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*The
health care
worker
shortage*

Suggested
responses
from the
surgical
community

With the dawn of a new century, the shortage of health care workers emerged as an international problem. Unlike previous cyclical shortages of American nurses, this shortage includes almost all health care workers and is predicted to have worldwide effects and a prolonged duration.

Why is there a shortage? How likely are we to see the problem continue? What is the impact on the overall health care delivery system?

The factors contributing to the health care worker shortage are multifaceted and include, but are not limited to, the following:

- The supply of health care workers is not keeping pace with the population growth and the aging of Americans.
- The number of people selecting health care as a career has decreased, and, therefore, new entrants to the field are not keeping pace with retirees and the increasing demand for health care workers.
- Minority racial/ethnic groups are underrepresented among nurses and other health care workers.
- The dramatic changes in health care over the past decade have altered the roles and responsibilities of the registered nurse.
- Employers are having difficulty filling registered nurse vacancies while reducing overall expenses by decreasing clinical and operational sup-

port staff. As a result, an increased burden is placed on registered nurses.

In this article, we describe the current health care worker pool, identify factors contributing to the shortage, and recommend effective strategies that surgeons working with nurses can employ to deal with this dilemma.

The problem

A comprehensive review of the health care labor force across the country has found that the number of health care workers is declining. The Bureau of Labor tells us that the demand for health care professionals is predicted to grow 24.6 percent by the year 2010.¹ At the same time, society's demand for health care services is increasing (see Table 1, this page).² Over the long term, health care researchers and administrators predict a worsening scenario. While the shortage of health care workers includes several role groups, nursing faces the greatest challenge. Why? Simply put, the average age of nurses has increased substantially and the number of nurses being educated is not keeping pace with the increased demand for nursing care.

Registered nurses (RNs) currently comprise the largest segment of health care professionals in the U.S. Today's nursing shortage is very different from those experienced in the past, and the actual breadth of the nursing shortage is difficult to quantify (see Table 2, this page).³ Nursing and health policy researchers have identified that the main factor that has led to the aging of the RN workforce appears to be the decline during the last two decades in younger women choosing nursing as a career. It is predicted that unless this trend is reversed, the RN workforce will continue to age and eventually shrink to the point where it will not meet projected long-term workforce requirements.

Indeed, one of the most critical problems facing nursing is the aging of practitioners and faculty. An estimated 2.7 million RNs are licensed in the U.S., with 82 percent actively working in the profession. The average age of registered nurses is 45.2 years. RNs who are less than 30 years old represent only 10 percent of the total working population. According to a survey conducted by the American Association of Colleges of Nursing (AACN), the average age of nursing school associate professors and assistant professors are 52 and

Table 1

Society's demand for health care²

- U.S. population is increasing at 1 percent per year.
- Population is rapidly aging:
 - People ages 85 and over will double from 3.5 million today to 7 million in 2020.
- Societal issues will increase demand:
 - Rise in antibiotic-resistant infections
 - Spread of air- and waterborne diseases
 - Rising drug abuse
 - Higher highway speed limits
 - Increased alcoholism
- Innovations in diagnostic, treatment, and monitoring technologies will increase demand.
- As personal income rises, more health care is consumed.
- As demand for health care increases, so, too, will the demand for personal care services provided by health organizations that employ nursing personnel.

Source: Harvard Nursing Research Institute, 1998.²

Table 2

National sample survey of RNs 2000³

- 2.7 million licensed nurses, up 5.4 percent from 1996 (U.S. population increased 13% in that same period); but number of nurses working in hospital settings increased only by 81.8 percent of licensed nurses are employed in nursing.
- 42.9 percent of licensed registered nurses hold a baccalaureate, masters, or doctorate as highest degree.
- Average age of RN is 45.2 years; average age of RNs working in nursing is 43.3 years, up from 42.3 years in 1996.
- Men constitute 5.9 percent of RN population, up from 5.4 percent in 1996.
- 12.3 percent of RN population reported being in one or more racial and ethnic minority group, up from 10.3 percent in 1996.

Source: Division of Nursing, Bureau of Health Professions, Health Resources and Services Administration.³

Table 3

Key constructs for nurse satisfaction

RN-MD relations—Establish good relations with physicians that facilitate exchange of important clinical information.

- Physicians and nurses have good relationships.
- A lot of teamwork between nurses and physicians.

Control of practice setting—Exert control over the practice setting to focus resources as required for good patient care.

- Adequate support services allow nurses to spend time with patients.
- Enough time and opportunity to discuss patient care problems with other nurses.
- Enough registered nurses on staff to provide quality patient care.
- A nurse manager who is a good manager and leader.
- Enough staff to get the work done.
- Opportunity to work on a highly specialized patient care unit.
- Patient care assignments that foster continuity of care, that is, the same nurse cares for the patient from one day to the next.

Autonomy—Exercise professional judgment in a timely fashion. A supervisory staff that is supportive of the nurses.

- Nursing controls its own practice.
- Freedom to make important patient care and work decisions.
- Not being placed in a position of having to do things that are against the nurse’s judgment.
- A nurse manager/supervisor who backs up the nursing staff in decision making, even if the conflict is with a physician.

Source: *American Journal of Nursing*.¹⁰

49, respectively. The shrinking pool of nursing faculty will affect the ability of nursing schools to educate sufficient numbers of registered nurses to meet future demand.⁴

A 2000 American Hospital Association survey found that most U.S. hospitals are currently managing the situation well, with 75 percent of hospitals reporting vacancies being filled in one to three

months. Demand for registered nurses is predicted to outstrip supply by 2010. However, the same survey indicates a shift to new graduate nurses being hired to fill positions. A sample of the RN workforce describes a dramatic shift between 1990 and 2000:

- 1990: 90 percent experienced nurses, 10 percent new graduates.
- 2000: 50 percent experienced nurses, 50 percent new graduates.

It is important to note that the motivations for young and future workers are different from those of years past. Generation X employees have cited an attraction to working in environments that are service-oriented, nonhierarchical, flexible, welcoming, ethnically diverse, and committed to retraining. In addition, they say it is extremely important to them that the workplace function as a “community.”⁵

In addition, the infrastructure required to facilitate a new graduate nurse’s transition from academia to practice is different today. It requires a commitment of additional time, experience, and, most importantly, coaching and mentoring. Studies have found that each new nurse’s tenure follows a typical learning curve as they acquire competence.⁶ They further cite that a critical juncture in the nurse’s tenure occurs at approximately the 12-month point, when there is an especially great need to support the nurse. The traditional approach to orientation of new hires and new graduates lasting only eight to 12 weeks is no longer adequate.

Jobs for specialty nurses are more difficult to fill. A survey conducted by the American Organization of Nurse Executives in 1998 cites the following data:⁷

Average days taken to fill nursing position vacancies

New graduates:	20 days
Experienced nurses:	45 days
Critical care and operating room nurses:	90 days
Nurse managers and clinical nurses:	90 days

Institutions have identified the need to produce their own specialty and critical care nurses in addition to recruiting nurses with experience in these areas. Mental models about selecting and remain-

ing in one area of practice within nursing are being challenged. Nurses are encouraged to think of their work as a career. To retain nurses, support needs to be provided to nurses to translate their core nursing skills into other practice areas through continuing education and certification programs.⁸

In addition, to address leadership and management vacancies, leadership development programs have reemerged with a twofold focus. Specifically, this approach entails ensuring that today's leaders have the right skills and tools to meet the demands of today's dynamic health care arena and that tomorrow's leaders are being identified and groomed.⁹

A decade or more of research about the factors that contribute to nurse satisfaction have consistently revealed that nurses place a very high value on their work environment, including the degree of respect they receive from their managers, peers, and other members of the multidisciplinary team, particularly physicians. Addressing such concerns is far more difficult than, say, improving pay or benefits because the solutions require sustained systemic changes, at times with individuals or groups who do not share the same values or understand their importance. Because the supply solutions are long term, the efforts to retain the nurses who are currently in the workplace should become the focus of everyone who has a stake in health care.

The attributes of a professional practice environment include the ability of the nurse to establish therapeutic nurse-patient relationships, autonomy

and control, and collaborative nurse-physician relationships at the unit level.^{10,11} Creating an ongoing mechanism to measure nurse satisfaction is more important than ever. In Table 3 (p. 15), three constructs provide an overview of satisfiers for retention of registered nurses.¹² With recruitment into the profession at an all-time low, retention of this treasured resource is key to the survival of the American health care system.

The solutions

The data indicate that there are few quick fixes to the problem, and attracting more women and men into nursing programs will take years, if not decades. Former approaches to resolving the nursing shortage will not work. International recruitment, which relieved the pressure on the demand side seven years ago, no longer exists as a viable solution. This shortage is global; former areas of international recruitment face their own scarcity of nurses.¹³ In addition, simply increasing the number of training programs or raising wages will not address the problems. A fundamental realignment of the health care system is needed.

More specifically, a multifaceted approach is required to mitigate the nursing and workforce shortage. Steps in this process include the following:

1. Increase supply through recruitment and the development of a pipeline.
2. Improve the environment of care where nurses work.
3. Increase the value and image of nursing in the health care system.
4. Compensate and/or reward nurses in new ways.
5. Create new regulatory standards.
6. Strengthen the support that nurses receive from the multidisciplinary team.

Call to action

Nurses cannot address this issue alone. The complexity of this shortage requires a call to action to legislative leaders, to community leaders, to physicians, and to other health care leaders. There is no single solution, and no one group can cure this problem alone.

For its part, the American College of Surgeons could collectively and individually support the national effort to avert this health care crisis by di-



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rectly and indirectly acting on each of the six mandates mentioned previously. By collaborating with nurses, other health care team members, patients, organizations, and the communities we serve, the American College of Surgeons is positioned to help shape the strategic plan necessary to make a positive impact on the worsening nursing shortage scenario. Suggested action steps include:

1. *Educate the membership about the nursing shortage.* This article is just an initial step toward increasing the awareness of the American College of Surgeons' membership about the nursing shortage. It is important that surgeons understand the factors driving this shortage. It is a supply problem, with no quick fixes and no end in sight; we cannot afford to lose any nurses. There may be nothing more serious than the nurses' dissatisfaction with their work environment. It relates to both retention and recruitment; satisfied nurses are the best recruiters.

2. *Launch a campaign for nurse-surgeon partnerships.* Strong, collaborative relationships between nurses and surgeons are leading satisfiers for nurses working in the perioperative and surgical settings. Surgeons must create best practices for working with nurse executives, nurse managers, and staff nurses to establish an atmosphere of collaboration and respect. An example of a best practice is initiating an award system based on preestablished criteria for MD-RN teams who best exemplify nurse-physician collaboration. Creating mechanisms for managing disruptive behavior in the OR is another illustration. Lastly, given the growing infusion of new graduate nurses into the profession, what role can surgeons play in facilitating their transition into practice?

3. *Support the creation of a professional practice environment.* It is important to shift the frame of reference of nursing from an "expense" to an "asset." To do so, it takes the teamwork of administrators, nurses, physicians, and other members of the health care team to create an environment in which clinical nurses feel supported and valued in their practice. Surgeons must collaborate with nurses to create and modify effective models of care delivery. Work should be redesigned to promote nurses' autonomy and control over their practice. Support for safety initiatives and technology that enable the work of nurses and minimize errors is imperative. Working conditions must appeal to

both Generation Xers and aging Baby Boomers. Most importantly, surgeons must seek out and reflect upon the results of nurse satisfaction surveys in their respective institutions and identify and implement strategies that address the dissatisfiers and reinforce the satisfiers.

4. *Influence health care career decision making and sponsor scholarships for surgical nurses.* Educators say that children often make up their minds about their careers by the fifth grade. Toward that end, it is critical that surgeons and nurses seize opportunities to influence career decision making of young men and women about the profession of nursing. Successful strategies include initiatives such as adopting middle schools in local communities and talking to students about health care professions. Creating and offering scholarships to boys and girls who agree to major in surgical or operating room nursing results in a pipeline of nurses in the surgical practice arena. Other strategies include initiating funds in local hospitals to underwrite the cost of certification for some nurses pursuing certification in surgical, perioperative, or certified registered nurse first assist (CRNFA) programs.

5. *Support the CRNFA strategy.* Operating room nurses are among the most difficult specialty of nurses to recruit. On average, it takes 90 days to recruit an OR nurse. The CRNFA strategy provides an additional step on the career path for experienced OR nurses who enjoy direct patient care yet seek a challenge to advance their skills and role. It may prevent even a small number of experienced nurses from leaving nursing. The presence of a senior CRNFA with advanced skills in the OR can

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help to retain OR nurses through education and professional development support. CRNFAs can function as needed as interpreters/mediators between surgeons and nurses during procedures to enhance effective communication and care. In areas where surgical residents are in short supply, CRNFAs can enhance the ability to maximize OR time and volume.

6. *Influence health care workforce legislation.* Surgeons armed with the facts and potential solutions for addressing the nursing shortage are poised to influence local and national health care workforce-related legislation. As health care leaders, surgeons and nurses should invite local and national legislators to tour/meet with them to learn about the health care issues firsthand. Once these relationships are established, you are then positioned to partner with legislators to draft and edit legislation. In addition, writing letters of support and/or providing testimony to promote legislation are visible ways of getting involved.

The road ahead

On February 25, 2001, a front-page headline of the *Boston Globe* read, "Needed: RNs to aid ailing profession."¹⁴ The profession is not ailing—the overall health care system is. Nursing is critical to its redefinition and survival.

The retention and recruitment of registered nurses needs to be a shared priority. We need long-term strategies that demonstrate to nurses that they are valued and that help position nursing to capture the interest of a new generation and retain the clinical intelligence of experienced nurses.

The ability of our health care delivery system to meet its future workforce needs is being determined right now. Tomorrow's patients are at the mercy of the decisions and actions we take today. 

References

1. Hecker DE: Occupational employment projections to 2010. *Monthly Labor Rev* (Bureau of Labor Statistics), November 2001, 57-84.
2. Buerhaus P: *Is Another Nursing Shortage Looming?* Boston, MA: Harvard Nursing Research Institute, 1998.
3. Health Resources and Services Administration: *Report of the National Sample Survey of Registered Nurses* (NSSRN 2000). Rockville, MD: Division of Nursing, Bureau of Health Professions, HRSA, 2000.
4. American Nurses Association: *Strategies to Reverse the New Nursing Shortage, A Policy Statement from Tri-Council Members.* American Association of Colleges of Nursing, ANA, American Organization of Nurse Executives, and National League for Nursing. Web site: www.aone.org/news/tricouncil_shortage%20strategies.htm.
5. O'Neil E: From the director: Health care's impending war. The Center for the Health Professions Web site: futurehealth.ucsf.edu, November 11, 2001.
6. Blanchard K: *The Difficult Transition to Hospital Nursing. Reversing the Flight of Talent.* Washington, DC: Nursing Executive Center, The Advisory Board Company, 2000.
7. *Research on Nursing Staff Shortages* (statement). American Organization of Nurse Executives Institute for Patient Care Research and Education. Washington, DC: AONE, November 1998, 14-21.
8. Massachusetts General Hospital: The Northeastern/Massachusetts General Hospital Perioperative Certificate Program: Recent graduates talk about the program. *Caring Headlines*, MGH, November 2, 2001, p. 11.
9. Kouzes J, Posner B, Peters T: *The Leadership Challenge.* San Francisco, CA: Jossey-Bass, Inc., 1995.
10. Aiken L, Havens D, Sloane D: The magnet nursing services recognition program. *Am J Nursing*, 100(3):26-36, 2000.
11. Scott JG, Sochalski J, Aiken L: Review of magnet hospital research: Findings and implications for professional nursing practice. *J Nursing Admin*, 29(1):9-19, 1999.
12. Aiken L, Sochalski J, Lake E: Studying outcomes of organizational change in health services. *Med Care*, 1997, NS6-NS18.
13. Nevidjon B, Erickson J: The nursing shortage: Solutions for the short and long term. *Online Journal of Issues in Nursing*, 6(1), Manuscript 4, January 31, 2001.
14. Barnard A: Needed: RNs to aid ailing profession. *Boston Globe*, February 26, 2001.

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