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

## FP684 POTENTIALLY PREVENTABLE READMISSIONS IN CHRONIC HEMODIALYSIS PATIENTS

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**Introduction and Aims:** In 2011 in the United States, 36% of prevalent hemodialysis patients were readmitted within 30 days of an index hospitalization. These rates are twice that of the general U.S Medicare population. While some readmissions are unavoidable, a substantial number could probably be avoided with optimal care - for example, management of volume overload. Despite the negative impact on patients' quality of life and adverse health outcomes and economics there remains a dearth of evidence regarding predictors of 30-day readmission in these patients. We aim to describe frequencies, correlates and length of stay of potentially avoidable 30-day readmissions in hemodialysis patients.

**Methods:** Retrospective cohort study using United States Renal Data System (USRDS). Prevalent hemodialysis patients (vintage >90 days) with acute hospitalizations from January 1, 2008, through December 1, 2008 were included. All 30-day readmissions up to December 31, 2008, were assessed. To ensure that our patient cohort reflected only hemodialysis patients who were discharged home after an index hospitalization, transfers on day of discharge to inpatient rehabilitation facility or skilled nursing facility, unknown hemodialysis start dates, "recovery of renal function" during the treatment period, and patients receiving less than 90 days of dialysis were excluded. The primary outcome was potentially preventable 30-day readmission, identified using a validated computerized algorithm based on administrative data (SQLape). Continuous variables were expressed as mean with standard deviation (SD) or median with interquartile range. Variables were compared with parametric or nonparametric tests, as appropriate.

**Results:** 250,606 index hospitalizations were identified, of which 37% were readmitted within 30 days. The median time to potentially avoidable readmission was 11 days (IQR 5 to 14). Shorter length of stay of the index hospitalization was associated with a higher risk of potentially avoidable readmission (See Table 1). Among all index hospitalizations 24%

had a potentially avoidable 30-day readmission (See Figure 1). Among the potentially avoidable readmissions, 35% and 24% were cardiac- or infection-related, respectively. Patients with potentially avoidable readmissions were more likely to be younger and black.

**Conclusions:** After an acute index hospitalization, nearly one quarter of chronic hemodialysis patients have a potentially preventable 30-day readmission. Future studies to develop and test interventions to reduce the risk of preventable 30-day hospital readmission in ESRD are warranted.

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Figure 1: Outcomes after an Acute Index Hospitalization in Patient on Chronic Hemodialysis

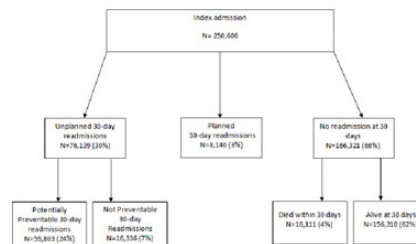


Table 1: Patient and Index Admission Baseline Characteristics

	Potentially Preventable Readmissions (N=59803)	Others (N=190803)	p-value
Mean Age, years (SD)	62.7 (15.8)	64.1 (15.21)	<0.0001
Gender (% Male)	49	50	<0.0001
Race (%)			
Black	41	38	<0.0001
White	54	57	
Other	5	5	
Diabetes causing ESRD (%)	49	49	<0.0001
Reason for Index Admission (%)			
Cardiac	31	29	
Infection	23	24	
Other	46	46	
Index Length of Stay (%)			
0-4 days	50	56	<0.0001
>4-8 days	27	26	
>8 days	23	19	