

## Current Status of Nephrology in Malaysia

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Nephrology as a separate discipline in Malaysia started in 1974 with the setting up of the Institute of Urology and Nephrology at Kuala Lumpur Hospital. However, a decade prior to this, haemodialysis had already been introduced to treat acute kidney injury due mainly to obstructive uropathy. In the early days there were not many treatment options for patients presenting with end-stage kidney failure due to lack of resources and manpower. Even today there is still a relative shortage of nephrologists with a ratio of 6 nephrologists per 1 million population. However, through a series of public- and private-sector reforms over the last 45 years, dialysis access has increased from 13 per million population (pmp) in 1990 to 246 pmp in 2016.<sup>1</sup> Currently public, private and NGO sectors provide 30%, 49% and 21% respectively of overall dialysis treatment. However, 63% of total funding for dialysis is provided by the government.

The main form of renal replacement therapy (RRT) in Malaysia is haemodialysis which accounts for 90% of all dialysis therapy. Peritoneal dialysis utilisation has grown at a much slower pace – in the public sector there is 30% PD utilization but overall, PD only accounts for 10% of RRT. Kidney transplantation started in Malaysia in 1975 but the transplant rate has always remained low. This is due to a number of factors including cultural and religious barriers and perhaps, the increased availability of dialysis options. Transplantation rates in fact declined from 6 pmp in 2006 to 3 pmp in 2016, and are driven mainly by living related renal transplants. Given the low deceased organ donation rate, a major revamp of the organ allocation system has been undertaken in 2019. The new allocation system is referred to as MyKAS, for Malaysian Kidney Allocation System and will use modified UNOS (United Network of Organ Sharing) criteria, incorporating Kidney Donor Profile Index (KDPI) and Estimated Post Transplant Survival (EPTS), in order to optimize the utility of the scarce kidneys and produce better allograft and recipient outcomes.

The prevalence of CKD in Malaysia has increased from 9.07% in 2011 to 15.48% in 2018. This increase is mostly due to population aging and increasing prevalence of non-communicable diseases. Diabetes currently accounts for 65% of all end stage kidney disease in the country, while hypertension accounts for another 19%.<sup>1</sup> National Health Morbidity Surveys have shown an alarming increase in prevalence of diabetes from 11.6% in 2006 to 17.5% in 2015.<sup>2,3</sup> The prevalence of overweight & obesity among adults has also increased from 14.0% in 2006 to 17.7% in 2015.<sup>2,3</sup> Hypertension prevalence has however remained fairly stable at 30.3% in 2015.<sup>3</sup> In April 2018, the National Action Plan for Healthy Kidneys (ACT-KID 2018-2025) was approved by a Special Committee chaired by the Director-General of the Ministry of Health Malaysia. This action plan aims to improve all levels of CKD care from prevention and early detection, to the other end of the spectrum i.e. renal replacement options.

Multiple stakeholders in primary care, public health, nephrology, professional societies such as the Malaysian Society of Nephrology and non-governmental organisations such as the

National Kidney Foundation of Malaysia are involved in the strategic plan. Future studies to re-assess trends in CKD prevalence will be necessary to gauge the impact of this initiative.

References :

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