



# INTERNATIONAL SUMMIT ON HEPATOLOGY AND NEPHROLOGY RESEARCH



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## IMPACT CKD: The Significant Societal and Environmental Impact Of Chronic Kidney Disease Over The Next Decade In Brazil

**Abstract:** Chronic kidney disease (CKD) is a progressive disease that thrives when undetected. Population ageing and increased comorbidities are projected to shift the CKD distribution to later stages that have larger socioeconomic and environmental impacts in Brazil. The significant burden of renal replacement therapy (RRT) suggests the need to prioritize preventive and early detection strategies.

Patient-level simulation model was developed to quantify the burden of CKD on clinical, patient, health system, environmental, productivity, and societal outcomes for the next decade. Yearly societal and economical burden were determined by applying the inputs to the number of diagnosed patients within each stage and aggregating for all patients. Resource burden was determined by multiplying the inputs by the number of diagnosed patients within each stage. To calculate the costing outputs, yearly CKD costs were applied to each patient.

By 2032, the number of Brazilians with CKD is projected to rise by 1.8M (7.2% increase), while the number of patients undergoing dialysis 170.8% (~233K). CKD is projected to result in USD38 billion of lost income.

Freshwater consumption fossil, fuel depletion and CO<sub>2</sub> emissions of patients with CKD are projected to rise 40% by 2032. RRT alone is project to incur the equivalent of the annual water usage of ~370K households, the annual power for 11M lightbulbs and the CO<sub>2</sub> emissions of 1.5M cars.

While overall CKD patient numbers increase by 7%, the distribution towards the later stages of CKD drives significant impact in terms of the epidemiology of CKD, across healthcare system, on patients, caregivers, society and the environment.

**Keywords:** chronic kidney disease, sustainability, burden, prevention

**Biography:** Talita Gobbi is the Sustainability and Health Equity Lead at AstraZeneca in Brazil. She holds a degree in Communication from São Paulo State University and a master's in International Public Affairs from Luiss University in Italy. With over a decade of experience in healthcare, she has worked in policy, government relations, advocacy, and communication across Brazil and Europe. Her career includes global roles at AstraZeneca and the United Nations, World Food Programme (WFP).