

Manpower Shortage in Rheumatology

Gregory F. Schimizzi, MD

Several articles have appeared in the literature regarding the looming shortage of various specialties.¹⁻⁵ It is surprising that some of the projected shortages in professional manpower include highly visible specialties such as neurosurgery, cardiology, and pediatrics. While shortages in these specialties are a newly recognized problem, a decline in rheumatology manpower has been expected for many years despite an increase in demand for services. The number of fellows in rheumatology has been steadily declining since 1995. In a survey and analysis of manpower in rheumatology done in 2000, the American College of Rheumatology projected a steady decline in the number of clinical rheumatologists until the year 2030.⁶ For the year 2010, the needs estimate for rheumatologists is 7500 physicians. The current number of practicing rheumatologists is 2200, and the projected number of practicing rheumatologists for the year 2010 based on new fellows entering practice and those rheumatologists leaving the field is estimated to be 2500.⁶

As the population of the United States ages, there has been an expected increase in the number of people afflicted with arthritis. The Centers for Disease Control and Prevention recently announced that according to their most recent data over 46 million Americans are afflicted with arthritic diseases which are the most frequently occurring chronic illnesses. Arthritic diseases of all types are the leading cause of disability in our country. Rheumatoid arthritis alone affects 1 in 200 Americans and costs the United States approximately \$80 to \$85 billion dollars per year. It has been projected that by the year 2030 an estimated 67 million Americans will be affected by chronic arthritic diseases.⁷

Ask any rheumatologist or medical group about the difficulty of recruiting a new physician in rheumatology, and you will likely get the same answer from coast to coast. In an era of new and promising therapies and with an increasing number of patients in need of rheumatology care, it seems counterintuitive that a decline in manpower is upon us in this field. But the reasons for our predicament are not as simple or straightforward as one might think. A detailed study commissioned by the American

College of Rheumatology and published earlier this year enumerated and analyzed causes for the manpower crisis in rheumatology. According to this report, factors affecting the manpower crisis in rheumatology include technological advances, limited advances in practice design and organization, minimal increases in training positions, changes in population characteristics, low reimbursement rates, and workload capacity changes.⁶

“In an era of new and promising therapies and with an increasing number of patients in need of rheumatology care, it seems counterintuitive that a decline in manpower is upon us in this field.”

Technological Advances

An increase in technological sophistication has occurred in the practice of rheumatology just as in other fields of medicine. This technology is very costly and has added to other cost centers (eg, malpractice rates, insurance costs, labor costs, increased costs due to workload) which are contributing to a rapid rise in overhead expenses. The American Medical Association has estimated that in the same years that the Medicare Modernization Act 2003 mandates drastic reductions in physician reimbursements there will be a 25% increase in overhead expenses for physicians.

Gregory F. Schimizzi, MD, is a board certified rheumatologist at Carolina Arthritis Associates, assistant clinical professor of medicine at New Hanover Regional Medical Center, and president of the Coalition of State Rheumatology Organizations. He can be reached at gfschimizzi@carolinaarthritis.com or 1710 S 17th Street, Wilmington, NC 28401.

Practice Design and Organization

There has been little change in practice organization and efficiency in delivering rheumatologic care. Utilization of family nurse practitioners and physician assistants has not increased dramatically over the last decade. This may in part be due to the nature of the specialty. Adoption of electronic medical records systems has been very slow in rheumatology possibly due to the complicated nature of the subspecialty as well as the associated expenses. Furthermore, a high energy of initial activation is associated with electronic medical records, and rheumatologists may not be interested in investing their time or financial resources to install an expensive system when retirement may be only a few years away.

Training Positions

The number of new fellowship-trained rheumatology positions has not kept pace with the demand for rheumatologists over the last 1 to 2 decades relative to the number of older physicians leaving the field and the demand for services. Physicians leave rheumatology primarily due to retirement or death. A few rheumatologists leave active rheumatology practices to accept industry positions. The average age of rheumatologists is approximately 57 years of age. The median age for rheumatologists is 53 years for male physicians in adult rheumatology and 46 years for the female physicians. For pediatric rheumatology the median ages are 51 years and 47 years respectively. There are 378 adult rheumatology fellowship training positions in 105 programs in this country and the fill rate for these positions was about 88% in 2004-2005.

One of the reasons for the reduced supply of new rheumatologists as well as other specialties can be traced back to several previously published reports such as the Graduate Medical Education National Advisory Committee's 1981 recommendation to reduce the number of medical schools and medical school positions based upon forecasts for a 23% surplus of physicians (approximately 145 000) by the year 2000. In response to this and other similar reports, Congress reduced support for medical school education.

Changes in Population Characteristics

Demand for rheumatology services is increasing due to the aging of our population, the increased sophistication of the populace, and the rise in per capita gross domestic product. Richard Cooper and his colleagues observed a strong correlation between the size of the economy measured in gross national product per capita and the demand for specialty physician services. Cooper argued this correlation was indicative of a pending increase in the demand for health care services to the extent that a physician shortage of 50 000 physicians would occur by 2010.

Reimbursement Rates

Reimbursements for rheumatology services have historically been the lowest of all subspecialties. This began to change in 1998 with the introduction of more sophisticated and complex services provided by rheumatologists in their offices. Despite the fact that reimbursements for rheumatology services increased 28% between 1998 and 2002, reimbursements are on the decline again after passage of the Medicare Modernization Act in 2003 and recent changes in reimbursement for ancillary services. These latest changes make rheumatology a less attractive field to prospective fellows. This is especially true for those who have accumulated large loans during their education and training.

Maximal Workload Capacity Changes Among Rheumatologists

Workload capacities for rheumatologists vary with age and sex of the practitioner. Female rheumatologists (whose numbers have been increasing) tend to see fewer patients than male rheumatologists at all ages. Females have peak workload capacities when they are between 40 and 49 years of age. Male rheumatologists have a peak workload capacity between the ages of 50 and 59 years. To some extent, the increase in the number of female fellows entering practices in rheumatology will accentuate the shortage of rheumatology supply.

Solutions

The remedies for the shortage of rheumatologists will not be easily implemented and likely will not be rapidly achieved. Four possible solutions are outlined here.

- (1) It will be necessary to increase the number of fellowship positions or add new rheumatology programs. Finding funding for expanding programs will be difficult in times of overall health care cutbacks and without a will on the part of government to not only recognize the problems facing rheumatology and other specialties but to act upon the problems in a meaningful way.
- (2) Adoption of newer technologies and/or increased use of physician extenders in the practice of rheumatology will help improve efficiency and increase practice visit capacities.
- (3) Inherent in adopting more widespread use of physician extenders there will need to be a commensurate increase in the number of training programs for these professionals.
- (4) There must be a concerted effort to advocate for medical liability reform, fair reimbursements, and removal of clerical workloads in an attempt to improve patient access to care while reducing overhead costs that accompany excessive interferences from multiple sources. Reduction of costs and fair reimbursements for services will create an incentive for younger physicians and trainees to consider rheumatology.

The goal of any resolution to a potential shortfall in physicians in any subspecialty should include, above all else, a desire to deliver the highest quality care possible to our patients as efficiently as possible with the best choice of therapies available based on medical evidence. No solution should occur at the expense of continued efforts to find cures for these diseases that disfigure and deform. Treatment must be continued since

inadequate or delayed treatment of arthritic diseases not only decrease the quality of life for millions of our patients but also creates hardship for families and late complications that will increase disease management costs. We must never forget that mortality is also increased in many of these patients, and this may be even more significant in those patients who are inadequately treated. **NCMJ**

REFERENCES

- 1 Massachusetts Medical Society 2007 Physician Workforce Study. Massachusetts Medical Society Web site. <http://www.massmed.org/workforce>. Updated October 11, 2007. Accessed November 30, 2007.
- 2 American Academy of Pediatrics Committee on Pediatric Workforce. Pediatric workforce statement. *Pediatrics*. 2005;116(1):263-269.
- 3 Cooper R. Weighing the evidence for expanding physician supply. *Ann Intern Med*. 2004;141(9):705-714.
- 4 Fye B. Perspective: cardiology workforce: a shortage not a surplus. *Health Affairs*. 2004; Suppl Web Exclusives: W4-64-66.
- 5 Gottfried ON, Rovit RL, Popp AJ, Kraus KL, Simon AS, Couldwell WT. Neurosurgical workforce trends in the United States. *J Neurosurg*. 2005;102(2):202-208.
- 6 Deal C, Hooker R, Harrington T, et al. The United States Rheumatology workforce: supply and demand, 2005-2025. *Arthritis Rheum*. 2007;56(3):722-729.
- 7 Targeting arthritis reducing disability for nearly 19 million Americans. National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention Web site. <http://www.cdc.gov/nccdphp/publications/AAG/arthritis.htm>. Modified May 24, 2007. Accessed November 30, 2007.

How to Reach Us

LETTERS TO THE EDITOR

- Our e-mail address is NCMedJ@nciom.org
- Our fax number is 919-401-6899
- Or you can send your letter to: *North Carolina Medical Journal*, Letters, 5501 Fortunes Ridge Drive, Suite E, Durham, NC 27713
- Please include the writer's full name, address, and daytime phone number. Letters may be edited for clarity or space.

SUBSCRIPTIONS AND GIFTS

- Customer services for subscriptions or gifts can be accessed via e-mail NCMedJ@nciom.org or by calling the North Carolina Medical Journal's business and advertising manager, Adrienne R. Parker, at 919-401-6599 ext. 28.

SUBMITTING PEER-REVIEWED ARTICLES

- For instructions on how to submit an article to the *North Carolina Medical Journal*, please visit <http://www.ncmedicaljournal.com/guideline.shtml>.
- Please send your articles via e-mail NCMedJ@nciom.org or mail to: *North Carolina Medical Journal*, Submissions, 5501 Fortunes Ridge Drive, Suite E, Durham, NC 27713.

CHANGE OF ADDRESS

- Please send your change of address via e-mail NCMedJ@nciom.org or by calling the North Carolina Medical Journal's assistant managing editor, Phyllis Blackwell, at 919-401-6599 ext. 27.

REPRINTS AND PERMISSIONS

- Information is available at the Web site www.ncmedicaljournal.com/reprints.
- To request photocopy permission or content licensing, e-mail NCMedJ@nciom.org.

ADVERTISING

- For advertising information visit www.ncmedicaljournal.com/media.htm or contact the North Carolina Medical Journal's assistant managing editor, Phyllis Blackwell, at 919-401-6599 ext. 27; pblackwell@nciom.org.

North Carolina
MEDICAL JOURNAL