Chronic kidney disease (CKD) ICD-10-CM

Definition
Chronic kidney disease (chronic renal failure) is longstanding, progressive deterioration of renal function.

Background
The kidneys maintain health by removing wastes and fluid from the body. The kidneys also perform these other important functions:
- Regulate body water and other chemicals in the blood, such as sodium, potassium, phosphorus and calcium
- Remove drugs and toxins
- Release hormones into the blood to regulate blood pressure, make red blood cells and promote strong bones

Causes
The main causes of CKD are diabetes and high blood pressure. Other conditions that affect the kidneys include:
- Glomerulonephritis (a group of diseases that cause inflammation and damage to the glomeruli, the filtering units of the kidney)
- Inherited diseases, such as polycystic kidney disease or sickle cell disease
- Congenital malformations (present at birth)
- Diseases of the immune system, such as lupus
- Obstructions caused by problems such as kidney stones, tumors or an enlarged prostate gland in men
- Repeated urinary tract infections
- Lead poisoning
- Long-term use of medicines that damage the kidneys (for example, nonsteroidal anti-inflammatory drugs [NSAIDs])

Note: The cause is not always known.

Signs and symptoms
There may be no symptoms in the early stages of CKD. As kidney function decreases, symptoms may include:
- Abnormal laboratory values (examples: increased serum creatinine and blood urea nitrogen [BUN]; or certain electrolytes)
- High blood pressure that is difficult to control
- Changes in urine output (example: urinating less or more frequently than normal)
- Swelling due to fluid build-up in the tissues (edema)
- Fatigue and weakness
- Loss of appetite
- Weight loss
- Nausea and/or vomiting
- Excessive sleepiness or inability to sleep
- Headaches
- Decreased mental sharpness, trouble concentrating
- Dry, itchy skin
- Avoidance of substances that are toxic to the kidneys, such as NSAIDs
- Treating complications (e.g., treatment of anemia with erythropoietin to induce the production of more red blood cells or phosphate-binding medications to reduce the amount of phosphate in the blood, which will increase the amount of calcium available to the bones)

Diagnostic tools
- Laboratory testing to check kidney function (urinalysis, blood testing for creatinine, urea, electrolytes, etc.)
- Glomerular filtration rate (GFR) – the best measure of the level of kidney function and determine the stage of CKD
- Imaging tests to evaluate for cause or type of CKD, including ultrasound, computed tomography (CT) scanning and magnetic resonance imaging (MRI)
- Renal biopsy (in some cases)

Treatment
Chronic kidney failure has no cure, but treatment can help control signs and symptoms, reduce complications and slow the progress of the disease. The first priority is controlling the condition responsible for the kidney failure and its complications (e.g., controlling diabetes or high blood pressure). Other treatments include:
- Proper diet (protein management along with salt, potassium and phosphorus restrictions may help slow disease progression)
- Daily exercise
- Avoidance of dehydration
- Avoidance of smoking and other tobacco products
- Avoidance of alcohol and illegal drugs
- Avoidance of substances that are toxic to the kidneys, such as NSAIDs
- Treating complications (e.g., treatment of anemia with erythropoietin to induce the production of more red blood cells or phosphate-binding medications to reduce the amount of phosphate in the blood, which will increase the amount of calcium available to the bones)
In end-stage kidney disease (when kidney function is reduced to 10-15 percent or less of capacity), conservative measures as outlined above are no longer enough. Dialysis or kidney transplant become the only options to support life.

**Documentation tips for providers**

- A good rule of thumb for any medical record is to limit – or avoid altogether – the use of acronyms and abbreviations. While “CKD” is a commonly accepted medical abbreviation for chronic kidney disease, best practice is as follows:
  - The initial notation of an abbreviation or acronym should be spelled out in full with the acronym in parentheses. For example: “Chronic kidney disease (CKD).”
  - Subsequent mention of the condition can be made using the acronym.
  - The diagnosis should be spelled out in full in the final impression or plan.

- In the subjective section of the office note, document the presence or absence of any current symptoms related to chronic kidney disease (e.g., fatigue, weakness, changes in urine output, etc.).

- In the objective section of the office note, document:
  - Any current associated physical exam findings (e.g., elevated blood pressure, edema, weight loss, etc.)
  - Related diagnostic test results
  - Presence of a surgically placed arteriovenous shunt for the purpose of dialysis, along with related exam findings (e.g., date of placement, presence of a thrill or bruit)

- In the final assessment/impression:
  - For a confirmed diagnosis of CKD, do not use descriptors that imply uncertainty (such as “probable,” “apparently,” “likely” or “consistent with”).
  - Document the specific stage of chronic kidney disease. Remember that medical coders are not allowed to calculate the stage of CKD based on documentation of the glomerular filtration rate (GFR).
  - Document the current status of CKD (stable, worsening, improved, etc.).
  - State the cause of CKD, if known, using terms that clearly show cause-and-effect (such as “due to,” “secondary to,” “related to,” etc.).

- Document a specific and concise treatment plan for CKD.
  - If referrals are made or consultations requested, the office note should indicate to whom or where the referral or consultation is made or from whom consultation advice is requested.
  - Document when you plan to see the patient again, even if only on an as-needed basis.

**ICD-10-CM tips and resources for coders**

CKD classifies to category N18. This category includes instructional notes that advise to code first any associated:

- Diabetic chronic kidney disease (E08.22, E09.22, E10.22, E11.22, E13.22)
- Hypertensive chronic kidney disease (I12.-, I13.-)

Use an additional code to identify kidney transplant status, if applicable (Z94.0).

The ICD-10-CM manual classifies CKD based on the severity of the condition, designated by stages 1-5; the number of each stage corresponds to the fourth character of the ICD-10-CM code. For example:

- CKD stage I N18.1
- CKD stage II N18.2 (includes mild CKD)
- CKD stage III N18.3 (includes moderate CKD)
- CKD stage IV N18.4 (includes severe CKD)
- CKD stage V N18.5

When the medical record does not document the stage of CKD, code N18.9 (chronic kidney disease, unspecified) is assigned.

N18.9 includes all of the following:

- Chronic renal disease
- Chronic renal failure, not otherwise specified (NOS)
- Chronic renal insufficiency
- Chronic uremia
Chronic kidney disease (CKD), continued

End-stage renal disease (ESRD) classifies to code N18.6, which includes chronic kidney disease requiring chronic dialysis, and advises to use an additional code to identify dialysis status (Z99.2). If both a stage of CKD and ESRD are documented, assign only the code for ESRD (N18.6).

Dependence on renal dialysis codes to Z99.2, which includes:
- Hemodialysis status
- Peritoneal dialysis status
- Presence of arteriovenous shunt (for dialysis)
- Renal dialysis status NOS

Code Z99.2 excludes encounter for fitting and adjustment of dialysis catheter (Z49.Ø-) and noncompliance with renal dialysis (Z91.15).

The National Kidney Foundation classifies the stages of CKD according to the patient’s glomerular filtration rate (GFR), a diagnostic laboratory test that measures kidney function. GFR is calculated based on the patient’s age, race, gender, height, weight and blood creatinine levels. However, as noted previously, coders cannot code the stage of CKD based on documentation of the GFR value. Rather, the provider must document the stage of CKD.

Hypertensive chronic kidney disease
Assign codes from category I12, Hypertensive chronic kidney disease, when both hypertension and a condition classifiable to category N18, Chronic kidney disease (CKD), are present. Unlike hypertension with heart disease, ICD-10-CM presumes a cause-and-effect relationship and classifies chronic kidney disease with hypertension as hypertensive chronic kidney disease.

The appropriate code from category N18 should be used as a secondary code with a code from category I12 to identify the stage of chronic kidney disease:
- I12.Ø Hypertensive chronic kidney disease with stage 5 CKD or end stage renal disease
- I12.9 Hypertensive chronic kidney disease with stage 1 through stage 4 CKD, or unspecified CKD

Hypertensive heart and chronic kidney disease
Assign codes from combination category I13, Hypertensive heart and chronic kidney disease, when both hypertensive kidney disease and hypertensive heart disease are stated in the diagnosis. Assume a relationship between the hypertension and the chronic kidney disease, whether or not the condition is so designated. If heart failure is present, assign an additional code from category I5Ø to identify the type of heart failure.

The appropriate code from category N18, Chronic kidney disease, should be used as a secondary code with a code from category I13 to identify the stage of chronic kidney disease.

The codes in category I13 are combination codes that include hypertension, heart disease and chronic kidney disease. The Includes note at I13 specifies that the conditions included at I11 and I12 are included together in I13. If a patient has hypertension, heart disease and chronic kidney disease, a code from I13 should be used, not individual codes for hypertension, heart disease and chronic kidney disease, or codes from I11 or I12.
## Chronic kidney disease (CKD), continued

### Coding examples

<table>
<thead>
<tr>
<th>Example 1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final diagnosis</strong></td>
<td>Stage I chronic kidney disease, worsening</td>
</tr>
<tr>
<td><strong>ICD-10-CM code(s)</strong></td>
<td>N18.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final diagnosis</strong></td>
<td>Chronic kidney disease, stage III with GFR 50</td>
</tr>
<tr>
<td><strong>ICD-10-CM code(s)</strong></td>
<td>N18.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final diagnosis</strong></td>
<td>End-stage renal disease, on hemodialysis Tuesday, Thursday, Saturday</td>
</tr>
<tr>
<td><strong>ICD-10-CM code(s)</strong></td>
<td>N18.6, Z99.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 4</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final diagnosis</strong></td>
<td>Chronic renal insufficiency, stable</td>
</tr>
<tr>
<td><strong>ICD-10-CM code(s)</strong></td>
<td>N18.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 5</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final diagnosis</strong></td>
<td>Chronic kidney disease stage II secondary to diabetes mellitus and hypertension</td>
</tr>
<tr>
<td><strong>ICD-10-CM code(s)</strong></td>
<td>E11.22, I12.9, N18.2</td>
</tr>
<tr>
<td><strong>Rationale</strong></td>
<td>Diabetes mellitus and hypertension are linked in a cause-and-effect relationship to chronic kidney disease.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 6</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final diagnosis</strong></td>
<td>Chronic kidney disease, GFR 60</td>
</tr>
<tr>
<td><strong>ICD-10-CM code(s)</strong></td>
<td>N18.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 7</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final diagnosis</strong></td>
<td>Mild chronic kidney disease</td>
</tr>
<tr>
<td><strong>ICD-10-CM code(s)</strong></td>
<td>N18.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 8</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final diagnosis</strong></td>
<td>Diabetes mellitus, hypertension and chronic kidney disease stage IV</td>
</tr>
<tr>
<td><strong>ICD-10-CM code(s)</strong></td>
<td>E11.9, I12.9, N18.4</td>
</tr>
<tr>
<td><strong>Rationale</strong></td>
<td>Diabetes mellitus is not linked to chronic kidney disease. ICD-10-CM presumes a cause-and-effect relationship between chronic kidney disease and hypertension.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Example 9</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Final diagnosis</strong></td>
<td>Hypertensive heart disease with chronic kidney disease stage IV and congestive heart failure</td>
</tr>
<tr>
<td><strong>ICD-10-CM code(s)</strong></td>
<td>I13.0, I50.9, N18.4</td>
</tr>
</tbody>
</table>

### References:
American Hospital Association Coding Clinic; ICD-10-CM Official Guidelines and Reporting; Mayo Clinic; Merck Manual; National Kidney Foundation; WebMD