vitale of Middlesex.⁶⁸ The legislation, if passed, would increase the level of education required for continued registration as a registered professional nurse by requiring RNs to attain a bachelor's degree in nursing within ten years following initial licensure, while maintaining the multiple entry points into the profession. Registered nurses currently licensed or enrolled in a nursing program would be grandfathered. The purpose of requiring the baccalaureate degree for continued registration as a registered professional nurse is to be responsive in meeting the increasingly complex health care needs of the residents of the US, as well as the faculty shortage. The legislative process has provided a timely impetus for educators to reach consensus about how a state can systematically increase the percentage of BSN prepared nurses. The New York State Nurses Association will present a similar "BSN in 10" initiative as an action proposal to the American Nurses Association House of Delegates in June 2008.⁶⁹

In most of these types of examples, although the change has been a result of legislative activity, the leaders driving that change typically come from nursing schools, practice settings, or other nurse leadership roles.

Additional examples of the role of policy and regulation are provided in the four case studies that begin on page 25.

V. TAKING A MULTI-PRONGED APPROACH: CASE STUDIES OF FOUR INNOVATIVE PROGRAMS

Looking across all of these examples, one notices that most of these efforts involve more than one approach to increasing nursing education capacity. In fact, research indicates that many of the most effective and comprehensive regional efforts to address the nursing education capacity problem incorporate three or four of these approaches. In order to demonstrate the effective combination of approaches, four programs are detailed below in case studies.

Case Study #1: Oregon Consortium on Nursing Education (OCNE).

Background. Formalized in 2006, OCNE is a consortium of all nursing educational institutions in Oregon designed to create a shared, competency-based entry-level BSN educational curriculum. Through the consortium, students at any partner campus (including community colleges) can complete the coursework for a BSN; the additional classes between an associate's degree and the BSN are completed through distance-learning courses.⁷⁰ As of Spring 2008, OCNE had admitted its second class of nursing students.

Impetus. Oregon nursing and health care leaders recognized that they were about to face a severe nursing shortage and that nursing schools needed to double enrollment in order to head off a nursing crisis. The consortium expects to increase the number of BSNs practicing in Oregon substantially. In addition, leaders recognized the need to transform nursing education to meet the new needs of clinical practice and the emerging health care needs of an aging population.

Creating Strategic Partnerships. Oregon Health and Science University School of Nursing (OHSU) and eight of Oregon's 14 community colleges participate as full partners in the consortium, which means they are committed to developing and implementing a new shared, competency-based nursing curriculum that culminates in a BSN degree. The remaining nursing programs in Oregon participate as associate partners, which play an advisory role with curriculum development but are not currently implementing the new curriculum.

In addition, OCNE has received generous financial and technical assistance support from many organizations, including Northwest Health Foundation, Meyer Memorial Trust, James and Marion Miller Foundation, Kaiser Permanente Northwest, the Ford Family Foundation, the Robert Wood Johnson Foundation and HRSA.

Chris Tanner noted the importance of partnering: "A critical component of the success of OCNE was meeting together as a group with representatives from community colleges, university schools of nursing, and practicing nurses and nurse leaders from different settings of care. Our success has rested on having strong relationships and on agreeing as a group that we needed to work together."

Increasing Faculty Capacity and Diversity. OCNE aims to increase faculty capacity and productivity in three ways.⁷¹ First, as a result of the common curriculum, OCNE is able to share faculty among facilities. A faculty member from one campus can fill in and teach a course on another campus.

Second, OCNE is beginning to leverage the expertise of its faculty members across programs in order to save faculty time in class preparation. To date, large amounts of course materials have been developed, including case studies, scenarios for simulations, role-plays, and examinations. OCNE is planning to upload all of this material onto a web-based searchable database to allow faculty to find teaching tools and materials for their classes.

Finally, the least developed but potentially most significant idea for increasing faculty productivity is to completely reform clinical education. Clinical education is the most expensive part of nursing education, but the traditional model of clinical education makes inefficient use of faculty and student time, while also placing a burden on staff nurse time.

The new idea is to create focused, intensive learning experiences for students, while substantially increasing the number of students working with the faculty member. For example, one faculty member might work with a total of 20 students in a 10 week period; each week the faculty member would guide the student through specific clinical learning activities, in groups of 4-5 students. Because students are engaged in new learning, which is closely guided by faculty, they actually need less time in clinical education.

In the traditional model students typically have “down” time, in which they are waiting for faculty supervision or are assigned to other duties that do not involve new learning. In the new model, it is anticipated that the faculty member can work with four groups of students in the same amount of time that s/he would traditionally have worked with one group.

The clinical rotations will be designed to allow students the opportunity to see many patients with similar health problems, so that they can learn the variation in how these problems present, and how nursing care might differ. For example, in order to learn how to differentiate between dementia, delirium and mental illness, students and faculty would have clinical experiences in a variety of settings, interacting with a number of different types of people with potential issues. Students might be placed in a long-term care setting and meet with older residents experiencing memory problems or might be placed in a shelter working with homeless individuals, or might work in an acute care setting working with patients admitted for suicidal behaviors.

A key element of this new clinical education design is working with different patient populations and settings outside of hospitals to help nursing students build specific clinical skills. Additionally, the clinical experience is enhanced by bringing the students together after meeting with patients to debrief and share their individual experiences in a way to reinforce the clinical learning across the peer group.

Once students develop basic clinical skills, they will move onto clinical experiences that are more complex. Much of this work will happen in their final course, an integrated

practicum during which students spend three full days per week in a clinical setting. During the practicum, students work one on one with nurses and other care providers. The consortium has already introduced this practicum into the nursing programs. In order for nurses to participate in the OCNE model, nurses are educated to serve as Clinical Teaching Associates (CTAs). OCNE hosts a two-day, in person workshop that provides education in ways to teach students, evidence-based practice, and leadership development. To date, OCNE has educated 250 CTAs and will educate a total of 600.

Nursing Education Redesign. The consortium's work relies on redesigning nursing education so that all of the participating programs use a standard set of prerequisites and a common curriculum. Nursing faculty from full partner schools developed and approved a common curriculum plan and agreed on a standard set of prerequisites for nursing programs. Secondly, nursing faculty from full partner schools approved a common curriculum plan (including courses, course titles and descriptions, and credit hour allocation) and academic standards for student admission and progression.

In addition to the development and deployment of a shared curriculum, OCNE is now planning to reform clinical education. (Please see the discussion of clinical education reform in the *Increasing Faculty Capacity* section of this case study, page 26.)

After completing the standard set of prerequisites, a student is admitted to the university or co-admitted to a community college and the university. Students who are co-admitted complete their first two years of education at the community college and transfer to the university for their fourth and final year, during which they can take classes online. So far, half of the fourth year students are taking classes online, but OCNE expects that to increase. The transition from the community college to the university is seamless, with all credits and financial aid transferring with the student.

Flexing Policy and Regulation. OCNE worked closely with the Oregon State Board of Nursing to receive approval for the significant curriculum changes instituted by the consortium partners. Each college or university campus administration also had to approve and accept the OCNE curriculum through regular policy/curriculum processes.

Case Study #2: The MAP-RN Program at Western Governor's University.⁷²

Background. Ten years ago, governors from 19 Western states formed Western Governor's University (WGU) as a new kind of university with the goal of leveraging technology to transform higher education to be more productive and more accessible. WGU provides competency-based education via online delivery tools to enable students to learn at their own pace, while being supported by individual faculty mentors. Rather than having to complete a set number of hours or courses, students are required to master specific competencies, which are developed by an external council of experts and assessed by a series of proctored exams and performance assessments.

In 2007, WGU launched its newest college, the College of Health Professions, with a MBA in Healthcare Management, a M.S. in Health Education, a Master's in Nursing program with two tracks: Education; and Management and Leadership, and an RN to BSN completion program. In addition, WGU has recently initiated the development of an innovative online competency-based program, the Multi-State Approach to the Preparation of Registered Nurses (MAP-RN), a pre-licensure BSN program targeting working adult students. WGU plans to launch the MAP-RN program in early 2010.

Impetus. The goal of the MAP-RN program is to increase the RN workforce by developing a contemporary, high-level baccalaureate entry-level nursing program that will target working adult students.

Creating Strategic Partnerships. WGU has partnered with HCA, Tenet, Kaiser Permanente, Cedars Sinai Medical Center, and Universal Health Systems to develop and implement the MAP-RN program. Each partner will provide some of its own nursing staff to serve as clinical faculty and preceptors. In addition, each partner has committed to provide sufficient clinical time and space to educate MAP-RN students; these clinical rotations will occur in addition to the committed rotations each hospital already provides to other nursing programs.

Initial funding for MAP-RN includes contributions from the Western Governors' University, the State of California, the Robert Wood Johnson Foundation and Tenet Healthcare Corporation with in-kind contributions from HCA, Tenet, Cedars-Sinai, Kaiser Permanente and Universal Health Services for the preceptor and clinical education portion of the program.

WGU will pilot the MAP-RN program in California, where the [California Labor and Workforce Development Agency](#) has joined as a partner in the program, and in a few other targeted states.

Increasing Faculty Capacity and Diversity. WGU employs a much different faculty model of teaching that allows the university to significantly increase faculty productivity. Rather than having faculty develop and teach individual courses, faculty members serve as mentors to students, working in a ratio of one faculty to 60-80 students. WGU finds the best available online courses and acquires the rights to the courses; for the MAP-RN program, WGU will evaluate educational courses developed by hospitals, the VA, and commercial companies in addition to traditional university courses.

Nursing Education Redesign. For the development of the competencies and curriculum, WGU created a MAP-RN Council comprised of nursing experts from educational institutions, practice sites and leadership organizations. The MAP-RN program will draw from existing standards of practice and core competencies developed by national organizations such as AACN, ANA, and professional specialty nursing organizations, while also blending in key competencies identified by hospital partners. A particular area of competency-based focus will be on quality improvement and patient safety.

Courses that are traditionally classroom based will be delivered online. In addition, students will participate in online communities led by content experts (WGU mentors), who will be master's or doctoral-prepared nurses with specialization in a specific content area. During the course of his or her education, each nursing student will participate in six to twelve nursing-specific communities, where the student can actively engage with the content expert and her/his fellow students through threaded discussion groups, live chats and blogs.

In addition, the MAP-RN program plans to take a different approach to clinical education, introducing clinical education in a student's first term of nursing education. The clinical education will be competency-based rather than hours based. Hospital-based nurses serving as adjunct clinical faculty will provide the clinical education. WGU will provide online competency-based education for the adjunct clinical faculty, who will be required to have a master's degree and to demonstrate proficiency with a predefined set of teaching rubrics.

Finally, the MAP-RN program will utilize educational simulation, both in clinical simulation labs and through the use of virtual reality simulation.

Flexing Policy and Regulation. The current WGU nursing programs have applicant status with the Commission on Collegiate Nursing Education (CCNE) and will have the CCNE site visit in November of 2008. As part of the development of the MAP-RN program, WGU will meet CCNE accreditation standards and will work closely with Boards of Nursing in each of the target states to achieve state approval for licensure. As the program is based on competencies rather than hours, effective engagement of accrediting organizations and state Boards of Nursing will be crucial.

WGU has successfully achieved both regional and specialized accreditation for its other online, competency-based programs, including its College of Teaching, which is the only online program accredited by NCATE (National Council for Accreditation of Teacher Education). WGU has secured the ability to license teachers in 49 states.

Case Study #3: VA Nursing Academy’s “Enhancing Academic Partnerships” Program

Background. In order to address nursing shortages in Veteran’s Administration (VA) health care facilities and throughout the nation, the Department of Veteran’s Affairs established the VA Nursing Academy as a five-year pilot program in 2007.

Impetus. The VA Nursing Academy will aim to alleviate the nursing shortage by “expanding faculty and professional development, increasing student enrollment, providing opportunities for educational and practice innovations, and increasing recruitment and retention of VA nurses as a result of enhanced roles in nursing education.”

Creating Strategic Partnerships. In June 2007, the VA Nursing Academy selected its first four academic partnerships through a request for proposals and competitive review process. The first four academic partners are North Florida/South Georgia Veterans Health System in Gainesville and the University of Florida; George E. Wahlen VA Medical Center in Salt Lake City and the University of Utah; VA San Diego Health Care System and San Diego State University; and VA Connecticut Healthcare System at West Haven and Fairfield University. The VA Nursing Academy will select eight additional VA-nursing school partnerships, four to begin in the Summer of 2008 and four to begin in the Summer of 2009.

For each partnership, the VA funds 3 FTE VA-based faculty and 2 FTE school-based faculty for the first and final years of the partnership (and 6 FTE VA-based faculty and 4 FTE school-based faculty for the intervening years). Each school commits to increasing its student enrollment in the baccalaureate degree programs by 20 students for each five faculty funded by the VA Nursing Academy.

Increasing Faculty Capacity and Diversity. In addition to the VA’s funding of additional faculty for partner schools, qualified VA nurses are appointed to faculty positions at the partner schools where they teach classes as well as provide clinical supervision at the VA facility. The VA nurses assigned to the VA Nursing Academy are relieved of their usual duties while assuming Nursing Academy roles and responsibilities.

The schools in the partnerships are required to provide courses and/or other educational opportunities, as appropriate, for VA nurses who receive faculty appointments to enable them to successfully assume faculty roles and responsibilities, keeping in mind that some VA-based faculty may have prior knowledge and skills in this area. At the San Diego partnership, the school offers scholarship funding to VA faculty to attend four graduate nursing education courses for which the faculty earn a post-master’s certificate in nursing education. In addition, the school offers a faculty seminar series to help develop educational competencies of faculty who are not able to attend the graduate courses. At the Salt Lake City partnership, the faculty development program includes an option for VA nurses to enroll in the master’s degree program in nursing education. At the Connecticut partnership, the faculty attend the university’s Center for Academic Excellence to develop faculty expertise.

Nursing Education Redesign. The partnerships have enabled the VA facilities and schools to design new and enhance existing nursing programs and learning opportunities.

The Florida partnership has developed a one-year Graduate Nurse Residency Program for recent graduates of associate and baccalaureate degree programs. The nurse residents rotate through four clinical areas for three months each, including a home unit rotation. The residents who have associate degrees will generally be able to complete their baccalaureate degrees at the University of Florida while in the residency program. The residents who have baccalaureate degrees can enroll in the Clinical Nurse Leader or other programs within the graduate school. The Florida partnership is emphasizing evidence-based practice in both the clinical and academic settings.

The Florida partnership will offer a new Peri-operative Clinical Preparation Program in the summer of 2008. This program is expected to significantly increase career interest in this important area of nursing that is experiencing severe staff shortages, partly due to the limited clinical opportunities in the academic programs.

At the Connecticut partnership, the students in the 15-month accelerated baccalaureate degree program for second-degree students receive most of their clinical experiences at VA except for maternal-child nursing. Students are assigned a “Home Unit” and a mentor, although they participate in rotations to other units in the facility. Students are able to attend any educational offering at VA. The partnership also includes a focus on enhancing the students’ understanding of veteran specific care needs and inter-professional learning at VA in areas such as pain management, case management, and geriatric consultation.

At the San Diego partnership, each nursing student is assigned a staff mentor and a “Home Unit” for the duration of her/his education. Twenty students have already been assigned a nurse mentor, and the students are attending staff meetings on their home units with their mentors. Through its partnership with VA, San Diego State University offers baccalaureate nursing students a comprehensive immersion program during their senior year. The curriculum includes inter-professional learning opportunities and the use of simulation to apply nursing education content to specific scenarios.

The Salt Lake City partnership will be recruiting an Associate Chief, Nursing Service for Research who will have a joint appointment between the VA facility and the college of nursing. Beginning in the second year after the position is filled, one new clinician-research team will be supported each year to engage in Evidence Based Practice projects.

Flexing Policy and Regulation. There are many policy and regulatory requirements when developing and implementing programs with Federal government agencies like VA. For this program, the Under Secretary for Health, with approval of the Deputy VA Secretary, authorized the use of Congressionally appropriated funds for this program after consultation with the Office of the General Counsel (OGC). Intergovernmental Personnel Act Agreements are being used to enable VA to pay for school-based faculty who participate in the program and for VA employees who are assigned faculty responsibilities away from the VA facility.

Case Study #4: Dedicated Education Unit (DEU)

Background. The Flinders University of South Australia School of Nursing initially developed the concept of the Dedicated Education Unit (DEU).⁷³ The University of Portland and its clinical partners adapted the concept and implemented the first DEU in 2003. Currently, the University of Portland, Oregon operates DEUs on five medical/surgical units and one psychiatric unit.

Impetus. The Dedicated Education Unit was developed in order to educate more nursing students efficiently and effectively.

Creating Strategic Partnerships. The University of Portland developed and implemented the DEU in partnership with the Providence Portland Medical Center, Providence St. Vincent Medical Center and the Portland VA Medical Center. The hospital partners provide space and staff nurses to serve as Clinical Instructors for the Dedicated Education Units.

Increasing Faculty Capacity and Redesigning Nursing Education. The DEU model leverages staff nurses to provide clinical education to nursing students. DEU nurses serve either as clinical instructors (BSN-educated nurses) or clinical teachers (ADN-educated nurses). Clinical instructors and teachers are required to complete a preceptor program taught by Providence Health System or Portland VA Medical Center.

In addition, clinical instructors and teachers as well as DEU nurse managers and charge nurses attend a one-day workshop DEU orientation workshop at the University of Portland. The workshop provides an overview of the DEU concept and model of clinical instruction and provides instruction on teaching and learning principles and clinical reasoning tools. UP provides attendees with an information packet, which includes clinical course syllabi, clinical expectations and evaluation forms, the DEU concept paper, and a clinical teaching handbook.

On the DEU, two students are assigned to work with the same clinical instructor for the duration of the rotation (typically six weeks). The DEUs are used for students only from the University of Portland.

Faculty from the University of Portland serve as Clinical Faculty Coordinators (CFCs), who are available onsite at the hospital (or electronically) to coach and support staff nurses on the DEU. The CFCs grade all student work and have the ultimate responsibility for student evaluation; however, the CFC collaborates with the DEU nurses in developing their evaluations.

Flexing Policy and Regulation. The State Board of Nursing in Oregon allows nursing schools to appoint staff nurses as Clinical Instructors as long as the staff nurses hold a BSN and have two years of clinical experience.⁷⁴ Following completion of the UP workshop on DEUs, UP submits the credentials of BSN-prepared DEU nurses to the State Board in order to facilitate their designation as clinical instructors. Both CIs and CTs can achieve adjunct faculty status at UP.

Results to Date. An initial evaluation of the impact of the DEU estimated a sizable savings in clinical faculty and sites needed to educate students. Prior to the DEU, in 2002, 227 UP students had clinical experiences on 14 medical-surgical units. Following implementation of the DEU, in 2006, 333 students completed their clinical medical-surgical experiences in 6 DEUs. Based on this information, the investigators estimated that the traditional clinical education model would have required 25 med-surg units and 14 to 15 clinical faculty to provide the education these students received in the 6 DEUs.

In addition, this evaluation found that staff nurses enjoyed the role of Clinical Instructor. Nursing student surveys indicated statistically significant differences between students on DEU compared to traditional clinical rotation for six items, including “nurses were my teachers” and “I was a member of the nursing unit responsible to nursing staff and health team.”

VI. THE CALL TO ACTION: MOVING FROM PROBLEM TO IDEA TO IMPLEMENTATION

This paper has only provided a sampling of programs and ideas, which have begun to tackle the issue of limited nursing education capacity. There are many other innovative programs across the nation addressing the capacity issue and reforming nursing education programs.

The purpose of this paper is to provide a concise but comprehensive understanding of the complexity of nursing education capacity and to inform Summit participants of pioneering solutions currently in development across the nation. The paper is designed to stimulate innovative thinking and help multi-stakeholder teams develop and implement creative solutions to the challenge of insufficient nursing education capacity

What became clear during the research is that many of the most effective solutions share common elements of how they mobilized their ideas and organized to accomplish their goals.

- **Span boundaries for new partners.** The nature and magnitude of the problem of limited nursing school capacity merits a multi-stakeholder collaborative effort. A nursing shortage affects a wide range of organizations and individuals: from service providers to the government to the educational community to employers to purchasers of health care, and especially patients. Consumers of health care are Nursing's most natural and powerful advocates and should be actively engaged in designing solutions. As a result, effective solutions will require and benefit from the involvement of many different players. Nursing must lead the effort but cannot accomplish the goal in isolation. Harnessing the power of multiple constituencies and organizations is essential to sustainable results. And casting a broad net to embrace and include more than "the usual suspects" should be a primary focus. By bringing together organizations with shared interests and working to identify common goals and action steps, each organization can contribute its unique resources in a way that both advances its organizational goals and the broader goals of the partnership.
- **No need to start from scratch.** Many leaders are more than willing to share their ideas and learning. Many of the sponsors of ideas presented in this paper have developed websites to help others learn from their efforts and adopt and adapt their approaches to nursing education.
- **Align capital investment in change.** Many of the initiatives described have benefited from financial support from foundations, government agencies, workforce investment boards, hospital systems, and/or other health care industry players. However, if investments are simply underwriting the traditional paradigm or lost to competitive purposes, real and lasting creative change will be elusive. Stakeholders must ensure that activity and investment are aligned and leveraged and by a common vision of change. Corporate America has a vested interest in economic development in their communities and the health of their employees. Now is the time to seek their involvement.

- **Track and share your results.** In order to objectively assess whether your programs work, it is important that you build data measurement and review into your implementation plans. And keep the innovation wheel rolling, by publicly sharing your ideas, programs, and projects so that other regions can learn from your experiences.

As leaders from around the country work to address the problem of increasing nursing education capacity, they should acknowledge the dynamic tension that exists between the need to graduate highly competent nurses and the demand for producing more nurses more efficiently utilizing the existing system of nursing education. The potential that can be realized by redesigning the current system of nursing education to create more nurses who are better-equipped to deliver care in today's rapidly changing health care system is a "call to action" that the Summit is perfectly poised to answer. Given the impending nursing shortage (and current shortage in some markets), many creative combinations of solutions are likely to be needed in both the short and long term.

But nursing leaders should not miss the opportunity presented by the fundamental challenge of the current nursing shortage to rethink how nurses are and should be educated. The window for transformation in nursing education is open, and the future of nursing in America may well depend on the actions of today's leaders. Who will step forward and join forces to take the bold steps to chart Nursing's future?

Contributors

The authors would like to thank these individuals who contributed to this report. Their participation does not imply endorsement of the findings or conclusions of this paper.

Kathy Apple, National Council of State Boards of Nursing.
Andrea Aughenbaugh, New Jersey State Nurses Association/Institute for Nursing.
Geraldine Bednash, American Association of Colleges of Nursing.
Hattie Bessent, W. K. Kellogg Foundation, Michigan.
Billy Bevill, North Carolina Center for Nursing.
George Bo-Linn, Gordon and Betty Moore Foundation, California.
Geri Dickson, New Jersey Collaborating Center for Nursing.
Jan Boller, California Institute for Nursing and Health Care.
Linda Burnes Bolton, Cedars Sinai Medical Center, California.
Shirley Chater, Robert Wood Johnson Executive Nurse Fellows Program, California.
Brenda Cleary, Center to Champion Nursing in America, AARP, Washington D.C.
Linda R. Cronenwett, University of North Carolina at Chapel Hill.
Karen Elzey, U.S. Chamber of Commerce.
Susan Hassmiller, Robert Wood Johnson Foundation, New Jersey.
Pamela Ironside, Indiana University.
Bonnie Jerome-D'Emilia, University of Virginia.
Linda Johnson, U.S. Department of Veterans Affairs.
Deloras Jones, California Institute for Nursing & Health Care.
Jan Jones-Schenk, Western Governors University.
Kathy Kaufman, National League for Nursing.
Gina King, U.S. Department of Labor, Employment and Training Administration.
Christine Kovner, New York University.
Maryjoan Ladden, Harvard Medical School, Massachusetts.
Kathleen Ann Long, University of Florida.
Tara Lubin, National Council of State Legislatures.
Richard MacIntyre, Samuel Merritt College, California.
Mary E. Mancini, The University of Texas at Arlington.
Robert W. Mendenhall, Western Governors University.
Ed O'Neil, University of California, San Francisco.
Barbara Nichols, The Commission on Graduates of Foreign Nursing Schools.
Stephanie Ramirez, Gordon and Betty Moore Foundation, California.
Susan Reinhard, Public Policy Institute, AARP, Washington D.C.
Cathy Rick, U.S. Department of Veterans Affairs, Washington, DC.
Fran Roberts, Grand Canyon University, Arizona.
Robert Rosseter, American Association of Colleges of Nursing.
Marybeth Sharpe, Gordon and Betty Moore Foundation, California.
Pat Stanley, Office of Vocational and Adult Education, U.S. Department of Education.
Jane Swanson, Cedars Sinai Medical Center, California.
Christine Tanner, Oregon Health & Science University.
Cynthia Teel, University of Kansas.
Linda Thompson Adams, Oakland University School of Nursing, Michigan.
Terry Valiga, National League for Nursing.
Stacy Walder, Gordon and Betty Moore Foundation, California.
Judith Woodruff, Northwest Health Foundation.

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