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ABSTRACT

In Malaysia, dialysis-treated end stage renal disease (ESRD) patients have been increasing rapidly. Haemodialysis (HD) and continuous ambulatory peritoneal dialysis (CAPD) use a disproportionately large amount of limited healthcare resources. This study aims to estimate the costs of HD and CAPD from the Ministry of Health (MOH) perspective. One year prospective multicentre study was conducted from October 2016 to September 2017 to assess direct medical costs of 90 HD patients and 73 CAPD patients from five large MOH dialysis centres. A mixed method of activity-based costing and step-down was used. The capital costs included land, building, medical equipment and furnishing. The recurrent costs included staff emoluments, facility utilities, patients’ medical costs and dialysis consumables. One-way sensitivity analysis was performed to investigate variability in the data. One hundred and forty-one patients (82%) completed the study comprising of 77 patients on HD and 64 patients on CAPD. Majority of the patients were between 46-65 years old (n=75, 53.2%). The most common aetiology of ESRD was diabetes mellitus (44.2% in HD and 48.4% in CAPD). Cost per patient per year was RM39,790 for HD and RM37,576 for CAPD. The main cost drivers were staff emoluments (37.6%) and dialysis consumables (70.5%) for HD and CAPD respectively. HD is highly sensitive towards all
the variables analysed except for dialysis consumables. In CAPD, there are minimal sensitivities except for the 5% discount rate. Knowledge of the costs of modalities are useful in the context of planning for dialysis services and to optimise the number of kidney failure patients treated by dialysis within the MOH.

**Keywords**: Haemodialysis, continuous ambulatory peritoneal dialysis, end stage renal disease, cost, Malaysia.

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