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Summary: The number of patients requiring dialysis by 2030 is projected to double worldwide, with the largest increase expected in low- and middle-income countries (LMICs). Dialysis is seldom considered a high priority by health care funders, consequently, few LMICs develop policies regarding dialysis allocation. Dialysis facilities may exist, but access remains highly inequitable in LMICs. High out-of-pocket payments make dialysis unsustainable and plunge many families into poverty. Patients, families, and clinicians suffer significant emotional and moral distress from daily life-and-death decisions imposed by dialysis. The health system's obligation to provide financial risk protection is an important component of global and national strategies to achieve universal health coverage. An ethical imperative therefore exists to develop transparent dialysis priority-setting guidelines to facilitate public understanding and acceptance of the realistic limits within the health system, and facilitate fair allocation of scarce resources. In this article, we present ethical challenges faced by patients, families, clinicians, and policy makers where dialysis is not universally accessible and discuss the potential ethical consequences of various dialysis allocation strategies. Finally, we suggest an ethical framework for use in policy development for priority setting of dialysis care. The accountability for reasonableness framework is proposed as a procedurally fair decision-making, priority-setting process. *Semin Nephrol* 37:273-286 © 2017 Elsevier Inc. All rights reserved.

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Chronic kidney disease (CKD) mortality increased by 82% between 1990 and 2013, with CKD being one of a few diseases worldwide in which mortality failed to decrease.¹ The true prevalence of acute kidney injury (AKI) and CKD in most low- and middle-income countries (LMICs) are unknown, but are likely at least as high as in high-income countries (HIC).²⁻⁴ Because the symptoms are nonspecific until advanced stages of the disease and awareness and diagnostic possibilities in many LMICs are poor, early diagnosis of kidney disease, when simple interventions could be effective, is often

missed. Social determinants play an important role in the risk for kidney disease and its progression in LMICs as outlined in [Table 1](#). Dialysis and transplantation are the only means of surviving chronic kidney failure. Little is known about the need for dialysis among patients with AKI in LMICs, but AKI tends to be more severe than in HICs, most likely owing to delays in presentation to the hospital, and few patients can afford dialysis.^{5,6} For patients with end-stage kidney disease (ESKD), the global country prevalence of dialysis ranges from 0.1 (or zero) to more than 2,000 per million population (pmp), showing a vast inequity in dialysis access.⁷ The global need for dialysis is projected to double by 2030, largely in LMICs.⁸ Recent estimates have suggested that 2.3 to 3.2 million people die annually because of an inability to access dialysis or sustain the treatment.^{8,9}

Many ethical dilemmas are raised by the facts that the global burden of renal disease remains undefined, access to early diagnosis and effective management is sub-optimal, access to life-saving renal replacement therapy (RRT; dialysis or transplantation) is highly inequitable, and the costs of RRT are prohibitive for individuals and health systems in LMICs. Technology has a global reach, but in LMICs given the costs and infrastructure required, demand outstrips the capacity for equitable access, aggravated by the lack of clear policies about allocation of limited dialysis resources. Thus, priority-setting dilemmas regarding RRT under resource-limited conditions must be addressed: should lines be drawn on

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Table 1. Differences in Kidney Disease Between High- and Low-Income Countries

Countries	Acute Kidney Injury		End-Stage Kidney Disease	
	HIC	LMIC	HIC	LMIC
General mean age (y)	> 60	25-50	> 60	20-50
Location	Hospital acquired	Community acquired	Community, acquired	Community, acquired
Most common risk factors	Age, CKD, infections, nephrotoxins, surgery	Volume depletion, infections, pregnancy	Diabetes, hypertension, glomerulonephritis	Glomerulonephritis, hypertension, HIV, environmental exposures, diabetes, unknown
Multimorbidity	Often present	Often absent	Often present	Often absent
Access to dialysis	Yes	Limited	Yes	Limited
Financing dialysis	State, insurance	Often out of pocket	State, insurance	Often out of pocket
Financing medication	State, insurance	Often out of pocket	State, insurance	Often out of pocket
Preventive strategies	Increased awareness, avoid hypotension, avoid nephrotoxins	Increased awareness, reduce infection rates, vaccinations, reliable availability of antibiotics and intravenous fluids, reduce use of traditional remedies, improve antenatal and maternal care, gender equality, reduce poverty	Increased awareness, early detection and treatment, manage blood pressure, diabetes, obesity, cardiovascular risk factors	Increased awareness; improve access to early detection and essential medications; reduce infection rates; reduce use of traditional remedies; manage blood pressure, diabetes, and HIV; reduce poverty; improve nutrition; improve gender equality, education, and work conditions; reduce environmental exposures

Abbreviation: HIV, human immunodeficiency virus.
Data from Mehta et al.² and Jha et al.⁶⁸

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