Chronic Kidney Disease and Diabetes Mellitus

In ICD-10-CM, more than one code is required to diagnose diabetic CKD: one combination code that indicates the type of diabetes with chronic kidney disease and one that indicates the stage of CKD.

The following codes indicate CKD in diabetic patients in ICD-10-CM:

- **E08.22** Diabetes mellitus due to underlying condition with diabetic chronic kidney disease
- **E09.22** Drug or chemical induced diabetes mellitus with diabetic chronic kidney disease
- **E10.22** Type I diabetes mellitus with diabetic chronic kidney disease
- **E11.22** Type II diabetes mellitus with diabetic chronic kidney disease
- **E13.22** Other specified diabetes mellitus with diabetic chronic kidney disease

Only one code from above would be chosen, based on the type of diabetes.

- Under the subcategory of N18, CKD, there is a note that directs the user to “Code first any associated diabetic CKD (E08.22, E09.22, E10.22, E11.22, E13.22). A second code would need to be listed after the diabetes code to specify the stage of CKD (N18.1-N18.9). It is also advised to use additional code to identify dialysis status (Z99.2) if necessary.
- To some extent Diabetes codes are different in ICD-10-CM. Ex: Diabetic chronic kidney disease and Diabetic nephropathy will both code to either E10.22, DM type I with Diabetic CKD or E11.22, DM type II with Diabetic CKD. Also a code from N18.1-N18.6, N18.9 is needed to identify the stage of chronic kidney disease.

- Diabetes and renal disease must be linked in a manner that denotes a direct relationship. Ex: diabetic nephropathy shows a cause-and-effect relationship with diabetes. But it is possible for a diabetic patient to have nephropathy and if no documentation indicates that nephropathy is due to diabetes, the link can not be established.

### Anemia in CKD

When assigning code D63.1, Anemia in CKD, it is also necessary a code from category N18, CKD, to indicate the stage of CKD. These codes can be used as the principal/1st listed code, and also as secondary codes. The sequence of the codes will depend on the reason of the encounter.

If the treatment for the anemia is a component of an encounter, but the primary reason for the encounter is the ESRD, codes should be sequenced as follows: N18.6, D63.1.

Anemia in chronic disease such as CKD or cancer can be documented just as they are for ICD-9.

### CKD and Kidney Transplant

Patients with kidney transplant may still suffer some type of CKD because the transplant may not completely reinstate kidney function. Consequently, having CKD alone does not mean there is a transplant complication. Assign the code to establish the stage of CKD (N18 category) and code Z94.0, Kidney transplant status. The documentation must be clear as to whether the patient has a complication of the transplant.

If a complication resulting from the transplant as failure (T86.12), rejection (T86.11) or unspecified (T86.10) is documented, review section I.C.19.g for material on coding complications of a kidney transplant.

### CKD Coding Examples

1. **Hyperkalemia due to CKD** — Codes: **E87.5, N18.9**
2. A patient is seen for diabetic CKD, stage 3. The patient has type 2 diabetes and takes insulin on a daily basis. Codes: **E11.22, N18.3, Z79.4**
3. Patient has Hypertensive heart disease and ESRD. He also was diagnosed with heart failure. Codes: **I13.2, N18.6, I50.9**
4. A patient has systolic (congestive) heart failure due to hypertension with stage 5 CKD. Codes: **I13.2, N18.5, I50.22**
5. Mild Chronic Kidney Disease. Code: **N18.2**
6. Patient with hypertension and ESRD on dialysis 3 times a week. Codes: **I12.0, N18.6, Z99.2**
7. Patient is admitted for treatment of diabetes mellitus, type 2. Patient is on hemodialysis for ESRD. Codes: **E11.9, N18.6, Z99.2**

Rationale: Even though the patient has ESRD (N18.6) on dialysis (Z99.2) there is no documentation about if it’s due to Diabetes Mellitus, therefore E11.9 (Type 2 diabetes mellitus without complications) is coded.

### References

- [www.kdigo.org/ControConf](www.kdigo.org/ControConf)
- [books.google.com/books](books.google.com/books)
- [www.procritline.com/assets/procrit/Procrit_ICD10_Nephrology.pdf](www.procritline.com/assets/procrit/Procrit_ICD10_Nephrology.pdf)
- [www.renal.org/information-resources/the-uk-eckd-guide/ckd-stages#stasha_FbNo4S8u_dpbs](www.renal.org/information-resources/the-uk-eckd-guide/ckd-stages#stasha_FbNo4S8u_dpbs)
- [www.usrds.org](www.usrds.org)
Chronic Kidney Disease (CKD) is a condition characterized by a gradual loss of kidney function over time as defined by the National Kidney Foundation.

**Characteristics**
- Kidney disease is considered a silent disease because it often has no symptoms and can go unnoticed until it is very advanced. Timely detection and treatment can slow and prevent the progression of kidney disease.
- When kidney function is compromised this is defined as renal/kidney failure.
- The diminutions in renal function can evolve very slowly or very fast. Chronic failure progresses gradually over at least 3 months and can conduce to permanent renal failure.
- CKD has countless causes, with diabetes and hypertension the most frequent.
- The diagnosis of CKD involves at least two abnormal markers of damage or two anomalous glomerular filtration rates (GFRs) persisting for more than 3 months.
- CKD is staged accordingly to GFR with formulas designed for infant/children and for adults. Those stages show the progressive severity.

**Facts**
- HTN causes CKD and CKD causes HTN.
- Persistent proteinuria means CKD is present.
- A person can lose up to 90% of their kidney function before experiencing any symptoms.
- Every 30 minutes, your kidneys filter all the blood in your body, removing waste and excess fluid.
- There are currently 123,175 people waiting for lifesaving organ transplants in the U.S. Of these, 101,170 await kidney transplants. 12 people die each day while waiting for a lifesaving kidney transplant. (www.kidney.org/news/newsroom/factsheets/Organ-Donation-and-Transplantation-Stats)
- Once the kidneys fail, dialysis or a kidney transplant is required.
- CKD has a uneven impact on minority populations, particularly African-Americans who have a 4 times greater risk than white Americans.

**Coding CKD**
There are no big differences between ICD-9 and ICD-10 when it comes to coding CKD.

The ICD-10-CM classifies CKD based on severity which is designated by stages 1–5, and ESRD based on GFR values and dialysis treatment.

**When coding for patients with both acute renal failure and chronic kidney disease an additional code for acute renal failure is required.**

**Often these CKD stage codes are secondary codes, preceded on the record by a code for the underlying cause of CKD, usually a diabetes code or a hypertensive kidney disease code.**

### CKD classification

**STAGE** | **CODE** | **DESCRIPTION**  
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Stage 1 | Code N18.1 | Slightly diminished function. Kidney damage w/normal or relative high GFR.  
Stage 2 | Code N18.2, equates to mild CKD | Mild reduction in GFR w/kidney damage  
Stage 3 | Code N18.3, equates to moderate CKD | Moderate reduction in GFR.  
Stage 4 | Code N18.4, equates to severe CKD | Severe reduction in GFR. Preparation for renal replacement therapy  
Stage 5 | Code N18.5 | Established kidney failure, or permanent renal replacement therapy (RRT). 
ESRD (End stage renal disease) | Code N18.6 | Patients with CKD requiring Dialysis. 
For unspecified | Code N18.9 | Severity is not specified  
CKD and ESRD | Code N18.6 only |  
If Kidney Transplant | Code Z94.0 |  
On Dialysis treatment | Code Z99.2 |  

**Code assignment will be based on physician documentation of the specific stage and not the GFR alone.**

### Chronic Kidney Disease and Hypertension

**A. Hypertensive Chronic Kidney Disease**

The ICD-10 manual has no Hypertension Table in the index. One reason is because the “malignant” and “benign” hypertensive kidney disease codes are left out of ICD-10.

- According to the ICD-10-CM Draft Official Guidelines (C.9.a.2), because there is a presumed cause-and-effect relationship between CKD and hypertension, codes from category I12, Hypertensive CKD, should be assigned when both hypertension and a condition classifiable to category N18, Chronic kidney disease, are existent. The physician would have to specifically document that CKD is not due to hypertension to negate the cause-and-effect relationship. If the patient has hypertensive chronic kidney disease and acute renal failure, an additional code for the acute renal failure is required.

**B. Hypertensive heart and chronic kidney disease**

As per ICD-10-CM Guideline the codes in category I13, Hypertensive heart and CKD, are combination codes that include hypertension, heart disease and chronic kidney disease.

- Codes from combination category I13 are assigned when both hypertensive kidney disease and hypertensive heart disease are stated in the diagnosis. A connection between the hypertension and the CKD is also implicit. If heart failure is present, an additional code from category I50 is given to identify the type of heart failure.

- The proper code from category N18, CKD, should be used as a secondary code with a code from category I13 to categorize the stage of chronic kidney disease.

- The Includes note at I13, specifies that the conditions included at I11 and I12 are incorporated together in I13. If a patient has hypertension, heart disease and chronic kidney disease then a code from I13 should be used, not individual codes for hypertension, heart disease and CKD.