

**ABSTRACT*****THE EFFECT OF PHARMACEUTICAL CARE IMPLEMENTATION ON THE ACHIEVEMENT OF BLOOD PHOSPHATE LEVELS IN HEMODIALYSIS PATIENTS***

*(Study at Adi Husada Hospital-Undaan Wetan Surabaya)*

**Background:** *Hyperphosphatemia is a disorder of mineral metabolism in chronic kidney disease particularly in hemodialysis (HD) patients. It is potentially life threatening by contributed to the development of mineral bone disease and cardiovascular calcification. Prevention of those prognosis through multimodal therapy (diet restriction, used of phosphate binder and hemodialysis) is essential to decrease the morbidity and mortality risk. Nevertheless, these managements have a low adherence level in Indonesia due to lack of phosphate knowledge and pill burden. Therefore, implementation of pharmaceutical care is required to overcome complicating factors and to improve the outcome therapy.*

**Objectives:** *To analyze the impact of pharmaceutical care on improving the achievement phosphate, knowledge and adherence level and suppressing the amount of drug-related problems (DRPs) in hemodialysis setting.*

**Methods:** *A single group pre and post test interventional study that conducted during 3 months. A total of 20 patients were enrolled at Adi Husada Undaan Wetan Surabaya Hospital. Interventions given in the form of counseling, education and review therapy at each patient visit.*

**Results:** *The intervention had a significant impact on phosphate levels ( $p < 0.05$ ), knowledge ( $p < 0.05$ ) and DRP ( $p < 0.05$ ) in the first follow-up, while adherence is not significant ( $p > 0.05$ ). In the second follow-up, phosphate level was increase consequently the number of patients who achieved the target decreased from 65% to 40%. Despite, other outcome was still improved significantly ( $p < 0.05$ ).*

**Conclusion:** *According to this study, implementation of pharmaceutical care in HD patients showed improvement of knowledge and adherence level and reduction of DRP, meanwhile there was no significant difference on phosphate serum levels because of cofounding factors in hemodialysis processes and patient's nutrition.*

**Keyword:** *Adherence, Drug related problems, Hyperphosphatemia, Hemodialysis, Knowledge, Pharmaceutical care.*