Codes for Chronic Kidney Disease: Help in Distinguishing between Renal Failure and Renal Insufficiency

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Coders assign codes to disease processes for many reasons, including capturing diseases treated at facilities, accurate representation of illness severity, and specificity of causes of symptoms and justification for treatment. To this end, we have been perplexed by terminology used by physicians to portray kidney failure, both acute and chronic. The reason seems to be based on the perception that physicians use the terms “insufficiency” and “failure” interchangeably or just don’t seem to understand how to give us what we want.

The urinary system occasionally gets into problems that lead to difficulty in clearing some poisonous products from the blood stream—nitrogenous products, such as blood urea nitrogen and creatinine. These are breakdown products from metabolism of proteins, and when these are not cleared the blood levels rise. A person can develop metabolic encephalopathy from this, and other organs can suffer from the acute or the chronic inability of the kidneys to function properly.

When there is inadequate supply of blood with its nitrogenous wastes that need clearing (prerenal cause) or destruction of any part of the load of nephrons (intrarenal cause) or blockage of outflow of urine (postobstructive cause), the kidney function test shows the abnormalities we’re used to seeing.

Is It *Insufficiency* or Failure?

So what is renal failure, and what is renal insufficiency? We often resort to medical dictionaries for help. One defines failure this way:

> *Renal failure*: the inability of a kidney to excrete metabolites at normal plasma levels under conditions of normal loading or the inability to retain electrolytes under conditions of normal intake. It is marked by uremia and usually by oliguria or anuria, with hyperkalemia and pulmonary edema.

That sounds helpful. Now here’s a definition of insufficiency:

> *Renal insufficiency*: a state of disordered function of the kidney verifiable by quantitative tests. See also *renal failure*.

We’re back where we started. Physicians use medical textbooks for their terminology, so let’s consult a few:

> *Renal insufficiency*: renal failure sometimes occurs as a complication of gout. The pathogenesis of renal failure may be complex.

This definition bounces back and forth between the two terms. Let’s try another book:

> *Anemia of renal insufficiency*: several factors are often involved in the anemia of chronic renal failure.

More bouncing. Let’s check a third textbook:

> *Manifestations of chronic renal failure*: chronic progressive renal insufficiency results in multiple clinical manifestations that affect virtually every organ system in the body.

The same thing again. No wonder physicians have difficulty differentiating between the terms. In fact, many nephrologists use the term “chronic renal insufficiency” until the patient is on dialysis, and then they use the term “end-stage renal disease”

(ESRD), never using the term “chronic renal failure.”

The ICD Definitions

The International Classification of Diseases was developed to define causes of death through the use of codes that would stand for similar conditions regardless of where the case occurred and what language was used. So the issue is the definition of codes that counts.

From *Coding Clinic* 1993 First Quarter, we have both terms defined:

> Renal insufficiency (code 593.9, Unspecified disorder of the kidney and ureter) refers to the early stages of renal impairment, determined by mildly abnormal elevated values of serum creatinine or BUN or diminished creatinine clearance. Clinical symptoms or other abnormal laboratory parameters may or may not be present but are usually minimal.
>
> The treatment of renal insufficiency depends to a very large extent on the underlying cause, with much attention given to the possibility of preventing progression to renal failure.

And …

> Renal failure (code 585, Chronic renal failure) is a progression of renal insufficiency where renal function is further impaired and **overt clinical consequences, such as anemia, have developed.** In essence, renal insufficiency is more of an abnormal laboratory assessment, while renal failure incorporates both abnormal laboratory and clinical findings.
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> Documentation in the medical record which might indicate the presence of renal failure could include:
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> a. Markedly abnormal elevated values of serum creatinine or [blood urea nitrogen], or diminished creatinine clearance.
> b. Specific clinical and laboratory manifestations of the degree of renal impairment (mostly seen as renal failure progresses). For example:
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> - Anemia
> - Hyperphosphatemia
> - Hypocalcemia
> - Hyperkalemia
> - Acidemia
> - Renal Osteodystrophy
> - Uremic symptoms: nausea, vomiting, itching, hemorrhagic conditions, hypertension, edema, dyspnea, lethargy, coma, etc.

This more accurately describes the differences in the conditions because here we have definitions of the codes. If the chronic kidney disease (CKD) does not affect other organ systems, then the term “insufficiency” is appropriate. If the extent of disease has progressed so far as to cause problems with any other organ system, then the term “failure” is required to express that severity.

Then They Change It All

The National Kidney Foundation and the specialty of nephrology have been working to establish codes to differentiate the stages of CKD because this entity has developed into epidemiologic proportions in the US and the terminology is confusing. It has been determined that CKD occurs earlier than most thought and carries such an implication that, if caught early and controlled (in those cases in which it can be caught early and controlled), then some people can avoid the serious consequences of CKD, from dialysis to early death.

Studies have shown that, upon dividing the CKD continuum into stages, it is possible to identify the earlier stages in which intervention could make a difference and, in those cases in which intervention will not help, to be able to prepare a patient for

the inevitable onset of ESRD and some method of dialysis. In fact, studies demonstrate that patients who will advance to the most serious stages can live longer if they get started on dialysis at an earlier stage.

The foundation's Kidney Disease Outcomes Quality Initiative divides CKD into five stages, based on glomerular filtration rate (GFR)—the rate that the kidneys form "filtrate," the stuff that gets into the tubules and gets acted upon with concentration or dilution of water and electrolytes. Matched to these five stages are five levels of work-up or treatment. (See "The Five Stages of Chronic Kidney Disease," below.)

The Five Stages of Chronic Kidney Disease

Stage	GFR	Description	Treatment Stage
1	90+	Normal kidney function but urine or other abnormalities point to kidney disease	Observation, control of blood pressure
2	60-89	Mildly reduced kidney function, urine, or other abnormalities point to kidney disease	Blood pressure control, monitoring, find out why
3	30-59	Moderately reduced kidney function	Observation, blood pressure control, and probably diagnosis, if not already made
4	15-29	Severely reduced kidney function	Planning for end-stage renal failure.
5	14 or less	Very severe or end-stage kidney failure (established renal failure)	See treatment choices for end-stage renal failure

The Kidney Disease Outcomes Quality Initiative breaks chronic kidney disease down into five stages based on glomerular filtration rate (GFR).

Source: National Kidney Foundation

The initiative is basically a quality effort to identify and treat patients at risk of or who have developed CKD. And the terms "insufficiency" and "failure" aren't necessary at all.

To this end, new codes were established for the stages of chronic kidney disease:

- 585.1, Chronic kidney disease, stage 1
- 585.2, Chronic kidney disease, stage 2 (mild decrease in GFR)
- 585.3, Chronic kidney disease, stage 3 (moderate decrease in GFR)
- 585.4, Chronic kidney disease, stage 4 (severe decrease in GFR)
- 585.5, Chronic kidney disease, stage 5
- 585.6, ESRD
- 585.9, Chronic kidney disease, unspecified (which includes documented CRI or CRF)

Assigning the Codes

Medical record documentation must be reviewed carefully in order to assign the correct codes for CKD. Stage 2 (code 585.2) equates to mild CKD; stage 3 (code 585.3) moderate CKD; and stage 4 (code 585.4) severe CKD. The stage (mild, moderate, severe) must be documented by the physician in order to assign codes 585.1–585.5. End-stage renal disease is classified to code 585.6. If the CKD stage is not documented, assign code 585.9, Chronic kidney disease, unspecified. If both a stage of CKD and ESRD are documented, assign code 585.6 only. An additional code should be assigned to identify any manifestation of CKD, such as uremic neuropathy. If applicable, V42.0 should be assigned as a secondary diagnosis to identify kidney transplant status.

When assigning a code from category 403, Hypertensive kidney disease, only fifth digit 1 should be used. For category 404, Hypertensive heart and kidney disease, only fifth digits 2 and 3 should be used for patients with hypertensive kidney disease.

All patients with hypertensive kidney disease have CKD. If the stage of chronic kidney disease is documented, assign an additional code from category 585.

If the term "chronic renal failure" is documented instead of chronic kidney disease and the stage is also documented, assign the appropriate code for the stage. If chronic renal failure is documented but the stage is not, assign code 585.9. Code 585.9 should also be assigned for chronic renal insufficiency. Acute renal insufficiency and renal insufficiency that is not specified as acute or chronic are classified to code 593.9, Unspecified disorder of kidney and ureter.

Dealing with New Code Sets

If hospitals were to develop a routine of determining the GFR on every creatinine level done, then physicians would have the opportunity to determine if a case represents:

- Normal renal function
- Acute decline in renal function
- Stable, chronic decrease in renal function
- Chronic decrease in renal function with an acute decompensation

It is possible to determine GFR for a large majority of patients directly from the creatinine level with basic or expanded lab profiles using a program on the National Kidney Foundation's Web site (and built into many software packages currently in hospitals). The calculation uses the patient's age, sex, and race. The program can be downloaded from the National Kidney Foundation's Web site at www.nephron.com/cgi-bin/MDRD_GFR.cgi.

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Article citation:
Gold, Robert S.; Bowman, Sue E. "Codes for Chronic Kidney Disease: Help in Distinguishing between Renal Failure and Renal Insufficiency" *Journal of AHIMA* 77, no.1 (January 2006): 76-78.