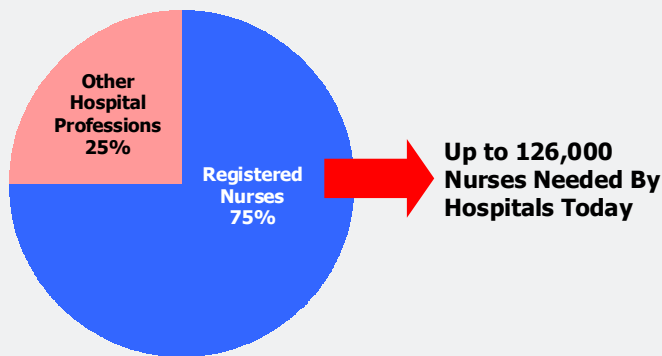


The newest threat to America's health care system is not an exotic virus or a sweeping epidemic. Rather, it is a growing shortage of hospital personnel. Hospitals across the country are struggling to find qualified staff to serve their communities' needs. Unfilled positions on nursing units and in pharmacies, laboratories, and x-ray departments cause delays in care delivery. Emergency departments close to ambulances, surgeries are postponed, and inpatient and outpatient capacity is reduced.

Up to 168,000 hospital positions are unfilled in six job categories; the majority needed are nurses...

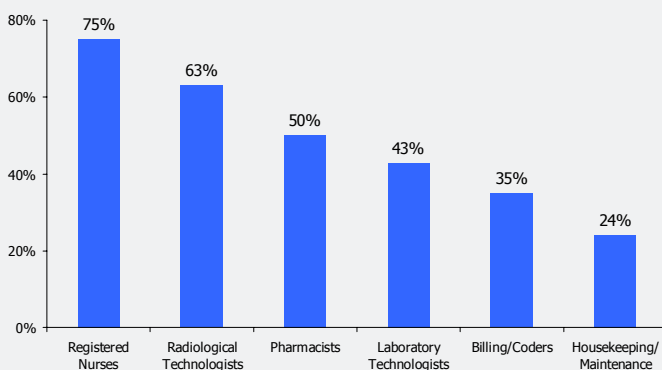
Chart 1: Estimated U.S. Hospital Vacancies, Selected Job Categories, 2001



Note: Other hospital professions include pharmacists, radiological technologists, laboratory technologists, billing/coders, and housekeeping/maintenance staff.

The workforce shortage is getting worse...

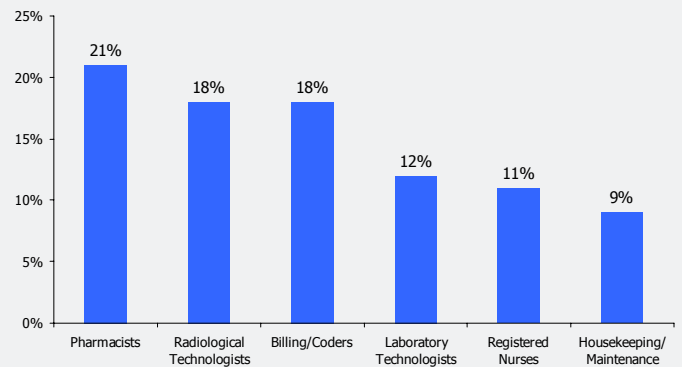
Chart 3: Hospitals Reporting More Difficulty Recruiting than Last Year for Selected Types of Hospital Workers, 2001



This issue of Trendwatch examines the scope and severity of the current hospital workforce shortage and explores the structural reasons that are likely to make the shortage get worse before it gets better — declining enrollment in health education programs, an aging workforce, and competition from other health care employers. It looks at how hospitals are coping with these difficult issues and poses questions for policy-makers about short- and long-term solutions.

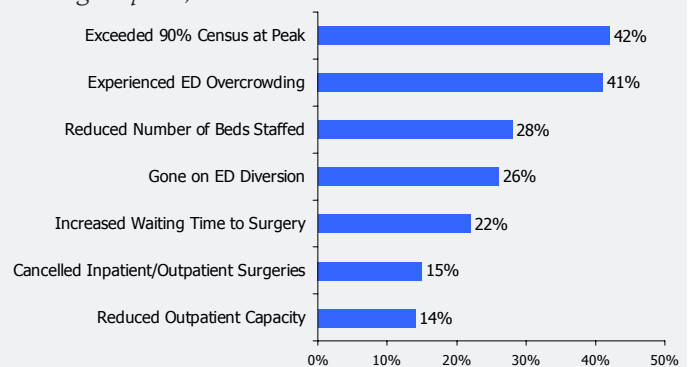
...but, pharmacists have the highest percent of unfilled positions.

Chart 2: Vacancy Rates for Selected Hospital Personnel, 2001



...and its impact is felt throughout the hospital.

Chart 4: Percent of Hospitals Reporting Various Types of Workforce Shortage Impacts, 2001



“This will not be a temporary shortage.... Fundamental demographic changes are occurring in America, and the coming labor crisis will be with us for decades.”

— The Panel on the Future of the Health Care Labor Force in a Graying Society

Skilled Hospital Staff have Attractive Employment Alternatives

Competition for skilled health personnel from alternative work settings is contributing to the workforce shortage in hospitals. Nurses and other healthcare professionals have a much broader range of employment options than they did in the past, though most are still employed by hospitals. As the hospital workforce ages, health professionals are less able to perform demanding physical activities and are more susceptible to work-related injuries. So, other health care settings with fewer physical requirements and less stress become more attractive.

The financial squeeze from managed care, Medicare and Medicaid cuts, and growing drug and supply costs has made it difficult for hospitals to offer more generous working conditions, wages, and benefits to attract and retain key personnel. At the same time, pressures to reduce length of stay and meet less acute needs in an outpatient setting mean that hospital patients are sicker and require

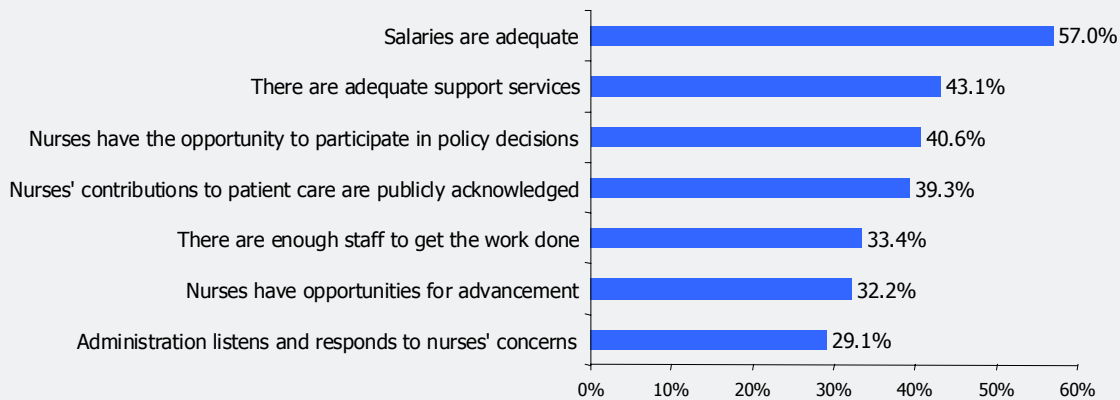
a greater intensity of care. The workforce shortage itself creates a vicious cycle as open positions create additional stresses for workers who remain.

In this environment, some hospital employees are willing to leave for lower paying, less pressured workplaces. Although the number of registered nurses working in hospitals went up between 1988 and 2000, the proportion dropped from 68 percent to 59 percent. A recent study found that only 51 percent of hospital employees intend to stay for several years.¹

For other professionals, wages can be considerably higher outside the hospital. Extreme competition for retail pharmacists has pushed entry-level wages above \$100,000 in some areas. Unrestricted by the cost containment pressures in the health care system, chain drug stores and mass merchandisers like Kmart, Target, and Wal-Mart are able to offer much higher salaries than hospitals.

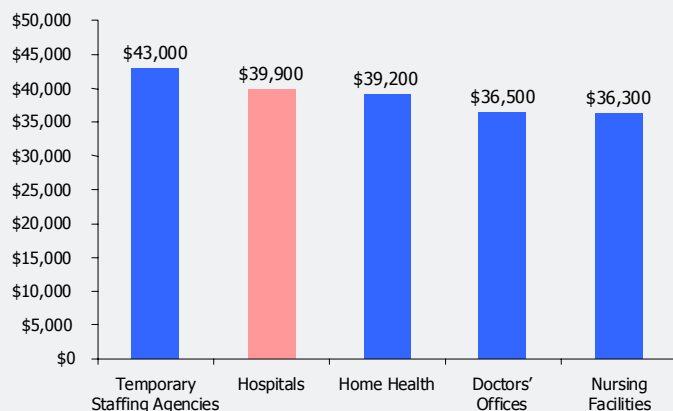
Hospital nurses want more communication and opportunities for advancement...

Chart 5: Percent of Nurses Agreeing with Statements about Hospital Staffing and Management, 1998-1999



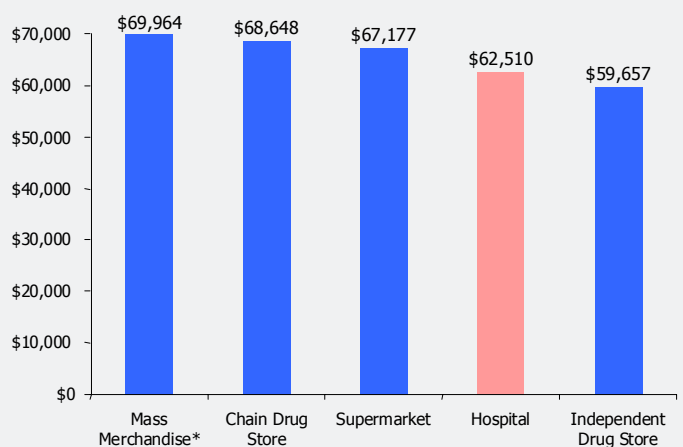
...Higher wages are not enough to attract nurses into the stressful hospital environment...

Chart 6: Median RN Salaries by Employment Setting, Includes Full-Time and Part-Time Workers, 1997



...while mass merchandise and chain drug stores outbid hospitals for pharmacists.

Chart 7: Pharmacists' Salaries by Employment Setting, 1998



*e.g., Kmart, Wal-mart, etc.

No Solution in the Pipeline

The shortage of hospital workers is not likely to be solved quickly. Today's student will become tomorrow's health professional. But, the pipeline of new graduates from nursing, pharmacy, and allied health education programs is insufficient to supply growing demand in hospitals and across the health care sector. The numbers of nursing and pharmacy graduates and students are falling, and schools do not have the capacity to increase enrollment quickly.

Enrollment in RN education programs has declined by 50,000 or 22 percent since 1993. Part of the drop is due to declining interest – less than 2 percent of college freshmen indicate nursing as a likely major. However, many nursing programs have had to cut enrollment even when applications increased because of faculty shortages, lack of clinical training sites, and insufficient classroom space.

Despite rising demand for pharmacists, the number of pharmacy school graduates has dropped. A key reason for the decline is a dramatic change in pharmacy education. The four-year Bachelor of Science (B.S.) in Pharmacy degree is being phased-out and replaced with a six-year Doctor of Pharmacy (Pharm.D.) requirement for entry-level pharmacists. As schools made the transition during the 1990s, there were years in which no pharmacists graduated from a pharmacy program and entered the workplace. The longer and more intense degree requirement has led to a drop in pharmacy school applicants as well.

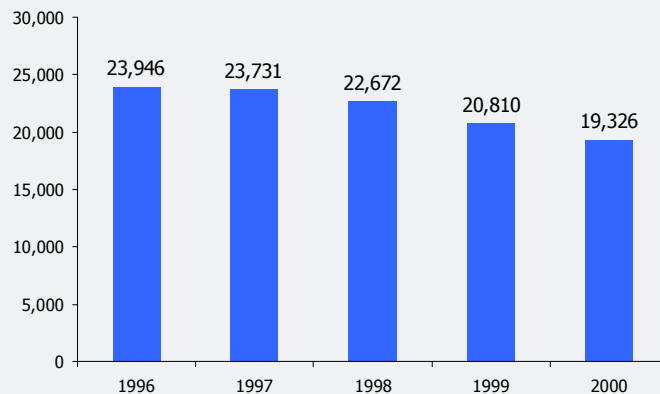
In the allied health professions, enrollment and graduations did not keep pace with job opportunities because of a variety of factors. The booming economy of the 1990s enticed many potential students to defer additional education and move directly into the workforce. At the same time, changes in technology and job complexity mean that hospitals now need more highly trained technicians and therapists. Longer training periods may deter some from entering these professions.

Quote from the Field

"It takes years to properly educate the next generation's workforce. Cultural changes, to make this profession more attractive, will not occur overnight." — Lynn Martin, former U.S. Labor Secretary

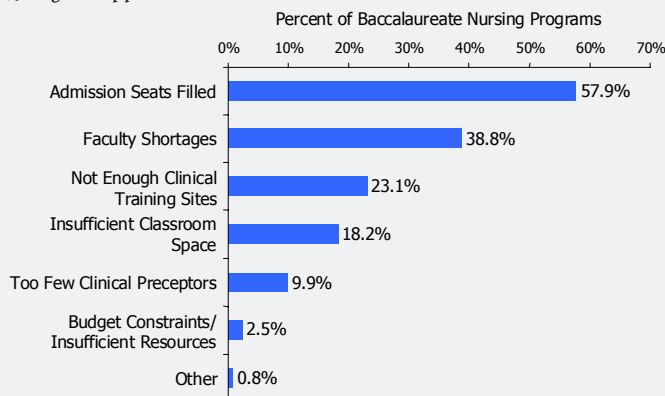
The number of nursing school graduates has dropped by 20 percent since 1996...

Chart 8: Graduates in Generic (Entry-Level) Baccalaureate Programs in Nursing, 1996 - 2000



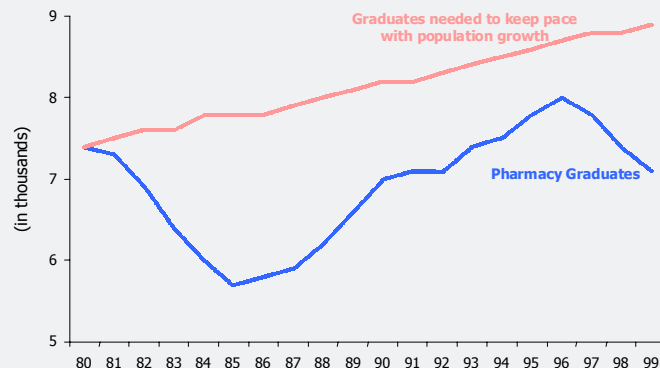
...as nursing schools face many challenges.

Chart 9: Reasons Why Nursing Schools are Not Accepting All Qualified Applicants



Similarly, the need for pharmacists outstrips the number of graduates.

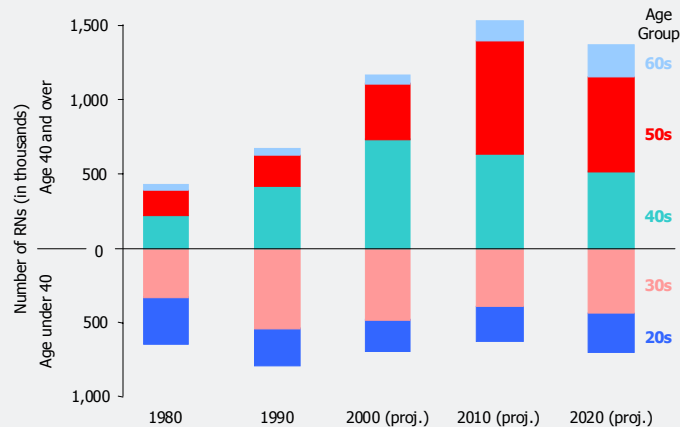
Chart 10: Pharmacy Graduates Versus Graduates Needed to Keep Pace with Population Growth, 1980-1999



Without Intervention Shortages Will Get Worse

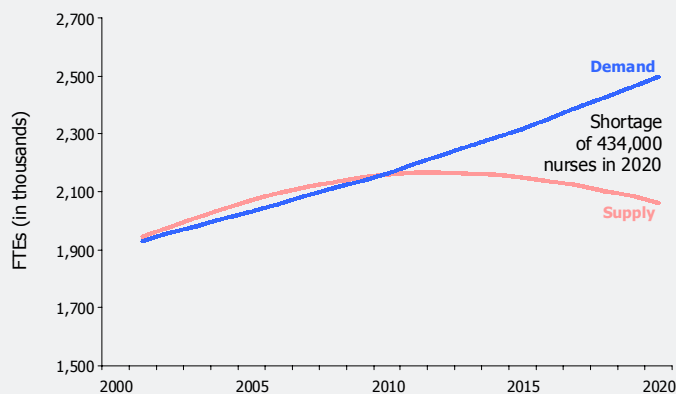
The aging RN workforce...

Chart 11: Number and Distribution of RNs by Age Group, 1980-2020 (proj.)



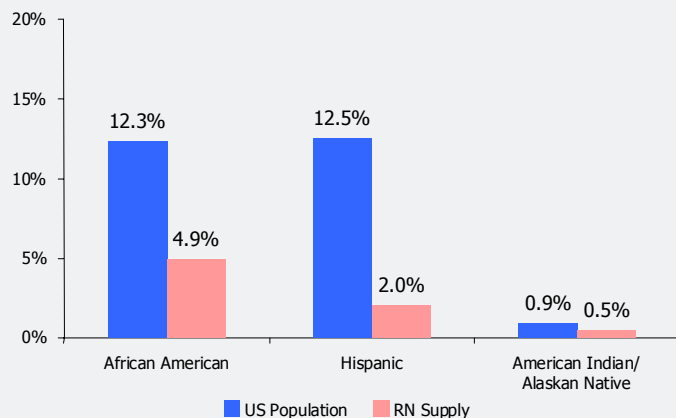
...is contributing to a supply that falls short of demand.

Chart 12: Forecast of Total RN FTEs vs. Requirements Estimated by the Federal Government, 2001-2020



And minorities are underrepresented in the nursing workforce.

Chart 13: Racial Composition of U.S. Population and RNs, 2000



Many experts believe that the hospital workforce shortage will get worse. Without a sufficient number of new health professionals entering the labor market, the hospital workforce is rapidly aging and retiring. These trends are most pronounced among nurses and pharmacists.

In 2000, the average age of working registered nurses was 43.3 years.¹ The proportion of registered nurses under 30 dropped from 30.3 percent to 12.1 percent between 1983 and 1998. The number of working nurses younger than 30 decreased 41 percent, compared to a decline of less than one percent in the labor market as a whole.²

Reasons for the aging workforce include wider and more attractive employment options for women over the past few decades. While the number of men in nursing has increased, women continue to make up 94 percent of the RN workforce. Greater career opportunities and rising wages relative to men have drawn women away from nursing and other female-dominated professions (e.g., teachers, social workers, secretaries). Since this trend is not likely to be reversed, the shortage will almost inevitably worsen.

Despite recruitment efforts, minorities are also underrepresented in the nursing workforce. Greater success in recruiting minorities is critical as the U.S. population and the labor force continue to increase in diversity.

Over the next decade, the aging pattern will continue as the largest cohorts of registered nurses enter their 50s and 60s. Then, the nursing workforce will shrink as the older nurses retire. By 2020, as the nation's baby boomers reach their late 60s and 70s and need more health care, the nursing workforce will fall to nearly 20 percent below the projected need. Available evidence points to similar patterns of aging and an increasingly short labor supply for other key health professionals as well.

The effects of these fundamental shifts in both the demographics of the U.S. population and the makeup of the healthcare workforce will be difficult to overcome.

Quote from the Field

"Nursing shortages are always cyclical, and each time we've had a shortage we've recruited nationwide and in foreign countries, options we don't have now as the population ages and the shortage extends worldwide." — Paulette Standifer, Vice President, Dallas/Ft. Worth Hospital Council

Hospitals Developing Creative HR Strategies

Hospitals have tried many creative strategies to maintain staffing levels and recruit new workers. They have also increased wages. Long-term solutions, however, will require finding new pools of potential workers, changing the way work is structured, and improving the workplace environment.

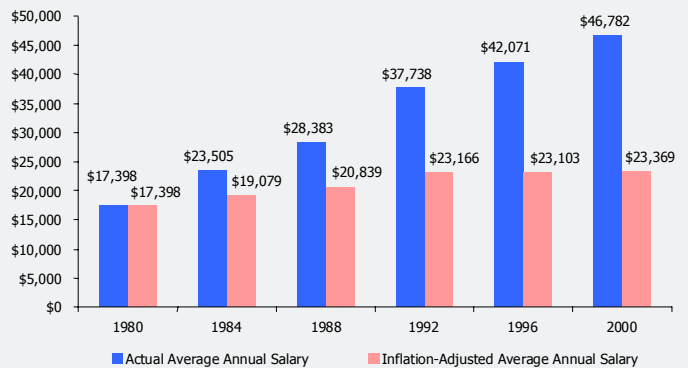
Hospitals have worked hard to offer better wages and benefits to their employees. The average full-time hospital employee received \$44,909 in wages and benefits in 1999 compared to \$32,476 in 1990. At the same time, hospital margins have been declining.¹

Hospitals are using a variety of strategies to recruit new staff. Richer employee benefits, such as health insurance and vacation time, are the most common incentives used. Some hospitals are offering signing bonuses based on experience or length of commitment. Tuition reimbursement and on-site continuing education are other benefits offered to recruit and retain skilled staff. Some hospitals are training workers themselves for specialties with severe shortages such as intensive care and surgery. Flexible work arrangements that provide summers off for working parents and alternating work weeks have been used by some hospitals.

Bonuses and short-term incentives bring staff from other health care settings back into hospitals and attract part-time and inactive health care workers into the full-time labor market. In the past, hospitals also relied heavily on temporary staffing agencies to meet unanticipated staff shortages for a particular shift. The difficulty and expense in getting agency staff have led more hospitals to rely on overtime, floating staff between workstations, and other in-house solutions. The use of overtime has been controversial in some hospitals. Proposed state legislation banning mandatory overtime or mandating minimum staffing ratios could exacerbate the shortage.

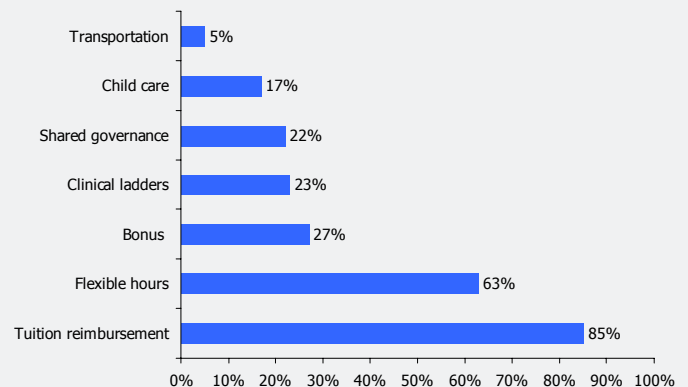
RN wages have grown faster than inflation...

Chart 14: Actual and Inflation-Adjusted Annual Salaries of Full-Time RNs, 1980-2000









...and hospitals offer a variety of other incentives to attract workers.

Chart 15: Percent of Hospitals Offering Recruitment and Retention Incentives



Three Good Ideas to Build a Supportive Hospital Culture

University of California Davis Medical Center (UCDMC) has no trouble keeping and hiring nurses, despite the state's 20 percent nurse vacancy rate. It has achieved its success by building a culture to support nurses in big and small ways.

Strategy	Impact
 No travel or registry nurses: use of in-house float pool trained to work in any unit needed	 Sends strong message that nurses are not easily replaceable. Staff know they will always work with a UCDMC team.
 Honoring leadership and quality through team recognition awards	 Keeps focus on high standards, teamwork, and individual leadership.
 Leave time for nurses to observe and visit new units	 Retains and supports RNs seeking new opportunities and challenges.

Source: Coffman J, et al. Nursing in California and A Workforce Crisis. San Francisco: California Workforce Initiative and the UCSF Center for Health Professions, January 2001

Policy Questions Raised by the Hospital Staffing Shortage

In the near term, hospitals need the resources and flexibility necessary to attract and keep hospital professionals. Higher wages and benefits may play a part in luring workers from other employment settings. But, short-term strategies cannot alleviate the long-term, structural under-supply of skilled and experienced personnel needed by hospitals. Significant investment will be required to expand the pool of hospital workers. More men and minorities need to be brought into nursing and other clinical professions. Many cite the need for greater autonomy and professional recognition and status to make this career option more attractive. If the structural causes of the hospital workforce shortage do not abate, hospitals will need to closely examine their staffing patterns and find alternative strategies to care for their patients.

- How can hospital payment policies reflect the need to attract and maintain a sufficient supply of highly-trained and experienced hospital workers?
- How can immigration restrictions be eased to allow foreign nurses and technologists to fill hospital vacancies?
- How should nurse, pharmacy, and allied health education be funded at the state and federal level?
- Can tax incentives encourage more students to enter health professions education and training programs?
- How can hospitals work more closely with schools, colleges, and universities to match the skills they need with the curricula and training received by nursing and pharmacy students and other health professionals?
- What are the most effective strategies to expand the pool of potential health care workers to underrepresented groups such as men and minorities?
- Can new technologies and advances in distance learning reduce the time and costs of training and continuing education?

Quotes from the Field

“For the first time in history there is a worldwide, global shortage of nurses.” — Rachel Booth, Dean of Nursing at the University of Alabama - Birmingham

“In a few years we’re going to be retiring, and there’s no one to replace us. Let’s face it, young women have lots of career options that I didn’t when I was going into nursing. And there are just a zillion other career opportunities for nurses these days.” — Jane Llewellyn, Chief Nursing Officer, Rush-Presbyterian-St-Luke’s Medical Center

“Hospitals need to get real, real creative. Earnings need to go up, but they should also offer benefits to older nurses to keep them in the workforce. Offer to have groceries delivered to nurses at their house or have housecleaning services. Reduce floor lengths, invest in technology to help them.” — Peter Buerhaus, Associate Dean for Research at Vanderbilt University School of Nursing

“When I was a young nurse I used to be able to work 12-hour shifts, but now that I’m in my 40’s and with children at home, if I worked that kind of shift, muscling eight patients, I’d be totally exhausted.”

— P. K. Scheerle, CEO, American Nursing Services

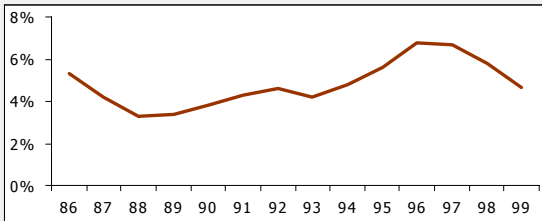
“That’s the disparity facing [pharmacy] graduates. Do I want a job as a clinical pharmacist in a hospital or make the big bucks and work in retail?” — Tom Van Hassel, Director of Pharmacy, Yuma Regional Medical Center

“As a nurse, my primary job is now to document. I don’t even touch patients. I am responsible for them but it is all documentation. It is not nursing at all.” — a nurse, Reality Check III, American Hospital Association, 1998-1999

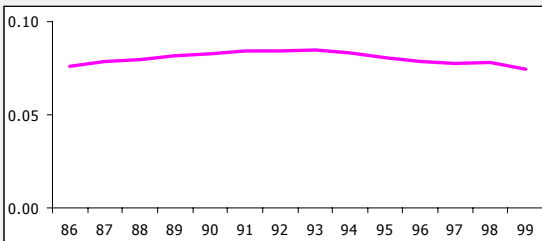
Stats to know

Hospital Sector

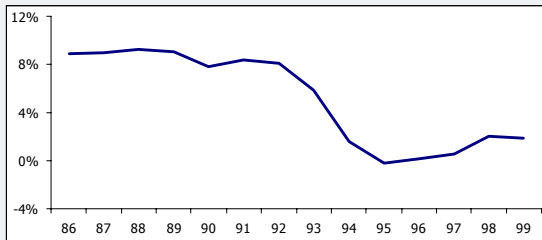
Total Margin:	1997	1998	1999
86 to 99 Trend	6.7%	5.8%	4.7%



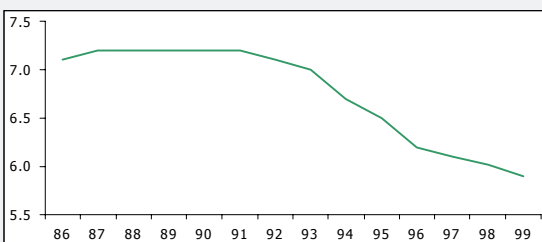
FTEs per Adjusted Admission:	1997	1998	1999
86 to 99 Trend	0.08	0.08	0.07



Percent Change in Expense per Adj. Admission:	1997	1998	1999
86 to 99 Trend	0.6%	2.0%	1.9%

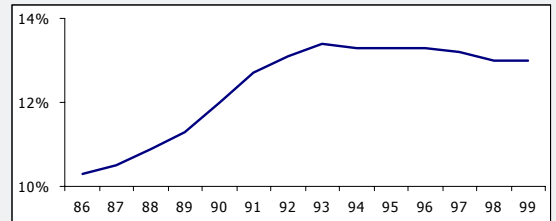


Average Length of Stay (in Days):	1997	1998	1999
86 to 99 Trend	6.1	6.0	5.9

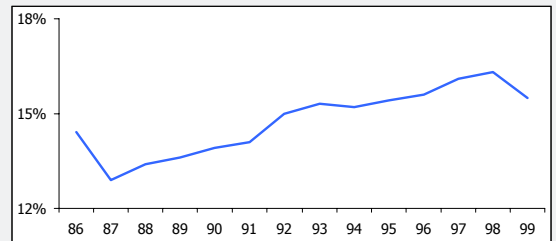


Healthcare Industry

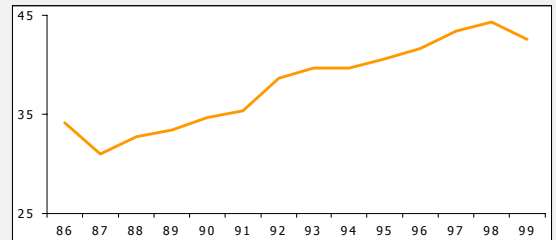
National Health Expenditures as a % of GDP:	1997	1998	1999
86 to 99 Trend	13.2%	13.0%	13.0%



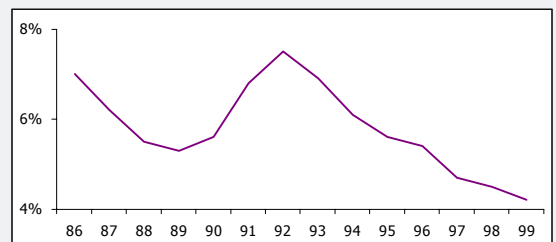
Percent Uninsured:	1997	1998	1999
86 to 99 Trend	16.1%	16.3%	15.5%



Number Uninsured (in Millions):	1997	1998	1999
86 to 99 Trend	43.4	44.3	42.6



Percent Unemployed:	1997	1998	1999
86 to 99 Trend	4.9%	4.5%	4.2%



Endnotes:

Page 2: ¹ Aon Consulting. Healthcare@Work, 2000

Page 4: ¹ National Sample Survey of Registered Nurses, 2000

² Buerhaus PI, et al. Implications of an Aging Registered Nurse Workforce. *JAMA*. 2000: 283:2948-2954

Page 5: ¹ Lewin Group analysis of American Hospital Association Annual Survey

Sources:

Chart 1: Lewin Group analysis of American Hospital Association Workforce Survey, 2001

Chart 2: Lewin Group analysis of American Hospital Association Workforce Survey, 2001

Chart 3: Lewin Group analysis of American Hospital Association Workforce Survey, 2001

Chart 4: Lewin Group analysis of American Hospital Association Workforce Survey, 2001

Chart 5: Nurse survey data, International Hospital Outcomes Research Consortium

Chart 6: Occupational Outlook Handbook, Bureau of Labor Statistics, U.S. Department of Labor, www.bls.gov/oco/ocos083.htm

Chart 7: Drug Topics Salary Surveys

Chart 8: 2000-2001 Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing, American Association of Colleges of Nursing

Chart 9: 2000-2001 Enrollment and Graduations in Baccalaureate and Graduate Programs in Nursing, American Association of Colleges of Nursing

Chart 10: Profile of Pharmacy Students 1999, American Association of Colleges of Pharmacy, and U.S. Census Bureau

Chart 11: Buerhaus PI, et al. Implications of an Aging Registered Nurse Workforce. *JAMA*. 2000: 283:2948-2954

Chart 12: Buerhaus PI, et al. Implications of an Aging Registered Nurse Workforce. *JAMA*. 2000: 283:2948-2954

Chart 13: U.S. Census Bureau data, Internal Release Date: April 2, 2001 and National Sample Survey of Registered Nurses, 2000, HRSA, Bureau of Health Professions, Division of Nursing

Chart 14: National Sample Survey of Registered Nurses, 2000, HRSA, Bureau of Health Professions, Division of Nursing

Chart 15: Research on Nurse Staffing. The American Organization of Nurse Executives, November 1998. Prepared by the HSM Group, Ltd.

Sources for "Stats to Know":

Total Margin: Lewin Group analysis of American Hospital Association Annual Survey, 1986-1999

FTE/Adjusted Admission: Lewin Group analysis of American Hospital Association Annual Survey, 1986-1999

Percent Change in Total Expense per Adjusted Admission: Lewin Group analysis of American Hospital Association Annual Survey, 1986-1999

Average Length of Stay: Lewin Group analysis of American Hospital Association Annual Survey, 1986-1999

National Health Expenditures as a Percent of GDP: Compiled by HCFA, Office of the Actuary on www.hcfa.gov/stats/nhe-oact/

Percent Uninsured: Compiled by Bureau of the Census on www.census.gov/hhes/www/hlthins.html

Number Uninsured: Compiled by Bureau of the Census on www.census.gov/hhes/www/hlthins.html

Percent Unemployed: Compiled by Bureau of Labor Statistics on <http://stats.bls.gov/cpsaatab.htm#empstat>

*TrendWatch is a series of reports produced by the American Hospital Association
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hospital and health care field.*



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