

INTRODUCTION

CMS mandated the annual administration of the KDOOL to all US dialysis patients as part of the conditions of coverage. It is inevitable that dialysis units, and especially social workers, will use this instrument to provide feedback to patients about their scores relative to others, and to track kidney-related quality of life over time. The KDOOL was even proposed as a Quality Improvement Measure in the CMS final rules for the ESRD prospective payment system.

The current norms for the KDOOL were developed in 1997 using 165 patients. It is well documented that dialysis patients have greater disease burden today than 13 years ago. As such, it would be prudent to renorm the instrument in a large more contemporary dialysis population.

METHODOLOGY

32,926 KDOOLs were administered to patients at a large U.S. dialysis organization between October 2009 and August 2010. We calculated subgroup means and standard deviations for each scale by gender, race/ethnicity, age, vintage, dialysis mode and leading co-morbidities.

RESULTS

Table 1. KDOOL subgroups

NOTE: Higher scores indicate better health-related quality of life

Subgroup	SF-12 mean ± SD		Kidney Disease mean ± SD		
	Physical	Mental	Burden	Symptoms	Effect
GENDER					
Male (18,014)	37.2±10.4	49.1±10.7	47.1±28.6	76.7±16.1	67.0±22.7
Female (14,912)	35.1±10.2	48.9±11.1	49.6±29.8	74.8±16.4	68.3±22.6
RACE/ETHNICITY					
White (13,577)	34.4±10.2	49.5±10.9	47.3±28.3	75.6±15.4	66.7±22.0
Black (12,714)	37.8±10.3	49.4±10.6	52.4±29.3	76.3±16.5	70.1±22.6
Hispanic(4452)	37.1±10.2	46.5±11.3	41.8±29.7	74.4±17.8	63.7±23.9
Asian/Pacific Islander (700)	37.7±10.0	48.4±10.7	41.5±29.4	75.9±17.3	65.7±23.3
Native American (417)	36.7± 9.3	49.5±10.4	46.3±28.2	76.8±16.7	69.9±22.0
Other/Unknown (124)	37.7±10.2	46.1±10.2	36.9±28.4	74.5±17.1	67.2±22.7
AGE					
20-29 (780)	42.6±9.7	48.0±10.5	46.5±29.2	76.3±17.0	65.4±24.0
30-39 (1,856)	40.6±10.3	48.1±10.8	47.7±29.1	75.5±17.0	64.7±23.7
40-49 (4,103)	38.3±10.4	48.2±10.9	47.8±29.0	74.6±17.0	64.8±23.7
50-59 (6,866)	36.5±10.2	48.0±11.0	47.3±29.2	74.2±17.1	65.1±23.3
60-69 (7,441)	35.2±10.3	49.2±11.0	48.3±29.5	75.8±16.0	67.6±22.4
70-79 (5,498)	35.0±10.2	50.1±10.8	49.5±29.3	77.0±15.5	71.1±21.3
80-89 (2,862)	33.9±9.7	50.7±10.2	49.5±28.4	77.8±14.6	72.8±20.2
≥90 (232)	34.5±9.6	50.2±11.0	49.8±29.5	77.9±14.3	74.4±19.8
DIALYSIS VINTAGE					
≤6 mo (3126)	35.6±10.1	48.7±11.1	46.3±29.3	75.4±16.4	66.7±22.8
7-12 mo (2143)	35.9±10.2	48.5±11.1	45.6±28.6	75.9±16.1	67.5±22.7
2-5 years (17852)	36.5±10.4	49.0±10.9	48.0±29.1	75.8±16.2	67.5±22.7
6-10 years (6025)	36.2±10.4	49.1±10.7	49.3±29.2	75.4±16.3	67.9±22.6
11-20 years (1939)	36.9±10.6	49.5±10.6	52.6±29.7	75.6±16.7	68.1±23.1
>20 years (159)	36.5±11.3	50.3±11.0	59.8±28.9	76.0±15.8	73.0±21.8
DIALYSIS MODALITY					
In-center hemodialysis (29720)	36.1±10.3	48.9±10.9	47.5±29.1	75.4±16.4	67.1±22.9
Peritoneal Dialysis (PD) (508)	38.8±10.2	50.7±10.3	56.9±29.1	78.6±15.6	74.4±19.6
Home Hemodialysis (HHD) (8)	38.5±13.0	51.5± 8.5	63.3±27.8	82.6±10.3	75.4±18.3
Other (376)	37.7±10.8	49.5±10.6	49.7±28.2	77.1±16.4	63.3±22.6
COMORBIDITIES					
Diabetes yes (22843)	35.2±10.1	48.8±11.1	47.0±29.1	74.9±16.4	66.7±22.9
Diabetes no (10083)	38.7±10.6	49.6±10.4	51.2±29.1	77.4±15.9	69.6±22.2
Cardiovascular disease yes (10061)	35.2±10.2	48.8±10.9	47.3±29.0	74.6±16.5	66.5±22.9
Cardiovascular disease no (22865)	36.8±10.4	49.1±10.9	48.7±29.2	76.2±16.2	68.1±22.6

Indicates differences ≥5 points

SUMMARY of RESULTS

- Blacks report lower disease Burden and Effects.
- Patients <40 years old report better Physical Function; patients >70 years old report fewer disease effects.
- Peritoneal dialysis and home hemodialysis patients report lower disease burden and effects; home hemodialysis patients report lower disease symptoms.
- Patients on dialysis >20 years report lower disease burden and effects.

KEY LEARNINGS

- ✓ Neither the Physical nor Mental Component Scores of the SF-36 differentiate between subgroups of dialysis patients, with the exception of patients <40 reporting better physical function.
- ✓ Of the disease scales, Burden and Effects demonstrate subgroup differences in expected (lower Burden and Effects in PD and HHD patients) but also unpredicted ways (lower Burden and Effects in blacks and patients >70 years old; no differences in patients with diabetes or cardiovascular disease).
- ✓ The Symptoms scale did not differentiate between groups, with the exception of lower symptoms in patients on HHD.
- ✓ A more extensive assessment of external validity (construct, known groups, criterion) is required for this instrument.

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