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FP729LONGITUDINAL CHANGES IN SERUM FERRITIN FROM 2007 TO 2011 IN A LARGE INCIDENT COHORT OF US HEMODIALYSIS PATIENTS

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## DIALYSIS. EPIDEMIOLOGY, OUTCOME RESEARCH, HEALTH SERVICES RESEARCH - 1

FP729

### LONGITUDINAL CHANGES IN SERUM FERRITIN FROM 2007 TO 2011 IN A LARGE INCIDENT COHORT OF US HEMODIALYSIS PATIENTS

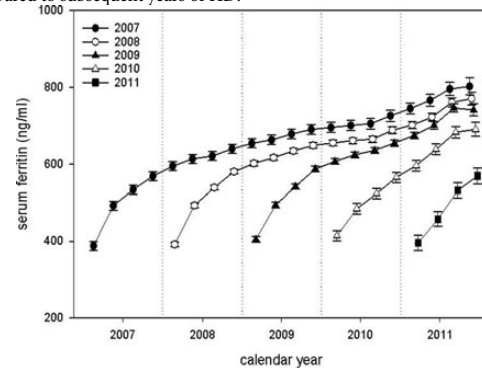
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**Introduction and Aims:** The recent rise in serum ferritin levels among prevalent US hemodialysis (HD) patients has been attributed to changes in practice patterns. A US observational study found that the median serum ferritin level rose by 24% in maintenance hemodialysis (HD) patients from Aug 2010 to Dec 2011. We hypothesized that maintenance dialysis therapy per se may have a bearing on the upward trend of ferritin over time independent of secular trends.

**Methods:** In a cohort 81,684 incident HD patients receiving care from a large US dialysis organization from Jan 2007- Dec 2011, we examined ferritin level trends from the start of dialysis initiation over 91-day intervals (quarters) using multilevel linear mixed models. Patients were divided into subgroups according to the year of dialysis initiation (2007-2011). Models were adjusted for baseline case-mix covariates, as well as time-varying levels of malnutrition and inflammation markers and IV iron doses.

**Results:** Forty-four percent of patients were female, 33% were African-American, and 63% were diabetic. There was no significant difference of age, race/ethnicity, nor sex across subgroups of year of dialysis initiation. Baseline mean ferritin levels were

incrementally higher with each subsequent year of dialysis initiation: 387.8 ng/ml (95% CI: 376.4-399.2), 391.8 ng/ml (95% CI: 385.7-397.9), 405.0 (95% CI: 397.7-412.3), and 413.9 ng/ml (95% CI: 400.4-427.4), in 2007, 2008, 2009, and 2010, respectively. In 2011, the baseline mean ferritin decreased to 395.4 ng/ml (95% CI: 375.7-415.0). In each subgroup of year of dialysis initiation, the ferritin slope was highest on year 1 of HD compared to subsequent years of HD.



**Conclusions:** Serum ferritin levels increased sharply during the first year of HD treatment, as compared with subsequent years of HD. This trend existed across all years of dialysis initiation over the course of 2007-2011, and persisted after adjustment for markers of malnutrition, inflammation and use of IV iron. Further studies are needed to determine the factors contributing to the rise in serum ferritin levels overtime in HD patients.