

Predictors of Hospital Survival among Patients Initiated on Haemodialysis at a Tertiary Hospital

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Abstract

Background: Haemodialysis (HD) is a life-saving treatment for kidney disease patients, but hospital survival rates are poor in low-income countries due to limited resources. Despite this, there is a lack of knowledge on factors affecting hospital survival among HD patients in these countries.

Objective: This study aimed to identify the hospital survival rates and predictors of hospital survival among HD patients in low-income countries.

Methods: We retrospectively analyzed medical records of adult patients who started haemodialysis (HD) at St. Francis Hospital, Nsambya between 2015 and 2022. We included patients aged 18+ years having their first time haemodialysis sessions at St. Francis Hospital, Nsambya and excluded those with renal transplants, missing records, or early referrals. We collected demographic, clinical, and laboratory data. Survival analysis and Cox regression were used to estimate hospital survival and hazard ratios among variables respectively.

Results: We retrieved 172 admission charts of patients initiated on HD, with a 59.3% hospital survival (n=102). Positive predictors of hospital survival included: being male (HR 0.61, p=0.046), prior nephrologist care (HR 0.53, p=0.046), age <60 (HR 0.51, p=0.006), ward admission (HR 0.21, p<0.001), and blood transfusion (HR 0.34, p<0.001). Negative predictors included: reduced level of consciousness (HR 17.74, p<0.001), mechanical ventilation (HR 2.46, p<0.001), and vasopressor use (HR 2.56, p<0.001)

Conclusion: There is a low in-hospital survival rate among patients initiated on HD in our setting. Critically ill patients (on ventilation, vasopressors, or with altered consciousness) and those without prior nephrologist care are less likely to survive. Thus, early identification of high risk patients and early referral of kidney patients to nephrologists can improve hospital survival among haemodialysis patients in low-income countries.

Key words: Haemodialysis, Kidney disease, Hospital survival rates