

Prevention strategies for chronic disease in Latin America

John H Dirks, Sheila Robinson, Emmanuel Burdmann, Ricardo Correa-Rotter, Sergio Mezzano and Bernardo Rodríguez-Iturbe

The first John H Dirks Renal Disease Prevention meeting, "Prevention Strategies for Chronic Kidney Disease in Latin America: A Strategy for the Next Decade", was held in Villarica, Chile, November 21–23, 2005. Organized by the International Society of Nephrology (ISN) and the Latin American Society of Nephrology and Hypertension (SLANH), the goal was to define the state of chronic kidney disease (CKD) and its treatment in Latin America, and set it within the global context.

The Latin American region comprises low-income and middle-income nations in which urbanization, increased lifespan, changed diets and declining physical activity have resulted in chronic diseases secondary to hypertension, kidney dysfunction and diabetes. From 2000 to 2030, prevalence of diabetes is predicted to increase by 248% (Wild *S et al.* [2004] *Diabetes Care* 27: 1047). In Mexico the prevalence of diabetes increased by 22% from 1993 to 2000; the proportion of deaths attributable to chronic diseases rose from 10% to 50% in the 50-year period to 1999. In Latin America, 35–55% of deaths are currently attributable to heart disease and stroke. Hypertension now affects about 27% of the population; approximately 51% of sufferers are identified, 33% are treated and 23% have their hypertension controlled. In poorer countries, hypertension is controlled in less than 10% of cases. In middle-income countries such as Brazil, the main cause of end-stage renal disease (ESRD) has shifted from glomerulonephritis to hypertension and diabetes.

Across the region, 182,000 patients receive renal replacement therapy (SLANH [2005] Latin American Registry of Dialysis and Transplantation). There is a correlation between gross national income per capita and rates of ESRD (SLANH [2003] Latin American Registry of Dialysis and Transplantation); for example, 916 cases per million population (pmp) in Uruguay and 63 pmp in Bolivia. One Venezuelan study showed that only 15% of CKD patients have access to treatment. More than 48,450

There have been too few epidemiological studies to support national initiatives for treatment or prevention

patients had a functioning renal transplant in 2004, but the numbers are not rising fast enough to keep pace with need. Transplantation rates vary widely across the region.

Data on causes, incidence and prevalence of ESRD, and availability of treatment, are patchy or entirely lacking. There have been too few epidemiological studies to support national initiatives for treatment or prevention (except in Uruguay). The lack of infrastructure and health-care professionals is a problem. There is a shortage of qualified laboratories and a need for standardization.

Doubling the current annual transplantation rate in Brazil from 3,000 to 6,000 would reduce the number of patients projected to be on dialysis in 2025 from 110,000 to 90,000. If the predicted increase in new ESRD patients could be cut by 75% through implementation of renoprotective measures, the number requiring renal replacement therapy would plateau within 10 years and remain constant thereafter.

Uruguay has established an excellent prevention model, including a complete patient registry. With support from the government, the medical community and the Uruguayan Society of Nephrology, the program aims to promote renal health education and healthy lifestyles, to provide renal health care at the primary care level (including multidisciplinary health-care teams), to promote early diagnosis of CKD among those at risk, and to support and optimize care, including medication costs.

Chile's Ministry of Health has developed an impressive understanding of chronic disease, recognizing that governments are stewards of health for primary, secondary and tertiary prevention. It is recognized that all stakeholders must be included. A needs assessment to define goals is underway, and a slate of effective interventions have been implemented.

Supplementary information, in the form of a more detailed report, is available on the *Nature Clinical Practice Nephrology* website.

JH Dirks, S Robinson, E Burdmann, R Correa-Rotter, S Mezzano and B Rodríguez-Iturbe were members of the organizing committee for the Villarica meeting.

Competing interests

The authors declared they have no competing interests.

www.nature.com/clinicalpractice
doi:10.1038/ncpneph0226