Services and costs of pharmaceutical care in Ethiopia

Tigestu Alemu Desse 1, Fekadu Assefa 2, Diriba Fufa 3, Tefera Belachew 4.
1Deakin University. 2Jimma University, Ethiopia. 3Jimma university, Ethiopia. 4Jimma University, Ethiopia

Background Studies show the positive impact of clinical pharmacy services on clinical and economic outcomes. However, no study was done to evaluate clinical and cost impact of clinical pharmacy services in Ethiopia

Purpose to measure the impact of clinical pharmacy service on patient care and cost saving in hospitalized medical patients

Method A single center randomized control trial was conducted. Patients were assigned to clinical pharmacy intervention group or control group from July 4- October 10/2016. The intervention group received clinical pharmacy services whereas the control group was simply observed. The primary outcomes were number of drug related problems, number of medication errors and cost of medicines. Sample size was calculated with 95% CI and 80% power. Total sample size was 146. We performed linear regression, student’s t-test, and chi-square tests

Findings We analyzed 69 patients in intervention group and 71 patients in control group. The mean ages of patients in the intervention and control group were comparable (39.70±17.56 vs. 41.62±17.66 years, p=0.519). Mean number of medication errors in control group was significantly higher than that of intervention group (1.4±0.23 vs. 0.55±0.11, p=0.03). Pharmacists identified and intervened 46 medication errors. Mean number of drug related problems (DRPs) identified and intervened in intervention group was significantly lower than that of control group (2.04±1.2 vs. 2.6±1.7, p=0.038). In intervention group 107 DRPs were identified and intervened of which 95(88.9%) were accepted by physicians. Cost of medicines was 83,662.46 Ethiopian Birr (ETB) for control and 44,529.11 ETB for intervention groups. The mean cost of medicines for intervention group is significantly lower than that of control group (645.35±603.61 vs. 1233.25±1119.26 ETB, P=0.001). Implementation of clinical pharmacy service saved 39,133.35 ET B during the study period.

Conclusion Implementation of clinical pharmacy services improved patient outcome and saved cost of treatment in hospitalized medical patients. Therefore, we recommend the hospital and stakeholders to enhance involvement of pharmacy professionals in the care of hospitalized patients.