ABSTRACT

Global epidemic of end stage kidney disease (ESRD) is on the rise with high prevalence in developing countries resulting in poor health outcomes. It also has moved towards adverse socio economic implications for patients, households and the country as a whole. In Sri Lanka, the main renal replacement therapy (RRT) is center based Haemodialysis (HD) with the prevalence of 64.5 patient slots for population one million. The public sector handles 70% of them through six island wide HD centers.

This study made an attempt to estimate both direct and indirect costs to the patient's household. Provider cost of HD therapy was estimated by performing a descriptive cross sectional study at Kandy and Anuradhapura (A'pura) public sector hospitals because 42% of the national capacity is with these two hospitals. A pre-tested interviewer administered questionnaire was used for the collection household cost with a recall period of one month. The sample consisted of systematically drawn 64 HD patients each.

Step down costing approach (SDCA) was adopted to estimate the provider cost. 84% of and 36% of HD patients in Anuradhapura and of Kandy, respectively, were from inside the district, the rest in altogether were from 13 other administrative districts. The mean age of Anuradhapura patients was significantly different from Kandy. On average there was a male predominance (76%). In both centers, over 74% had gone up to grade 10. Whilst own business or own properties was the main income source of about 50% in each centre, only 14.3% and 23.9% were engaged in unskilled occupations in Anuradhapura and Kandy, respectively.

Patients with a monthly income below Rs.10,000 (or US$ 3 per day) in Anuradhapura and Kandy were 50.7% and 41.8%, respectively. Public bus service was the mode of

transport of 74.5% and 44.5% of the patients in Anuradhapura and Kandy, respectively. Average total direct household cost in Anuradhapura and Kandy stood at Rs. 8,205 and Rs.11,385, respectively. The proportions of the cost of drugs, investigations, transport and meals on average stood at 3.5%, 3.7%, 53.5% and 21.6%, respectively. On average the loss of time per month per patient, household members and bystanders were reported as 15.8, 8.2 and 6 days respectively whilst total indirect cost of households in Anuradhapura was Rs. 17,110, and it was Rs 18,600 in Kandy. Altogether 65% of the indirect cost was borne by the patient and it was 36% and 47.6% of the income of the patient in Anuradhapura and Kandy, respectively.

Average total direct household cost in Kandy and Anuradhapura were Rs: 11,385 and 8,205 respectively in that proportion of cost for drugs, investigations, transport and meals were 3.5%, 3.7%, 53.5% and 21.6% respectively. Irrespective of level of disability, 74.5 %(47/63) of Anuradhapura while 44.5 %(30/67) of Kandy used bus.

In Anuradhapura and Kandy the unit cost (of one session of HD) was reported as Rs.7,322 and Rs.6,573, respectively. Meanwhile, annual total provider cost per HD patient management was Rs.998,700 and Rs,756,500 in Anuradhapura and Kandy, respectively. From the total annual provider cost while 92.4% accounted for direct cost and the rest 7.6% for indirect cost. In total 90.8% of direct cost was incurred as recurrent expenditure. There was a noteworthy difference in the composition of recurrent expenditure between the two hospitals. In Anuradhapura, the proportions for drugs, HD consumables and personnel were 10.4%, 41.9% and 45.7%, respectively. Those proportions stood at 25.3%, 27.9% and 56.5% in Kandy respectively.

These findings are important for health policy makers as well as mangers in the public sector in the context of limited available resources constraints coupled with the increasing prevalence of kidney failure. This study brings out the necessity of developing a sustainable and rational approach to expand RRT services in a highly efficient manner. This will indeed be a challenge for the public health sector as the study has pointed out the necessity catering to the lower stratum of the society with poor socio-economic background by way of minimizing their direct and indirect household cost. Such an approach will lead to provide safety nets and hence social security for them.

In this context, it is essential to prioritize primary prevention and setting up of proper management system at the secondary stage to minimize the social cost of the disease.