Evidence on fatigue in HD are limited by focus on unidimensional aspect of fatigue, flawed unidimensional tools, lack of objective measures, and variability in the correlates of fatigue. Fatigued individuals on HD have a poor quality of life and can die prematurely. Purpose: To examine severity and trajectory pattern of fatigue; delineate influencing physiological and situational factors pre and post-dialysis. Methods: A descriptive, correlational design was utilized. Measures were Piper Fatigue Scale (PFS)-12, Patient Reported Outcomes Measurement Information Systems (PROMIS)-Fatigue, Charlson Comorbidity Index and six-minute walk test (6MWT). Adults, cognitively intact patients on HD were included; patients with limited mobility, heart issues and abnormal vital signs were excluded for the 6MWT. Results: Participants were 86 adults (M=61.7 years, SD=13.81), predominantly male (58.1%) and African American (48.8%), with 80% reporting fatigue in the week prior to dialysis. Individuals were fatigued pre- and post-dialysis, with no statistical difference between pre- versus post fatigue scores. Significant increases were noted in sensory and cognitive fatigue from pre- to post-dialysis, while the 6MWT distance decreased significantly pre- to post-dialysis. Factors significantly associated with pre-dialysis fatigue included: low hemoglobin, younger age, and living with someone else, while comorbidities and dialysis inadequacy were trending to significant associations with fatigue. Conclusion: Individuals are fatigued before and after dialysis, with escalation of fatigue post-dialysis. Therefore, interventions that target fatigue, before and after dialysis are needed. A better understanding of trajectory pattern of fatigue will eventually help in improved fatigue management and contribute to improved survival and quality of life in this population.