The Tragedy of Having ESRD in Mexico

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“...my son was on peritoneal dialysis; he lost his abdomen to infection. We were told his last chance was hemodialysis. We’ve been searching for days in different hospitals to find a slot. It is too expensive; we don’t have money left, no social security; we’ve spent all we got; we don’t have any other place to go.”

Anonymous

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hirteen years after our first report that highlighted the disparities of access to renal replacement therapy (RRT) in the Mexican population,1 the study by Valdez-Ortiz et al.2 indicates that nothing has changed to improve access and quality of care to end-stage renal disease (ESRD) patients in Mexico.

Chronic kidney disease (CKD) has become a serious public health problem in Mexico. Between 1990 and 2013, CKD burden rapidly increased, with an age standardized years of life lost and disability-adjusted life-years (DALY) rates rising to >130%, the second highest DALY rate due to CKD in the world. Like many other Latin American countries, Mexico lacks a national dialysis registry. Reports from the Jalisco Registry estimate an annual incidence rate of 411 per million population and a prevalent rate of 1556 per million population.3 However, the fragmentation of our health care system has resulted in unequal access to renal care.

Mexico has a health system characterized by its failure to offer universal protection in health to one-half of its citizens. The public health system is multtiered and highly inefficient.4 Health expenditures represent 6.5% of the gross national product, which is below the Latin American average of 7% and below the 9% of countries that belong to the Organization for Economic Cooperation and Development (OECD). Out-of-pocket expenditures represent 40% of total health expenditures, compared with 15% in Colombia and Uruguay and 14% in the OECD. Overall, administrative expenditures in the different Mexican health subsystems represent 8.7% of their budgets, which is well above the 3.7% of OECD countries.5 Access to RRT is limited or nonexistent for the uninsured population. Social security benefits, including universal access to dialysis and kidney transplantation, are only available to salaried workers employed by the private sector or by government. However, they represent 48% of the country’s population, and only 3% can afford private health insurance. The remaining 49% do not have access to social security benefits and cannot afford private health care services. This segment of the population seeks care at the facilities of Mexico’s Health Ministry, where access to RRT is limited or nonexistent. The government Popular Insurance Program (Seguro Popular), which was established in 2003, intended to correct these disparities. Although after 15 years of its implementation, the percentage of the population seeking some type of public health insurance has increased from 41% in 2002 to 81% in 2015,6 Seguro Popular still does not cover ESRD treatment.

As a result, the marked disparities between the insured and uninsured populations with access to RRT persist. By 2015, the treated ESRD incidence and prevalence rates in the population with social security were 281 and 1357 per million population, respectively, whereas 130 and 200 per million population were uninsured, respectively (Figure 1).3 The origin of these disparities is multifactorial. First, the number of dialysis and transplantation facilities is in the Health Ministry is few. Second, there are geographic restrictions. Most dialysis and transplantation facilities are located in the country’s largest cities and the nation’s capital, which is a far distance for the population without insurance. Third, and most important, access to dialysis and transplantation is limited only to those patients who can afford to pay part or all of the...
treatment expenses. Because the average monthly income in the uninsured population is <$133 US dollars (USD), many patients refuse dialysis, eventually abandon their treatment, or lose their kidney grafts because sustaining dialysis or immunosuppression becomes unaffordable. In addition, uninsured patients treated for ESRD are highly unlikely to receive predialysis nephrology care. As a result, they have severe metabolic abnormalities and high mortality rates at initiation of dialysis.6

Although peritoneal dialysis (PD) continues to be the frequent modality of treatment in Mexico, hemodialysis (HD) has experienced a significant growth in recent years. Because of its simplicity and lower cost, currently estimated at $6000 USD patient per year, PD rapidly became the treatment of choice for insured dialysis patients at the Mexican Institute for Social Security (IMSS) and at the Institute of Social Security and Services for Civil Servants, the largest dialysis providers in Mexico. By the late 1990s, 90% of their dialysis population was on this therapy, and HD was used as a backup therapy of last resort for patients in whom PD failed. This unwritten PD-first policy prevailed in the public health sector for >2 decades. However, over the years, as the number of patients in whom PD failed increased, the limited number of HD facilities became insufficient, which resulted in patients standing outside of overcrowded in-center dialysis units, waiting for an empty place, to receive 1 or 2 dialysis treatments a week, or even once every 2 weeks. This inhumane situation prompted IMSS to hire private dialysis providers largely owned by industry. However, as the capacity of private HD units increased, a significant number of patients were offered HD as a first option. As a consequence, by 2013, the number of patients on PD declined to less than one-half of the dialysis population, at an unaffordable higher cost (estimated at $9000 USD patient per year) to the public sector.6 This required IMSS to reconsider its PD-first policy, and, in consequence, the return to inadequate treatment for those patients on HD.

Kidney transplantation is recommended as the treatment of choice for ESRD. The introduction of legislation on organ donation and transplantation in 1984 resulted in a significant increase in kidney transplantation rates in Mexico, from 1.57 per million population in 1984 to 22.8 per million population in 2015. However, this success has not been shared equally by the uninsured population. Because Seguro Popular does not pay for the cost of kidney transplantation and immunosuppressive therapy, transplantation rates remain significantly lower (130 per million population vs. 13 per million population) among patients without social security.

Mortality on PD is high. Due to the lack of a national registry, most of the information on outcomes on PD patients is scarce and comes from a few single-center reports. In a report from a network of centers that belong to IMSS, the 2-year patient survival was <50%, and in 1 center, patient survival was <20%. It was suggested that the overall substandard quality of care was responsible for these bad outcomes. Outcomes in the uninsured population are as bad as those with social security. In a study that compared survival outcomes in uninsured PD patients in Jalisco with Hispanic patients in the United States, mortality was 3-fold higher in Mexico. The high mortality was attributed to the advanced stage of kidney disease at the time of dialysis initiation, treatment withdrawal, and to the lack of predialysis nephrology care.6

Reports on HD outcomes are also infrequent and disappointing. Despite the largest number of HD patients now being treated in private facilities, a report from a large cross-sectional national study of public and private dialysis units in Mexico disclosed poor quality of treatment and bad patient outcomes. The average number of dialysis treatments provided was 1.2 per week; only
2% of the patients received 3 sessions per week, and only 8% had an arterial-venous fistula. Unadjusted annual mortality rates ranged between 5.2% in the good quality units and 21% in the poor units, with an average mortality of 10.7%.

A particular issue is the problem faced by uninsured pregnant women with CKD. Prenatal surveillance in Mexico does not include serum creatinine, which limits the potential for early diagnosis of pregnancy-related acute kidney injury and CKD, and their differential diagnosis. There are few specialized centers for the care of a pregnancy complicated by kidney disease in Mexico. Access to RRT is limited or nonexistent, and pregnancy-related coverage lasts for only 42 days after delivery. In addition to an increased risk of pregnancy-related complications, perinatal results are no less troubling, because most patients give birth to preterm or small babies.

Despite the increased burden of CKD in Mexico and the failure to offer equal access to RRT, strategies to prevent CKD have not been part of the nation’s noncommunicable diseases health policies. CKD screening is very low in Mexico. An analysis of the results of the National Health Surveys in 2006 and 2012 indicated that annual albuminuria testing in patients with diabetes occurred in only 12.6% of patients in 2012. In addition, uninsured predialysis CKD patients are often denied access to treatment by Seguro Popular when they are identified as having kidney disease. Therefore, the opportunity to intervene to retard CKD progression is lost. To overcome this barrier, health professionals do not disclose the diagnosis of CKD in their prescriptions and medical files, which causes an underreporting of this condition in affiliates to Seguro Popular.

In conclusion, CKD care in Mexico is unjust, unequal, and below the quality of international standards. The current infrastructure and resources are insufficient to satisfy the demand of renal care in our society. Therefore, it is of paramount importance to consider CKD a public health priority and to implement a comprehensive program of prevention and treatment of this illness. An effort should be made to decentralize the dialysis programs and to promote a PD-first policy and kidney transplantation as the treatments of choice. The use of generic immunosuppressive drugs could help to make this therapy more affordable. The establishment of a national ESRD registry, the extension of Seguro Popular to cover RRT nationwide, and the implementation of community screening programs for the detection and control of CKD offers an opportunity to correct the existing disparities and for improving CKD care in Mexico.

DISCLOSURE
All the authors declared no competing interests.

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