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Incident Hemodialysis Patient Hematocrit (Hct) Outcomes: Comparison of Cohorts 1991-95 vs. 1996-98.

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Hct associated outcomes comparing two time intervals have not been previously reported. We studied 84,069 incident HD patients (pts) during 1991-95 and 66,761 incident pts during 1996-98, assessing their outcome of all-cause death, all-cause first hospitalization, and relative expenditures. All pts survived through month 9 of ESRD treatment. Mortality and hospitalization risks were assessed with a Cox regression model stratified on diabetes. Hct was assessed from month 4-9, and the analysis was adjusted for demographics, comorbidity, and severity of disease. All relative risks (RR) were significant except as noted.

1991-1995		Hct <30	30-<33	33-<36	36+
	N	33,974	36,062	13,022	1,011
	% of patients	40.4	42.9	15.5	1.2
	RR of Hosp	1.19	1.08	1.00^	0.98
	RR of Death	1.31	1.12	1.00^	1.03*
1996-1998					
	N	8,763	24,465	28,674	4,862
	% of patients	13.1	36.6	43.0	7.3
	RR of Hosp	1.42	1.21	1.00^	0.78

	RR of Death	1.74	1.25	1.00 [^]	0.999 [*]
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[^]Reference group

^{*}Not significant at 95% confidence level

The proportion of pts with Hct \geq 33% increased significantly between the two cohort periods. Compared to the reference group, there were significant increases in RR of mortality and hospitalization during the 1996-99 period in pts with Hct<33%. In contrast, pts with Hct \geq 36% did not have mortality differences in either period, but had significantly associated lower RR of hospitalization in the 1996-99 period. The association between higher Hct levels and improved hospitalization outcomes in the most recent period suggests that maintaining pts at Hct \geq 33% correlates with clinical benefit.