

Chronic Kidney Disease and Nephrology Referral: When Is The Right Time?

Studies show that early nephrologist referral and frequent visits improve survival among ESRD patients

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According to a recent article by Gilbertson et al⁶, it is predicted that end stage renal disease (ESRD) incidence and prevalence counts are expected to increase by 44% and 85%, respectively, from the year 2000 to 2015 and incidence and prevalence rates per million population by 32% and 70%, respectively. Diabetes and hypertension remain the leading causes of ESRD with many patients suffering from additional co-morbid conditions as well.

Recent studies^{1,5} have found that it is not uncommon for chronic kidney disease (CKD) patients to be examined by a nephrologist for the first time only one month before starting dialysis. Additionally, it has been suggested (Kinchen et al., 2002, and Avorn et al., 2002)^{1,5} that ESRD patients who consult with a nephrologist more than three months before beginning dialysis, and who see that specialist more often, are less likely to die during the first year of dialysis.

Kinchen et al. (2002)⁵ indicates that patients that are evaluated by a nephrologist less than four months prior to dialysis would be classified as a late referral; four to twelve months prior to dialysis as intermediate, and over twelve months as an early referral.

Many resources available for download on the Fistula First website³ and the following information is specifically provided for primary care physicians:

Caring for patients with chronic kidney disease (CKD) is a great challenge for both primary care providers and for nephrologists. This challenge increases when patients are referred late to a nephrologist, that is, when they require urgent dialysis. Delayed referral leads to emergency dialysis with higher morbidity, mortality and excessive cost. Emergency dialysis jeopardizes the dialysis modality choice, endangers the ability to maintain prolonged vascular access, precludes psychological preparation of patients and family and frequently necessitates hospitalization for a catastrophic complex illness. Mortality associated with acute dialysis can be as high as twenty-five percent.

A nephrologist should see all patients with a **glomerulofiltration rate (GFR) below 30 ml/min** (see attached CKD Guidelines). It is recommended that all diabetic patients with **GFR below 60 ml/min**. be referred. An online GFR calculator is available at www.kdoqi.org.

CKD Guidelines for Referral

Stage	Description	GFR, mL/min per 1.73m ³	Prevalence, n (%)	Actions
-	At increased risk	≥60 (with chronic kidney disease risk factors)	-	Screening; chronic kidney disease risk reduction
1	Kidney damage with normal or increased GFR	≥90	5 900 000 (3.3)	Diagnosis and treatment; treatment of co-morbid conditions; slowing progression; CVD risk reduction
2	Kidney damage with mild or decreased GFR	60-89	5 300 000 (3.0)	Eliminating progression
3	Moderately decreased GFR	30-59	7 600 000 (4.3)	Evaluating and treating complications
4	Severely decreased GFR	15-29	400 000 (0.2)	Preparation for kidney replacement therapy
5	Kidney Failure	<15 (or dialysis)	300 000 (0.1)	Kidney replacement (if uremia present)

^{4,7} Adapted from National Kidney Foundation (NKF) Kidney Disease Outcome Quality Initiative (K/DOQI) Advisory Board. K/DOQI clinical practice guidelines for chronic kidney disease: evaluation, classification, and stratification. Kidney Disease Outcome Quality Initiative. Am J Kidney Dis 2002;39(2 Suppl 2):S50.

Early referral of chronic kidney disease patients offers many advantages. In addition to beginning the process of education and preparation for renal replacement therapy, benefits include the following:

- A diligent search may reveal a potentially reversible cause of renal failure.
- A number of measures may be implemented to preserve the remaining renal function, e.g., good control of blood pressure, glucose control in diabetics, nutritional guidance, and avoidance of nephrotoxic drugs.
- Upper extremity vessels may be preserved for placement of a native arteriovenous fistula, which is the most reliable type of vascular access. Since it may take up to six months for a fistula to mature, it is critical that early surgical referral be made. Dialysis grafts and catheters are sub-optimal because of recurrent thrombosis and infection. In addition, central venous catheters may irreversibly damage proximal veins precluding future use of that extremity for vascular access. The cost of these complications in the U.S. amounts to over one hundred million dollars annually.
- Treatment of anemia with erythropoietin may significantly improve life quality.

- Secondary hyperthyroidism may be treated with phosphate binders and calcitriol.
- Referral to a team consisting of a nephrologist, renal dietitian, dialysis nurse, social worker and financial counselor allows time to establish the best treatment modality for the patient, develop financial support if needed and to allay the fears of both patient and family.”

Ideally, after referral to the nephrologist for consultation, the patient will be referred back to his/ her primary care physician (PCP) for further care. The nephrologist should then develop a long-term management plan in collaboration with the PCP to assist in optimizing the patient’s care until there is further progression toward end-stage renal failure.

As of December 31, 2005 there were 12,465 prevalent patients and 4,097 incident patients receiving dialysis services in the Heartland Kidney Network, which services the states of Iowa, Missouri, Kansas, and Nebraska. The Quality Improvement Organizations are working collaboratively with the Heartland Kidney Network to raise the awareness among healthcare providers of the need to assure that a nephrologist evaluates patients with chronic kidney disease sooner rather than later.

In conclusion, the studies referenced support that chronic kidney disease patients fair better as their disease progresses toward end stage failure if they are referred to nephrologists for evaluation and co-management of their care – ideally twelve months prior to the initiation of renal replacement therapy.

References:

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