



Determinants of Successful Home Hemodialysis Training in a Multi-center US Observational Cohort

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Background

- Home hemodialysis (HH) patients are a growing segment of the ESRD population in North America.
- However, there has been a lack of studies examining the suitability and determinants of successful HH candidates.



Current Literature

- Limited information is available in guiding home hemodialysis patient selection
- Most reports
 - Single center
 - Selection bias
 - ? Generalizability
 - Lack of quantitative analysis
 - Small sample size



Methods

- Objectives
 - To define the demographic characteristics of our HH cohort
 - To ascertain potential risk factors for patients unable to achieve HH therapy
- Descriptive cohort study of all patients enrolled into the DaVita HH program from January 1 2002 to September 1 2007.

Disposition and Training Days

- 1206 patients were enrolled into the DaVita HH program.
- 1107 patients (92%) were able to undergo HH therapy after 17.1 ± 8.4 training days.
- In contrast, 99 patients were unable to achieve HH after 9.4 ± 8.8 training days; $p < 0.001$.



Demographic Characteristics of Home Hemodialysis Patients vs. Training Failures

Variables	Age	Gender (F:M)	Charlson Comorbidity Index	Renal Replacement Vintage (years)
HH (n=1107)	51.9±14.3	371:736	4.5 ± 2.2	3.4±4.5
Training Failures (n=99)	54.5±13.6	40:59	4.6 ± 2.1	3.4±4.4

- Multivariate analysis was used to predict significant risk factors for patients unable to pursue HH.



Multivariate Logistic Model

Variables	Odd Ratio	95% Lower	95% Upper	<i>p</i> Value
Charlson Comorbidity Index (CCI)	1.38	1.13	1.69	0.0018
PatientAgeYears	0.95	0.93	0.98	<.0001
HHTrainingCenter	1.17	1.13	1.21	<.0001
PatientGender [F vs M]	0.82	0.52	1.30	0.4036
Diabetes [0 vs 1]	2.41	1.31	4.46	0.0049
Marital Status [married vs not married]	1.87	1.17	3.01	0.0095



Conclusions

- This is the first US multi-center analysis of the determinants of HH patients.
- Our results suggest that traditional demographic parameters were not the only differentiating factors in predicting successful transition to HH.
 - These included age, co-morbidity index and renal replacement vintage
- In contrast, the roles of perceived social support and gender may be of critical importance in determining successful HH training in suitable candidate patients.



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