Current and Future State of the US Nursing Workforce

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Despite a recent strengthening of the registered nurse (RN) workforce, the US health care delivery system needs to prepare for an aging population of RNs and a coming wave of retirements. Over the next 20 years, the average age of RNs will increase, and the size of the workforce will plateau as large numbers of RNs retire. Because the demand for RNs is expected to increase steadily during this same period, a large and prolonged shortage of RNs is expected to develop in the latter half of the next decade, threatening access and quality and increasing health care costs. The question looming over the nursing profession, employers, nursing educators, physicians, other health professionals, and health care policy makers is what can be done to mitigate these developments.

Recent Strengthening in the Nursing Workforce

Recent changes have invigorated the nursing workforce compared with conditions that prevailed during the 1990s, a decade marked by a substantial slowdown in employment growth, falling earnings, deteriorating hospital working conditions, increasing concerns about the quality of care, declining enrollments into nursing education programs, and 2 different hospital nursing shortages. Currently, the shortage that began in 1998 is finally easing in many areas of the country due to the increase in total full-time equivalent (FTE) RN employment from 2 million in 2001 to 2.35 million in 2007, with 63% (229,000 RNs) of this increase occurring in hospitals. According to calculations of data from the Current Population Survey, Bureau of Labor Statistics, this growth was spurred by increases in RN earnings in 4 of the past 6 years. In addition, the post–September 11 economic recession and the current economic downturn stimulated many RNs to reenter the workforce. However, nearly all of this employment increase was supplied by older RNs and non–US-born RNs, the 2 most rapidly increasing components of the RN workforce.

Beyond these impressive employment gains, the nursing workforce has been strengthened by a deepening understanding among influential thought leaders and quality organizations that achieving higher quality health care delivery systems cannot be accomplished without an adequately sized and well-prepared nursing workforce. This awareness resulted from increasing evidence linking hospital nurse staffing to patient outcomes and by the concurrent emergence of efforts to improve quality and safety. Within the past few years, nursing quality measures have been endorsed by the National Quality Forum, The Joint Commission (formerly JCAHO), Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. The increasing importance of nurse-sensitive performance measures adds to the business case encouraging more effective use and retention of nurses.

The hospital workplace also has improved. Data from biennial national RN surveys conducted since 2002 reveal improvements in overtime hours, job and career satisfaction, management’s recognition of nurses’ personal and family responsibilities, and opportunities for nursing to influence the organization of health care delivery and decisions affecting patient care. These improvements have been reinforced by the increase in the number of hospitals in the Magnet Hospital Recognition Program (American Nurses Credentialing Center) in which organizations are reviewed against numerous criteria to identify excellence in nursing practice and patient care. Currently, 293 hospitals have received the designation of the Magnet program, an increase from 51 in 2001 (J. Moran, Assistant Director, Magnet operations for the American Nurses Credentialing Center, oral communication, August 19, 2008).

Foundations and private sector initiatives have also invigorated the nursing workforce by providing substantial resources to test initiatives aimed at improving the workplace, to conduct studies on the quality of nursing care, and to support nursing education. Leading examples include the Robert Wood Johnson Foundation’s Transforming Care at the Bedside and its Interdisciplinary Nursing Quality Research Initiative and the Gordon and Betty Moore Foundation’s $100 million commitment to establish the Betty Irene Moore School of Nursing. In 2002, Johnson & Johnson launched the Campaign for Nursing’s Future that has spent more than $50 million to increase public awareness about...
the current and projected nursing shortage, to convey positive images of nurses in nationwide television advertisements, and to raise funds for student and faculty grants and scholarships that to date total more than $14 million (A. Higham, Director of Corporate Equity, Johnson & Johnson, oral communication, August 20, 2008).

Although these developments have strengthened the current nursing workforce, the nursing profession and others concerned with the health care delivery system face formidable challenges in overcoming the implications of ominous workforce projections.

**Projections of the Future Age and Size of the Nursing Workforce**

In the 1960s and 1970s, when large numbers of women born in the baby boom generation entered their 20s, many chose to become RNs. In ensuing decades, fewer women were born relative to those born in the baby boom generation, resulting in a decline in the size of the population aged 20 to 29 years from which nursing education programs traditionally attracted students. Societal changes also opened up a greater number of career opportunities for women, further reducing the propensity of young women to become RNs during the 1980s and 1990s. Consequently, the average age of the RN workforce has increased as the baby boom generation of RNs has aged over time, and fewer younger RNs have entered the workforce.

By 2006, the average age of the RN workforce had increased to 43.7 years, and the largest age group was composed of RNs in their 40s. Latest projections suggest that the average age of RNs will reach 44.5 years in 2012, and RNs in their 50s will be the largest age group in the workforce, numbering approximately 750,000. Even though the demand for RNs is expected to increase at a rate of 2% to 3% per year over the next 20 years, the number of RNs is projected to increase very little as large numbers of RNs retire. A deficit in the number of RNs, relative to their expected demand, will begin around 2015, will increase to an estimated 285,000 FTE RNs by 2020 (nearly 3 times larger than any deficit experienced in the United States over the past 30 years), and is projected to expand to 500,000 FTE RNs by 2025.

**Preparing for the Future**

Hospitals, still the major employer of RNs, and other health care delivery organizations are likely to respond to the future nursing shortage using familiar strategies (eg, giving sign-on bonuses, enriching benefits, offering flexible schedules), but given the size of the projected shortage, it will take years before the nurse labor market adjusts and reaches a new equilibrium level that will end the shortage. During this period of adjustment, the RN workforce will become older, the number of internationally educated RNs working in the United States will expand, and as real RN earnings increase to counter the increasing shortage, some hospitals will substitute lower-wage licensed practical nurses or nursing assistants for RNs. For patients, the large and prolonged shortage has the potential to delay receiving care and an increased risk of experiencing adverse outcomes. Mitigating these expected consequences is possible if health care organizations implement actions in 3 areas: use the current workforce more efficiently; retain older RNs; and expand the size of the future RN workforce.

At a microlevel, efficiency gains are possible by reengineering nursing processes and improving documentation, medication administration systems, and care coordination. Reconfiguring the physical workspace to reduce time spent searching for supplies and equipment results in RNs spending more time providing direct patient care, monitoring potential complications, and intervening as needed. At a systems level, hospitals can reduce the variability in patient census, which is driven mainly by elective rather than emergency admissions and therefore can be controlled. Reducing variability in patient flow can decrease the peaks and valleys in patient demand and thus can reduce stress on nurses, decrease waste and inefficiency, reduce the chance of postponed admissions even in the presence of nursing shortages, and increase the reliability of microlevel efforts intended to improve quality and safety.

Efforts to retain older RNs are needed to ensure that enough experienced RNs are available in the future to mentor younger nurses. The years of nursing knowledge and clinical skills possessed by older RNs can also help to offset the increased risk of adverse patient outcomes as future RN shortages increase and persist. However, older RNs are more susceptible to musculoskeletal injuries and require a longer time to recuperate when injured. Improving the ergonomic environment of nursing units has been shown to decrease injury, improve job satisfaction, lower costs, and reduce the number of days that RNs limit their activity due to injury, all of which may contribute to delaying the withdrawal of many older RNs from the workforce.

To expand the long-run supply of RNs, policy makers can support efforts to remove entry barriers into the nursing workforce. Every year since 2001, nursing education programs have turned away many thousands of qualified applicants due to capacity constraints associated with shortages of faculty, classroom space, and clinical education sites. Notwithstanding, the summit convened by the AARP (formerly the American Association of Retired Persons), the Robert Wood Johnson Foundation, and the US Department of Labor to address these capacity constraints, or numerous collaborative initiatives of hospitals, foundations, citizens, corporations, and certain states to graduate more RNs, these efforts are unlikely to close the expected long-run deficit.

Because an adequate supply of RNs is essential to ensure patient access to care, a case can be made that the nursing workforce is a national social good; hence, public dollars may be well spent to expand educational capacity through grants to students and capitation grants to schools.

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The underrepresentation of men and Hispanics in nursing is another entry barrier to overcome. Of the estimated 2.24 million RNs in the nursing workforce in 2006, 200,000 were men (8%) and 100,000 (4%) were estimated to be Hispanic. Even though the proportion of the RN workforce that was male or Hispanic has approximately doubled since 1983, both groups continue to be underrepresented relative to their presence in the population (49% men and 15% Hispanic) or in the national workforce (54% men and 14% Hispanic). In contrast, African Americans were underrepresented in the nursing workforce in the 1980s, but they now account for approximately 11% of the RN workforce, which is equal to their proportion in the overall workforce. Since men and Hispanics together comprise more than half of the working age population, if both groups were to begin entering nursing education programs at the same rate as white women, the future size of the RN workforce would increase substantially. It is unlikely that white women will ever enter the nursing profession to the same extent as those who were born during the baby boom generation; therefore, a vigorous strategy to eliminate the barriers preventing men and Hispanics from becoming nurses, such as social stigma attached to the nursing profession and lack of mentors and role models, is perhaps the most important opportunity to increase the long-run supply of RNs.14

Ensuring an adequate supply of RNs is essential to any health care delivery system. Looking ahead, the implications of demographic and social forces driving the age and future size of the RN workforce will be difficult to reverse. But by the efforts of organizations to increase the number of RNs in the workforce, this shortage can be solved in the future. What is needed most is for the problems facing the nursing profession to rise higher onto the nation’s health policy agenda so that effective actions can be implemented sooner rather than later.

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