SUMMARY

BACKGROUND  Treatment of end stage renal disease by haemodialysis, uses dialysis fluid to facilitate the normalization of electrolyte and acid base abnormalities. The dialysate during haemodialysis is separated from patient’s blood by only a thin semi-permeable membrane which allows the passage of chemicals, microbial and microbial products into patient’s blood. It is very important that the chemical and microbial content of haemodialysis water should be check regularly to avert adverse effects that may arise from water contaminations. However this essential aspect of haemodialysis care is often not given the necessary attention in our environment.

METHODS:  Structured questionnaires were administered to eight haemodialysis centres to assess the methods of water treatment, source of water for haemodialysis use and water monitoring techniques. Also questionnaires were administered to sixty-four haemodialysis patients to evaluate clinical symptoms before, during and after haemodialysis.

Water samples were collected from three points ; A) water storage tank, B) an outlet in the piping connection between the water storage tank and reverse osmosis machine and C) an outlet piping between the reverse osmosis machine and haemodialysis machine. Samples from A and B were referred as pretreated water while samples from C were referred to as post treated water. These samples were tested for aluminum, calcium, magnesium, using colorimeter; potassium and sodium using flame photometer; chloramines , nitrare and free chlorine using colometric method. Water samples were culture in tryptone glucose extra agar at 37°c for 48hours. Endotoxin analysis was done using limulus Amaeboctye assay.