

Preface



Edgar V. Lerma, MD
Guest Editor

In the United States, the average life expectancy in 2004 was 75.2 years for men and 80.4 years for women; by 2015, it is expected to be 76.2 and 82.2 years, respectively, and to continue to grow. During the 1990s, the population older than 85 years was the fastest growing group at 38% growth. This older age group is the largest consumer of health care services.¹⁻⁷

In 2005, only 5% of the population older than 75 years had no health visits. Of people with 10 or more visits, 30% were in this age group, although the group constitutes only 10% of the population.

In 2007, it was estimated that the average age of patients starting renal replacement therapy (hemodialysis or peritoneal dialysis) in the United States was 62.3 years for men and 63.4 years for women, and this continues to be on an increasing trend. Twenty percent of all patients treated for end-stage kidney disease (ESKD) are older than 75 years, and about 50% of all patients on hemodialysis are older than 65 years.

The prevalence of the most common diseases causing ESKD, diabetes mellitus and hypertension, also increases substantially with aging; in 1999, the United States Renal Data System (USRDS) records show that the peak incident counts of treated ESKD occur in the 70- to 79-year age group at 15,000 patients per year. Peak incident rates of treated ESKD occur in the 70- to 79-year age group at 1543 per million population.

These trends are not entirely unexpected, considering the aging population, increased life expectancy brought about by advances in medical technology, concomitant decrease in renal function with age (ie, from age 40 onwards, creatinine clearance decreases at a rate of 0.87 mL/min/y), and the elderly's increased access to care.

With the current projected increase in the number of elderly patients, it is estimated that there will be a corresponding increase in the number of elderly patients requiring renal replacement therapy. In 1999, in recognition of the above trends, Luke and Beck coined the term "gerontologizing nephrology."

At that time, it was estimated that approximately 3 million Americans were older than 85 years, and this number is estimated to increase to 10 to 50 million by 2050. Nursing home beds were predicted to increase from 1.5 million in 1993 to 5 million

in 2040. The percentage of health care expenditure in the United States going to those older than 65 years is likely to increase from 38% in 1999 to 75% by 2030. In 1999, the annual incidence of end-stage renal disease (ESRD) increased at a rate of 6% to 7% annually.

Chronic kidney disease (CKD) and ESKD are huge financial burdens to our medical system. In 2005, Medicare costs for CKD and ESKD were \$42 billion and \$20 billion, respectively. The cost of ESKD was one-half that of CKD, although only a very small percentage of patients with CKD progress to ESKD. According to the National Health and Nutrition Examination Survey (NHANES) data, about 11% of the United States population has CKD, whereas less than 0.2% of the United States population has ESKD. Despite this low prevalence, ESKD was responsible for 6.4% of the entire Medicare budget. The annual per person cost for dialysis alone exceeded \$65,000 in 2005. If all medical care is included, this figure is even higher. For the 70- to 79-year age group, the per person annual cost of dialysis is more than \$69,000, and in the 80+ year group, it is more than \$74,000.

At present, 26 million Americans (13% of the United States adult population) suffer from CKD. Studies predict that these numbers will rise further due to other confounding risk factors: high obesity rates (one-third of all adults), diabetes and hypertension, and the aging of the baby boom generation (because age is considered as another risk factor for CKD).

When discussing dialysis, patients and families need to understand that, although renal replacement therapy does prolong life, life expectancy is very limited in the older population. Average 1-year survival for a 70- to 79-year-old is 70%, and 60% for an 80-year-old. By 2 years, survival drops to 52.7% and 39.7%, respectively.

These changing demographics mandate advances in our general understanding of geriatrics and nephrology as subspecialties.

In 2008, the Accreditation Council for Graduate Medical Education (ACGME) mandated that fellows in training should receive formal training in geriatric nephrology, but nearly 25% of United States institutions with ACGME-accredited nephrology training programs did not have comparable training programs in geriatrics.

Recognizing the importance of this issue to physician training and patient care, the American Society of Nephrology (ASN) convened the ASN Geriatrics Task Force. Co-chaired by Drs Dimitrios G. Oreopoulos and Jocelyn Wiggins, the task force designed and developed the ASN Geriatrics Nephrology Online Curriculum with generous financial support from the Association of Specialty Professors (ASP).

The curriculum was based on the ACGME's 6 core competencies (patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice).

As guest editor of this issue of *Clinics in Geriatric Medicine* focusing on renal diseases, I and the other contributors attempt to address some of these aspects of caring for aging patients with kidney disease, including assessing glomerular filtration rate in the elderly, drug dosing and renal toxicity, management of ESRD in elderly patients, and end-of-life decision making.

This issue is meant to supplement the aforementioned curriculum. In this issue, I am honored and privileged by renowned mentors and colleagues who have all agreed to contribute well-written articles that give the readers a true perspective of the blend between geriatrics and nephrology. In addition, we also have an article addressing issues on renal transplantation, a still-evolving field, especially as it applies to the geriatric population.

I am hopeful that primary care physicians (internists and family practitioners), geriatricians, nephrologists, and nurse practitioners and social workers who are involved

with care of the elderly will find this issue quite informative and useful to their daily practices.

Edgar V. Lerma, MD
Department of Medicine
Division of Nephrology
University of Illinois at Chicago College of Medicine
3543 Wisconsin Avenue
Berwyn, IL 60402, USA

E-mail address:
edgarvlermamd@pol.net

REFERENCES

1. Lindeman RD, Tobin J, Shock NW. Longitudinal studies on the rate of decline in renal function with age. *J Am Geriatr Soc* 1985;33:278–85.
2. Luke RG, Beck LH. Gerontologizing nephrology. *J Am Soc Nephrol* 1999;10:1824–7.
3. Oreopoulos DG, Wiggins J. Geriatric nephrology has come of age: at last. Washington, DC: American Society of Nephrology. Online Geriatric Nephrology Curriculum. Available at: http://www.asn-online.org/education_and_meetings/geriatrics/. Accessed July 2009.
4. Sclanger L. Kidney senescence. Washington, DC: American Society of Nephrology. Online Geriatric Nephrology Curriculum. Available at: http://www.asn-online.org/education_and_meetings/geriatrics/. Accessed July 2009.
5. Wiggins J, Patel C. The coming pandemic of CKD/ESKD and the aging population. Washington, DC: American Society of Nephrology. Online Geriatric Nephrology Curriculum. Available at: http://www.asn-online.org/education_and_meetings/geriatrics/. Accessed July 2009.
6. Wiggins J. Why do we need a geriatric nephrology curriculum? Washington, DC: American Society of Nephrology. Online Geriatric Nephrology Curriculum. Available at: http://www.asn-online.org/education_and_meetings/geriatrics/. Accessed July 2009.
7. US Renal Data System. USRDS 2007 Annual Data Report: Atlas of chronic kidney disease and end-stage renal disease in the United States. Bethesda, MD, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, 2007.