Chronic kidney disease is at least 3–4 times more frequent in Africa than in developed countries. Hypertension affects ≈ 25% of the adult population and is the cause of chronic kidney failure in 21% of patients on renal replacement therapy in the South African Registry. The prevalence of diabetic nephropathy is estimated to be 14%–16% in South Africa, 23.8% in Zambia, 12.4% in Egypt, 9% in Sudan, and 6.1% in Ethiopia. The current dialysis treatment rate ranges from 70 per million population (pmp) in South Africa to <20 pmp in the most of sub-Saharan Africa. The transplant rate in Africa averages 4 pmp and is 9.2 pmp in South Africa. The goal for sub-Saharan Africa should be to have a circumscribed chronic dialysis program, with as short a time on dialysis as possible, and to increase the availability of transplantation (both living related and cadaver) and promotion of prevention strategies at all levels of health care. Screening for kidney disease in high-risk populations, eg, patients with hypertension and diabetes mellitus and a family history of kidney disease, should be instituted as the first step in kidney disease prevention in developing countries. (Ethn Dis. 2009;19 [Suppl 1]:S1-13–S1-15)

Key Words: Chronic Kidney Disease, End-stage Renal Disease, Sub-Saharan Africa, Renal Replacement Therapy, Prevention Strategies

INTRODUCTION

Africa is the second-largest continent on Earth and has a population of ≈850 million people living in 54 countries, with a population growth of 2.3%. Sub-Saharan Africa occupies >80% of the land mass of Africa and has a population of 741 million and an annual population growth rate of 2.1%. Millions of people live in poverty, with an external debt of 48.3% of gross national income.1 In sub-Saharan Africa, >291 million people live on <$1 per day.

Life expectancy has declined in the past 10 years in sub-Saharan Africa and averages 46 years.1 Wars, crime, and violence are a serious drain on the economy, and in South Africa crime costs an estimated 6% of gross domestic product. Increasingly, health is influenced by social and economic circumstances. Any improvements in health thus demand integrated, comprehensive action against all the determinants of poor health.

Per capita expenditure per year on health care ranges from $9 (Nigeria) to $29 (Senegal) to $100 (North Africa) to $158 (South Africa); per capita healthcare expenditure in Europe is $2000. Healthcare expenditure in 2002/2003 for the public sector in South Africa amounted to $100 per capita per year, ≈3% of gross domestic product.2

Infectious diseases are the world’s leading cause of death, 43% in the developing world compared with 1.2% in the developed world. In Africa, they are a major health problem. HIV/AIDS has reached epidemic proportions, especially in sub-Saharan Africa; two-thirds of all adults and children with HIV worldwide live in sub-Saharan Africa (24.7 million), and the epicenter is in Mozambique, Swaziland, and South Africa.4,5 Of the known deaths world-wide due to AIDS in 2006, 72% of those occurred in sub-Saharan Africa (2.1 of a total of 2.7 million). Botswana has an estimated 330,000 people infected with HIV/AIDS, including 39% of the population aged 15–49 years. Africa is thus facing the “double burden” of disease, with also a marked increase in noncommunicable diseases, such as cancer, diabetes, and hypertension.6

There is a continuing “brain drain” of healthcare workers from Africa to more affluent regions.7 There are large rural areas of Africa that have no health professionals to serve these populations. There are no nephrologists in many parts of Africa; the numbers vary from .4 per million population (pmp) in Nigeria to .5 pmp in Kenya and Sudan, 1 pmp in South Africa, 4 pmp in Morocco, and 10 pmp in Egypt according to a recent report.8 The Fellowship Program of the International Society of Nephrology has trained many African physicians to provide renal care for their communities.

CHRONIC KIDNEY DISEASE

The high incidence of chronic kidney disease among Black Americans has been demonstrated in several studies. Unfortunately, lack of functioning registries in most of sub-Saharan Africa has resulted in a lack of reliable statistics. However, there is a general impression that it is at least 3–4 times more frequent than in more developed countries; uremia was reported to account for 1.0%–1.5% of total annual deaths among Egyptians, both in the predialysis era and for 2 decades thereafter.9 These figures are comparable with those of other countries in the region with similar socioeconomic standards.

Chronic kidney disease affects mainly young adults aged 20–50 years in sub-Saharan Africa and is primarily due