

The frequency of CKD claims & nephrologist claims prior to ESRD initiation

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Introduction

- As patients near ESRD, chronic kidney disease (CKD) may be recognized more frequently, yet preparation for ESRD treatment may be lacking.
- Referral to a nephrologist has been shown to be associated with the use of fewer dialysis catheters and improved outcomes.
- In this analysis we assess how frequently CKD was recognized before ESRD and when nephrology referral occurred.

- We also addressed visits to primary care physicians (General Practice, Family Practice, or Internal Medicine), cardiologists, and visits to any of the above listed physicians.

- In comparison, 65% of the patients saw a primary care physician 2 years before the start of ESRD.
- While there is a substantial increase in the percent of patients with each type of claim (CKD and nephrologist) in the last quarter prior to ESRD, much of this occurs in the last few weeks before ESRD.
- Almost everyone (99.2%) had at least one CKD claim during the 2 years prior to ESRD. The average number of days between the first CKD claim and the first nephrology claim was 298.9.
- Of those with a nephrologist claim in the 2 year period, 19% had their first claim during the last 30 days before ESRD.
- Those with a referral to a nephrologist were more often diabetic, and had more occurrences of CHF and CKD hospitalizations prior to ESRD.

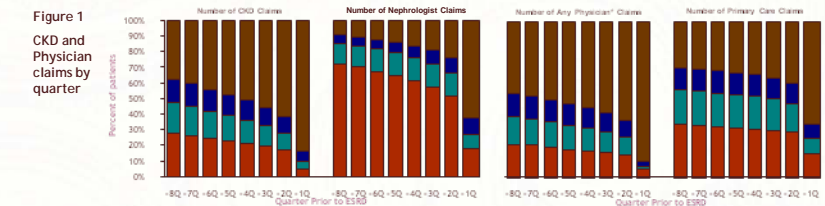
Results

- CKD was recognized in 75% of patients as much as 2 years before ESRD, yet only 25% saw a nephrologist 2 years before ESRD, and only 40% one year before ESRD.
- Even within 6 months of ESRD initiation, only 50% of patients recognized to have CKD were seen by a nephrologist, thereby given little time to plan for ESRD and address CKD care.

Methods

- We identified 29,955 incident ESRD patients in 2007 aged 67 years or older at initiation with Medicare as their primary payer for the two years prior to initiation.
- Using Part A (Inpatient and Outpatient) and Part B claims, we counted the number of CKD claims and the number of claims where the physician code was for seeing a nephrologist, and summarized them by quarter.

Patient Characteristics	N	%
Total Patients	29,955	
Age: 67-69	4,114	13.7
70-74	7,436	24.8
75-79	7,610	25.4
80-84	6,569	21.9
85+	4,226	14.1
Gender: Male	16,055	53.6
Race: White	23,090	77.1
African Am	5,577	18.6
Prim Cause: DM	11,807	39.4
HTN	10,996	36.7



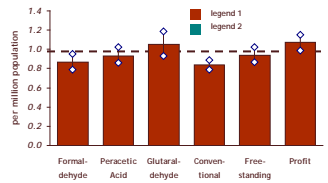
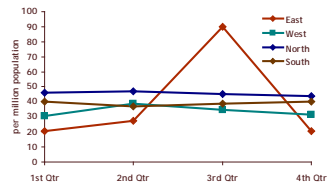
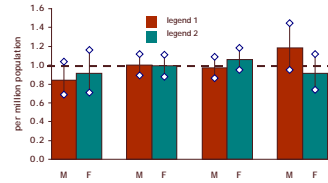
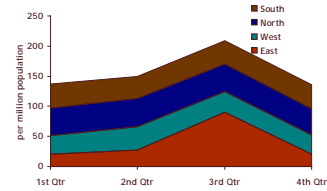
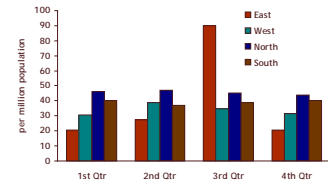
Timing of CKD and Nephrologist claims	N	%
Total with a CKD Claim	29,730	
No Nephrology claim	3,279	11.0
First Neph. Claim on or before First CKD claim	4,133	13.9
First Neph. Claim after First CKD claim	22,318	75.1
Total with First Neph. Claim after First CKD claim	22,318	
First Neph. Claim within 30 days	4,531	20.3
First Neph. Claim within 180 days	9,641	43.2
First Neph. Claim more than 365 days	9,152	41.0
Total with a Nephrologist claim	26,454	
More than 365 days prior to ESRD	14,278	54.0
Less than 30 days prior to ESRD	4,998	18.9

Distribution of patient characteristics by Nephrologist referral	CKD Pts w/ Nephrologist Claim (N = 26,451)		CKD Pts w/o Nephrologist Claim (N = 3,279)	
	N	%	N	%
Gender: Female	12,387	46.8	1,478	45.1
Race: Caucasian	20,415	77.2	2,507	76.5
African American	4,922	18.6	604	18.4
Age*: 67-74	10,159	38.4	1,295	39.5
75-84	12,587	47.6	1,483	45.2
85+	3,705	14.0	504	15.3
Prim Cause*: DM	10,561	39.9	1,174	35.8
HTN	9,744	36.8	1,188	36.2
Other	6,146	23.2	917	28.0
Number of CHF hospitalizations*:				
0	12,311	46.5	1,932	58.9
1	6,400	24.2	758	23.1
2	3,376	12.8	301	9.2
3+	4,364	16.5	288	8.8
Number of CKD hospitalizations*:				
0	3,903	14.8	977	29.8
1	9,239	34.9	1,304	39.8
2	6,075	23.0	586	17.8
3+	7,234	27.4	412	12.6

CKD and Nephrologist claims in this table refer to the first CKD and first nephrologist claim during the two-year period prior to ESRD. It is possible that patients had either a CKD or a Nephrologist claim prior to that two-year period which is not represented here.

Conclusions

- Although a patient's CKD is often recognized up to 2 years before ESRD, they are not always referred to a nephrologist.
- Even though the final quarter prior to ESRD shows a dramatic increase in the percent of patients with nephrologist claims, there is little time to address CKD care, manage risk factors, and plan for ESRD treatment with either form of dialysis, or vascular access assessment and placement.
- A more complete assessment of the monitoring of kidney disease, risk factors and treatment is needed to inform primary care physicians of their role in managing timely referral of the CKD population.



10 point

graphs with confidence intervals: the bars have to be colored by hand, and the x-axis labels (if long), line at 1.0, and legend have to be made outside of the graph

TABLES: Please do not use the space bar to align numbers in columns; the numbers will not print properly. If you aren't sure how to set the tabs to create columns, just ask Ed or Sue; we'll be happy to show you.

Group #	1	2	3	4	5	6
Race	white	white	white	white	white	white
Gender	male	male	male	male	male	male
Age	45-64	45-64	45-64	45-64	45-64	45-64
ESRD years	0	0	0	0	0	0
Diabetes	no	yes	yes	yes	yes	yes
Comorbidity	no	no	PVD	PVD	PVD	PVD
Hosp. days	0	0	0	11-20	11-20	11-20
Blood trans.	0	0	0	0	3+	3+
Vascular acc.	0	0	0	0	0	2