

Table and Graph Criticism Exercise

Table principles

- Should be self-explanatory!!!
- It is easier to compare numbers in columns.
- Round aggressively, preferably to two effective digits (ie where the numbers differ). *Exception: you need to convey precise results.*
- Order rows and/or columns purposefully to convey information. Compare across columns
- Lightly use visual elements to ease comparisons.

Graph principles

- Should be self-explanatory.
- Aim for interocular traumatic impact. Use the ideas below to convey your message clearly.
- Choose a graph type to emphasize your desired message.
- **Maximize the data to ink ratio.**
- Minimize the impact of non-data ink.
- Use colors, marker symbols and line types purposefully (Excel is ☹).

Group assignment

For table and graph

- What works?
- What doesn't work?
- What principles were satisfied or violated?

Functional Status of Elderly Adults before and after Initiation of Dialysis

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ABSTRACT

BACKGROUND

It is unclear whether functional status before dialysis is maintained after the initiation of this therapy in elderly patients with end-stage renal disease (ESRD).

METHODS

Using a national registry of patients undergoing dialysis, which was linked to a national registry of nursing home residents, we identified all 3702 nursing home residents in the United States who were starting treatment with dialysis between June 1998 and October 2000 and for whom at least one measurement of functional status was available before the initiation of dialysis. Functional status was measured by assessing the degree of dependence in seven activities of daily living (on the Minimum Data Set–Activities of Daily Living [MDS–ADL] scale of 0 to 28 points, with higher scores indicating greater functional difficulty).

RESULTS

The median MDS–ADL score increased from 12 during the 3 months before the initiation of dialysis to 16 during the 3 months after the initiation of dialysis. Three months after the initiation of dialysis, functional status had been maintained in 39% of nursing home residents, but by 12 months after the initiation of dialysis, 58% had died and predialysis functional status had been maintained in only 13%. In a random-effects model, the initiation of dialysis was associated with a sharp decline in functional status, indicated by an increase of 2.8 points in the MDS–ADL score (95% confidence interval [CI], 2.5 to 3.0); this decline was independent of age, sex, race, and functional-status trajectory before the initiation of dialysis. The decline in functional status associated with the initiation of dialysis remained substantial (1.7 points; 95% CI, 1.4 to 2.1), even after adjustment for the presence or absence of an accelerated functional decline during the 3-month period before the initiation of dialysis.

CONCLUSIONS

Among nursing home residents with ESRD, the initiation of dialysis is associated with a substantial and sustained decline in functional status.

Table 2. Adjusted Models of Change in Functional Status.*		
Model and Timing of Assessment	Change in MDS–ADL Score points (95% CI)	P Value
Model adjusted for age, sex, and race†		
At initiation of dialysis	2.8 (2.5–3.0)	
During 12 mo before start of dialysis	2.2 (1.8–2.6)	
During 12 mo after start of dialysis	1.4 (0.8–2.0)	
Before vs. after start of dialysis		0.06
Model adjusted for coexisting conditions‡		
At initiation of dialysis	2.8 (2.5–3.0)	
During 12 mo before start of dialysis	2.2 (1.8–2.6)	
During 12 mo after start of dialysis	1.4 (0.8–2.0)	
Before vs. after start of dialysis		0.04
Model adjusted for coexisting conditions and laboratory values, 2618 subjects§		
At initiation of dialysis	2.7 (2.4–3.0)	
During 12 mo before start of dialysis	1.9 (1.4–2.4)	
During 12 mo after start of dialysis	1.8 (1.1–2.5)	
Before vs. after start of dialysis		0.80
Among 2360 residents surviving for at least 3 mo after initiation of dialysis‡		
At initiation of dialysis	2.5 (2.2–2.8)	
During 12 mo before start of dialysis	2.1 (1.6–2.7)	
During 12 mo after start of dialysis	2.1 (1.4–2.8)	
Before vs. after start of dialysis		0.90
Among 1375 residents with at least one ADL assessment 1 mo before start of dialysis and one ADL assessment after start of dialysis‡		
At initiation of dialysis	2.2 (1.8–2.5)	
During 12 mo before start of dialysis	3.3 (2.6–4.0)	
During 12 mo after start of dialysis	1.1 (0.2–2.1)	
Before vs. after start of dialysis		<0.001

* Positive numbers for the change in the Minimum Data Set–Activities of Daily Living (MDS–ADL) score indicate a decline in functional status. Data shown are for 3702 subjects, except where indicated.

† Race was reported in the U.S. Renal Data System database.

‡ The model was adjusted for age, sex, race, hospitalization status, and presence or absence of diabetes, congestive heart failure, coronary artery disease, peripheral vascular disease, cerebrovascular disease, chronic obstructive pulmonary disease, cancer, dementia, and depression.

§ The model was adjusted for age, sex, race, hospitalization status, albumin concentration, estimated glomerular filtration rate, and presence or absence of diabetes, congestive heart failure, coronary artery disease, peripheral vascular disease, cerebrovascular disease, chronic obstructive pulmonary disease, cancer, dementia, and depression.

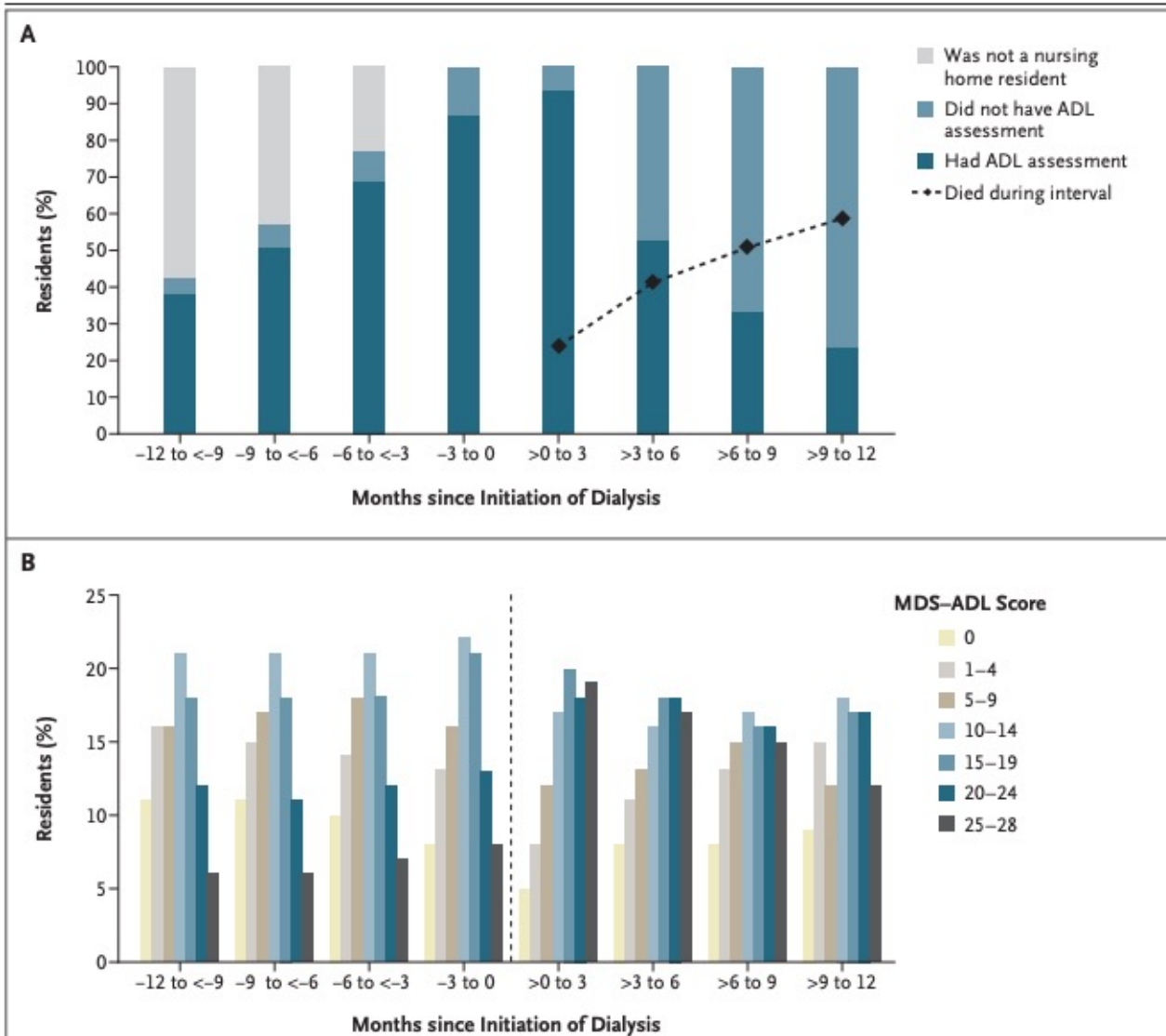


Figure 1. Decline in Functional Status and Cumulative Mortality among Nursing Home Residents before and after the Initiation of Dialysis.

Panel A shows the percentage of 3702 nursing home residents who underwent assessments of activities of daily living (ADL) during 3-month intervals before and after the initiation of dialysis. The cumulative mortality rates were 24% at 3 months, 41% at 6 months, 51% at 9 months, and 58% at 12 months after the initiation of dialysis. Panel B shows the distribution of Minimum Data Set-ADL (MDS-ADL) scores among nursing home residents before and after the initiation of dialysis. Higher MDS-ADL scores indicate poorer functional status. The dashed vertical line indicates the initiation of dialysis.