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Chronic condition toolbook: Diabetes

Focusing on diabetes and its complications

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Due to the updated, clinically revised CMS-HCC Medicare risk adjustment model for payment year 2015, the bolding of ICD-9-CM codes has been revised to reflect:

- **Red = Risk adjusts *in only* the 2013 CMS-HCC model**
- **Black = Risk adjusts *in both* the 2013 CMS-HCC model and the 2014 CMS-HCC model**
- **Orange = Risk adjusts *in only* the 2014 CMS-HCC model**

Note: The 2015 payment year model is a blend of the 2013 CMS-HCC model (67%) and the 2014 CMS-HCC model (33%).

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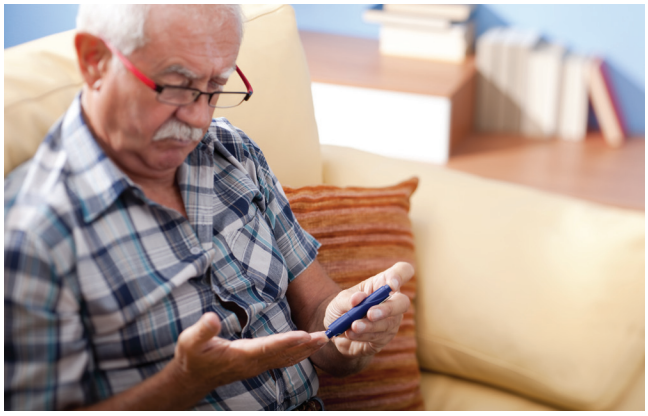
Focusing on diabetes



Facts about diabetes

Sixty percent of all diabetics have some complication of this devastating disease.

Diabetes with renal manifestations

Since diabetic nephropathy occurs in up to 40% of individuals with diabetes, annual screening for proteinuria in all diabetics and calculation of the glomerular filtration rate (GFR) should be performed.

ICD-9-CM[1]

- **250.4x** diabetes w/renal manifestations

If chronic kidney disease (CKD), use additional codes: 585.1-585.9

There is no presumed linkage between diabetes and CKD. The linkage must be stated specifically (i.e., diabetic nephropathy) or addressed as a causal relationship (i.e., chronic kidney disease due to diabetes).

Diabetes with ophthalmic manifestations

Screening: a dilated and comprehensive eye examination by an ophthalmologist or optometrist shortly after the diagnosis of diabetes. Subsequent eye exams should be repeated annually.

ICD-9-CM[1]

- **250.5x** Diabetes w/ophthalmic manifestations

Use additional code to identify the manifestation

Diabetes with peripheral circulatory manifestations

Screening for peripheral arterial disease (PAD) is best achieved by both obtaining a history for claudication and performing an ankle-index (ABI) on all diabetic patients. Patients with ABI between 0.9 and 0.8 can be managed by the primary care physician with improved glucose control, supervised exercise regimens, and reduction of other risk factor (e.g., tobacco cessation). Specialized referrals are required for patients with ABIs > 1.2 or < 0.8.

ICD-9-CM[1]

- **250.7x** Diabetes w/peripheral circulatory disorders

Use additional code to identify the manifestation

Diabetes with neurological manifestations

Screening for peripheral neuropathy: A foot examination should include inspection, assessment of foot pulses, and testing for loss of protective sensation, assessing for changes in vibratory sensation and deep tendon reflexes (ankle), and identifying foot ulcers and amputations.

Screening for autonomic neuropathy: obtain a history of gastrointestinal symptoms consistent with gastroparesis and other dysmotility problems (e.g., intermittent constipation and diarrhea).

ICD-9-CM[1]

- **250.6x** Diabetes w/neurological manifestations

Use additional code to identify the manifestation

ICD-10-CM coding categories for diabetic manifestations[2]

- E08 Diabetes mellitus due to underlying cause*
- E09 Drug or chemical induced diabetes mellitus*
- E10 Type 1 diabetes mellitus
- E11 Type 2 diabetes mellitus
- E13 Other specified diabetes mellitus*

*Types of secondary diabetes mellitus

These are categories only. Please consult the code set for further information.

If type of diabetes not documented – assign type 2

- Long-term use of insulin
  - ICD-9-CM V58.67
  - ICD-10-CM Z79.4

Combination codes include:

- Type of diabetes
- Body system affected
- Complications affecting that body system
  - NO 5th digits as in ICD-9-CM
- Note in the index for inadequately controlled, out of control, poorly controlled, coded by type with hyperglycemia

Example of combination code:

- E10.331 type 1 diabetes mellitus with moderate nonproliferative diabetic retinopathy with macular edema

Code includes:

- Type of diabetes
- Body system involved
- Complications of the body system

1. World Health Organization, Professional: *ICD-9-CM for Physicians — Volumes 1 & 2.* 2013 Alexandria, VA: Optum, 2012.

2. Optum 2013 ICD-10-CM The Complete Official Draft Code Set <www.optumcoding.com/ICD10>.

Diabetic peripheral neuropathy

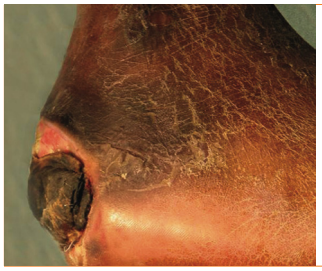
Diabetics with peripheral neuropathy or peripheral arterial disease are three times more likely to have an amputation compared with diabetic people without these conditions.[1]

Why is it important to diagnose diabetic peripheral neuropathy?

Peripheral neuropathy may cause:[2]

- Foot deformities, such as hammertoes and the collapse of the midfoot
- Muscle weakness and loss of reflexes
- Injury and ulcers as numbness decreases awareness of pressure or injury
- Infection and tissue necrosis, resulting in limb loss (i.e., amputation)

If an infection occurs and is not treated promptly, the infection may spread to the bone and the foot may have to be amputated.



Many amputations are preventable if minor problems are caught and treated in time. Diagnose and treat a neuropathy before a complication occurs!

Why does it matter?

Providers can improve patients' quality of life and outcomes with earlier screening and detection of diabetic peripheral neuropathy.

- Diabetic patients account for 60% of all lower extremity amputations; 85% of these lower extremity amputations are preceded by a foot ulcer[3,4]
- Five-year survival rate following diabetes-related amputation is less than 30%[5]
- Among persons with diabetes, foot ulcers and amputations can be reduced by up to 85%[6]

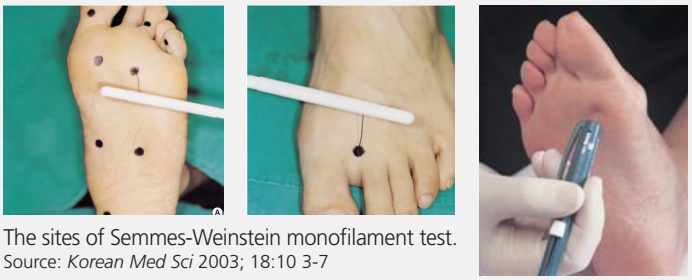
How are you currently screening for Diabetic peripheral neuropathy?

The American Diabetes Association recommends an annual comprehensive foot examination on patients with diabetes and a visual inspection of the feet at each routine visit.

Guidelines for comprehensive foot care: Key components[4]	
History	Assess for prior ulcers, amputation, symptoms related to neuropathy or peripheral vascular impairment, diabetic nephropathy and use of tobacco.
Inspection	Inspect feet for abnormalities, such as ulcers, erythema, skin temperature differences, as well as callus presence, nail changes and paronychia. Check shoes and socks for evidence of proper fit and bloody discharge.
Musculoskel-etal	Check for deformities such as bunions, prominent metatarsal heads, toe deformities and Charcot foot.
Neurological	Perform tests to look for loss of protective sensation (LOPS), which should generally include testing with a 10 gm monofilament and one other test (e.g., tuning fork, ankle reflexes, pinprick sensation).
Vascular	Assess patients < 50 years old with diabetes and one other atherosclerotic risk factor (e.g., smoking, dyslipidemia, hypertension, or hyperhomocysteinemia), patients 50-64 years old with history of diabetes or smoking, and all patients 65 or older.

This test may be performed in your practice

Monofilament testing



The sites of Semmes-Weinstein monofilament test.
Source: *Korean Med Sci* 2003; 18:10 3-7

1. RR, Eberhardt MS, Gregg EW, Geiss LS. Control of risk factors among people with diagnosed diabetes, by lower extremity disease status. *Prev Chronic Dis* 2009;6(4):A114. <http://www.cdc.gov/pcd/issues/2009/oct/08_0224.htm>.
2. "Diabetic Neuropathies: The Nerve Damage of Diabetes." National Diabetes Information Clearinghouse (NDIC). 08/16/10 <http://diabetes.niddk.nih.gov/dm/pubs/neuropathies/>.
3. 2000–2002 Behavioral Risk Factor Surveillance System (BRFSS). <<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5245a3.htm November 14, 2003 / 52(45);1098-1102>>. Accessed Aug 15, 2011.
4. Singh N, Armstrong DG, et al. Preventing foot ulcers in patients with diabetes. *JAMA*. 2005;293:217–28. 2 Dang CN, Boulton AJ. Changing perspectives in diabetic foot ulcer management.
5. Dorsey RR, Eberhardt MS, Gregg EW, Geiss LS. Control of risk factors among people with diagnosed diabetes, by lower extremity disease status. *Prev Chronic Dis* 2009;6(4). <http://www.cdc.gov/pcd/issues/2009/oct/08_0224.htm>. Accessed Aug 15, 2011.
6. Bild DE, Selby JV, Pomeroy S, Browner WS, Braveman P, Showstack JA. Lower-extremity amputation in people with diabetes: epidemiology and prevention. *Diabetes Care* 1989;12:24–31.

Brief peripheral neuropathy screening tool[1]

1. Elicit subjective symptoms

Ask the subject to rate the severity of each symptom listed in question 1 on a scale of 01 (mild) to 10 (most severe) for right and left feet and legs. Enter the score for each symptom in the columns marked R (right lower limb) and L (left lower limb). If a symptom has been present in the past, but not since the last visit, enter "00 - Currently Absent." If the symptom has never been present, enter "11 - Always Been Normal."

ALWAYS BEEN NORMAL	CURRENTLY ABSENT	MILD ⟷ SEVERE									
11	00	01	02	03	04	05	06	07	08	09	10

SYMPTOMS	R	L
a. Pain, aching, or burning in feet, legs		
b."Pins and needles" in feet, legs		
c. Numbness (lack of feeling) in feet, legs		

2. Grade subjective symptoms

Use the single highest severity score from question 1 above to obtain a subjective sensory neuropathy score. If all severity scores are "00" or "11," the subjective sensory neuropathy score will equal "0."

Subjective sensory neuropathy score (based on highest severity rating):

01 - 03 = grade of 1
04 - 06 = grade of 2
07 - 10 = grade of 3
11 or 00 = grade of 0

R	L

3. Evaluate perception of vibration

Compress the ends of a 128-Hz tuning fork just hard enough that the sides touch. Place the vibrating tuning fork on a bony prominence on the subject's wrist or hand to be sure that he/she can recognize the vibration or "buzzing" quality of the tuning fork. Again, compress the ends of the tuning fork just hard enough that the sides touch. Immediately place the vibrating tuning fork gently but firmly on the top of the distal interphalangeal (DIP) joint of one great toe and begin counting the seconds. Instruct the subject to tell you when the "buzzing" stops. Repeat for the other great toe.

Vibration perception

a. Great toe DIP joint perception of vibration in seconds
b. Vibration perception score

0 = felt >10 seconds (normal)
1 = felt 6-10 seconds (mild loss)
2 = felt <5 seconds (moderate loss)
3 = not felt (severe loss)
8 = unable to or did not assess

R	L

4. Evaluate deep tendon reflexes

With the subject seated, the examiner uses one hand to press upward on the ball of the foot, dorsiflexing the subject's ankle to 90 degrees. Using a reflex hammer, the examiner then strikes the Achilles tendon. The tendon reflex is felt by the examiner's hand as a plantar flexion of the foot, appearing after a slight delay from the time the Achilles tendon is struck. Use reinforcement by having the subject clench his/her fist before classifying the reflex as absent.

Ankle reflexes score

0 = absent
1 = hypoactive
2 = normal deep tendon reflexes
3 = hyperactive
4 = clonus
8 = unable to or did not assess

R	L

Sources:
1. "ACTG Brief Peripheral Neuropathy Screening Tool." U.S. Department of Veterans Affairs. NIAID Adult AIDS Clinical Trials Group, 2009. Web. 28 Jan. 2014. <http://www.hiv.va.gov/provider/manual-primary-care/peripheral-neuropathy-tool1.asp>.

Peripheral arterial disease (PAD)

In the next five years, one in four of your patients with peripheral arterial disease will suffer a heart attack, stroke, amputation, or death.[1]

Did you know that…

- PAD affects approximately 8 to 12 million individuals in the United States[2]
- PAD afflicts 29% of patients who are:
  - Age ≥70 years
  - 50 years and older with at least a 10-pack per year history of smoking[3] or
  - 50 years and older with a history of diabetes[3]
- Up to 89% of people with PAD do not present with symptoms of classic claudication[1]
- Despite the strikingly high prevalence of PAD, this disease is underdiagnosed because it often presents with atypical symptoms or no ischemic symptoms related to the legs at all[3]

Early identification of PAD allows for risk factor modification and medical therapy that can both favorably impact PAD disease progression and reduce cardiovascular risk factors.[4]

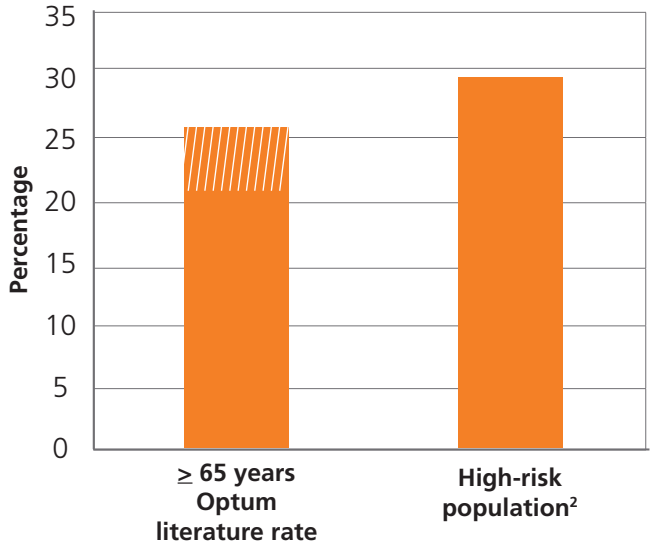
Why is it important to diagnose asymptomatic at-risk individuals with lower extremity PAD?

PAD is a prevalent atherosclerotic syndrome and is associated with a very high risk of MI, stroke and death. In the absence of a national program of PAD education and detection, many patients will not receive a diagnosis of PAD prior to the occurrence of a morbid or mortal ischemic event.

Groups at risk for PAD includes individuals…

- < 50 years old with diabetes and one other atherosclerotic risk factor (smoking, dyslipidemia, hypertension or hyperhomocysteinemia)
- 50 years and older and history of smoking or diabetes
- ≥ 65 years
- with leg symptoms with exertion (suggestive of claudication) or ischemic rest pain
- abnormal lower extremity pulse examination
- with known arthrosclerotic coronary, carotid or renal arterial disease

Prevalence of PAD: How does your practice compare?



Source: Diehm C, Allenberg JR, Pittrow D, et al. Mortality and vascular morbidity in older adults with asymptomatic versus symptomatic peripheral artery disease. *Circulation*. 2009;120:2053– 61.

Recognizing the importance of early diagnosis of PAD is the first step in improving patient outcomes resulting in…

1. Increased provider and member awareness of PAD
2. Earlier detection, including individuals at risk for PAD without classic symptoms
3. Lifestyle modification and pharmacological interventions
4. Reduced progression of PAD, symptomatic improvement and cardiovascular risk reduction

1. The Peripheral Arterial Disease (P.A.D.) Coalition. Web. 02 Feb. 2012. <http://www.padcoalition.org>.
2. Hirsch, AT, Criqui, MH, et al. "Peripheral Arterial Disease Detection, Awareness and Treatment in Primary Care." *JAMA* 2001; 286:1317-1324.
3. Society for Cardiovascular Angiography and Interventions, Society of Interventional Radiology, Society for Vascular Medicine, and Society for Vascular Surgery, Rooke, Thom W., et al. 2011 ACCF/AHA Focused Update of the Guideline for the Management of Patients With Peripheral Artery Disease (Updating the 2005 Guideline): A Report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol* 2011 0: j.jacc.2011.08.023. <http://content.onlinejacc.org/cgi/content/full/j.jacc.2011.08.023v1>.
4. Mohler, ER. "Patient Information: Claudication (peripheral arterial disease)." In: Basow, DS (Ed), *UpToDate*, Waltham, MA, 2010.

Peripheral arterial disease (PAD) documentation & coding

Language of documentation

"Peripheral arterial disease," "peripheral vascular disease" and "intermittent claudication" are coded as **443.9**. It is important to note that this code excludes atherosclerosis of the arteries of the extremities. When atherosclerosis (arteriosclerosis) is diagnosed by the clinician, the progress note should state "arteriosclerosis of" and the site, "arteriosclerotic" or "arteriosclerosis with" followed by the symptom or complication (e.g., arteriosclerosis with ulceration). Arteriosclerosis and atherosclerosis may be used interchangeably for documentation and coding purposes. Documentation of arteriosclerosis that lacks specificity is coded as 440.9 and includes the following:

- Arteriosclerotic vascular disease NOS
- Generalized arteriosclerosis
- Endarteritis deformans
- Arteriosclerosis (obliterans) (senile)
- Arteriosclerosis with calcification
- Occlusive arteriosclerosis

ICD-9-CM codes

Atherosclerosis of the native arteries of the extremities (Category 440) is further classified as:

Use additional code, if applicable, to identify chronic total occlusion of artery of the extremities ***(440.4)***	
440.20	Atherosclerosis of native arteries of the extremities, unspecified
440.21	Atherosclerosis of native arteries of the extremities, with intermittent claudication
440.22	Atherosclerosis of native arteries of the extremities, with rest pain
440.23*	Atherosclerosis of native arteries of the extremities, with ulceration
440.24*	Atherosclerosis of native arteries of the extremities, with gangrene
440.29	Atherosclerosis of native arteries of the extremities, other

When PAD or atherosclerosis is documented as a manifestation of diabetes or secondary diabetes, report one of the following diabetes codes with the associated manifestation code:

250.70-250.73	Diabetes with peripheral circulatory disorders
249.70-249.71	Secondary diabetes with peripheral circulatory disorders

The progress note must provide the appropriate linkage between the diabetes and the manifestation. For example, if the documentation states "PAD due to diabetes," the most appropriate code to describe the PAD is **443.81**. This becomes a two-code scenario:

250.70	Diabetes with peripheral circulatory disorders, type II or unspecified type, not stated as uncontrolled
443.81	Peripheral angiopathy in diseases classified elsewhere

Atherosclerotic disease is a progressive disease. Therefore, avoid documenting "history of peripheral vascular disease" and instead consider "known peripheral arterial disease." In support of such documentation, providers can use a V code for patients who have had peripheral arterial bypass (V43.4) in addition to the ICD-9-CM code for PAD.

*Use additional code to identify any associated ulceration:

707.1X Ulcer of lower limbs, except pressure ulcer		
X = **0** unspecified	X = **3** ankle	X = **9** other part of lower limb
X = **1** thigh	X = **4** heel and midfoot	**707.8** Chronic ulcer of other specified site
X = **2** calf	X = **5** other part of foot	**707.9** Chronic ulcer of unsp. site

*When documenting ulcers, it is important **not to** document them as "wounds,""open wounds" or "lesions."*

Managing chronic kidney disease:
Early detection, accurate staging and correct reporting

Currently, there are 26 million Americans with chronic kidney disease (CKD).[1] CKD can cause damage to the cardiovascular system and may result in dialysis. Undiagnosed CKD can be debilitating — and can lead to more serious complications up to and including death. Since each stage of CKD requires different interventions, it is important to be able to specify which stage of CKD a patient may have. Knowing how to appropriately detect, stage and treat for CKD can potentially improve health outcomes for this serious condition.

Did you know[2] . . .

- By using the more accurate test of eGFR, CKD can be diagnosed well before abnormal creatinine levels appear
- Persistent protein in the urine indicates CKD
- Symptoms for CKD do not appear until the disease is advanced

Always remember to . . .

Screen at-risk individuals for CKD, such as:
- Individuals with hypertension or diabetes
- Those who have a family history of hypertension or diabetes or any renal disease
- Those considered as U.S. ethnic minority status

Test your high-risk patients annually with the following tests:
- Blood pressure measurement
- Urine test to detect protein (microalbuminuria)
- Chemistry (creatinine) to calculate GFR

Approximately 39.4% of adults 60 years or older in the United States have CKD according to the Centers for Disease Control and Prevention.[3] On average, providers are reporting CKD at a much lower rate. The charts on page 9 represent coding of CKD and its other associated conditions.

Calculating GFR rates is good quality of care. Staging of CKD is the standard of care.

Documentation tips[4]:

- **CKD**: The diagnosis of CKD cannot be coded from diagnostic reports alone. Documentation in the progress note should clearly state: review of reports, pertinent findings and the stage of CKD, including the GFR.
- **CKD and diabetes**: There is no presumed linkage between diabetes and CKD. It must be implied (i.e., diabetic nephropathy) or a causal relationship stated (i.e., chronic kidney disease due to diabetes).
- **CKD and hypertension**: ICD-9-CM assumes a relationship when a patient has both chronic renal disease and hypertension (cause-and-effect link). Both conditions, chronic kidney disease (staged) and hypertension, must be documented.
- **CKD, hypertension and heart disease**: There is no presumed linkage between hypertension and heart disease. It must be implied (hypertensive) or a causal relationship stated (due to hypertension).
- **Kidney failure**: It is important to specify the type of kidney failure — acute or chronic — and the cause of the kidney failure, if known. If kidney failure is chronic, document the stage of the CKD.
- **Acute renal failure**: If patient has temporary dialysis, document it and code **V45.11**.

Sources:
1. "Chronic Kidney Disease (CKD)." National Kidney Foundation. National Kidney Foundation. 11 Oct 2012. <http://www.kidney.org/kidneydisease/index.cfm >.
2. National Kidney Foundation, . "NEW ICD-9 CODES FOR CHRONIC KIDNEY DISEASE." KDOQI Clinical Practice Guidelines for Chronic Kidney Disease. National Kidney Foundation, 25 09 2005. Web. 11 Oct 2012. <http://www.kidney.org/professionals/kls/pdf/icd9codes.pdf>.
3. CDC/Department of Health and Human Services, "Prevalence of Chronic Kidney Disease and Associated Risk Factors." *Morbidity and Mortality Weekly Report* 56(08) (2007): 161-165. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5608a2.htm>
4. World Health Organization, *Professional: ICD-9-CM for Physicians-Volumes 1&2.* 2013. Alexandria, VA: OptumInsight, 2012.
5. National Kidney Foundation, "KDOQI Clinical Practice Guidelines for Chronic Kidney Disease: Evaluation, Classification and Stratification." *American Journal of Kidney Disease* 39: 2002 supplement 1.
6. OptumInsight, *Coders' Desk Reference For Diagnoses.* 2013. Alexandria, VA: OptumInsight, 2012: 506.

Staging chronic kidney disease[4,6]

Note: All stages need to be chronic, not a one-time event.

Stage	Severity	GFR value (ml/min/1.73 m²)	ICD-9 codes
Stage I	Normal or slightly ↑ GFR	GFR ≥ 90 *with kidney damage**	585.1
Stage II	Mild	GFR 60-89 *with kidney damage**	585.2
Stage III	Moderate	GFR 30-59	585.3
Stage IV	Severe	GFR 15-29	585.4
Stage V	Kidney failure	GFR < 15	585.5
	ESRD	Requiring chronic dialysis or transplantation	585.6
CKD Unsp.	CRD, CRF NOS or CRI	Chronic kidney disease, unsp.	585.9

*• Assign **V45.11** for "dialysis status" or **V45.12** for "noncompliance with renal dialysis" with regard to all **585.6** and some **585.5**; assign V42.0 for "kidney transplant status."[4]*

• CKD is defined as either kidney damage or GFR < 60 ml/min/1.73 m² for ≥ 3 months.

**Kidney damage is defined as pathologic abnormalities or markers of damage, including abnormalities in blood or urine tests (e.g., untimed spot urine albumin/creatinine ratio or microalbumin-sensitive dipstick) or imaging studies.[5] Thus, patients can have chronic kidney disease with a normal estimated GFR.*

CKD, hypertension & heart failure[4]

Note: With chronic kidney disease, identify the stage of the disease; with heart failure, identify the type of failure.

ICD-9 Code	Description
403.90	Hypertensive CKD w/ CKD stage I–IV or unsp.
403.91	Hypertensive CKD w/ CKD stage V or ESRD
404.90	Hypertensive heart & CKD w/o heart failure & w/ CKD stage I–IV or unsp.
404.91	Hypertensive heart & CKD w/ heart failure & w/ CKD stage I–IV or unsp.
404.92	Hypertensive heart & CKD w/o heart failure & w/ CKD stage V or ESRD
404.93	Hypertensive heart & CKD w/ heart failure & CKD stage V or ESRD

Transplant & dialysis[4]

ICD-9 Code	Description
V42.0	Kidney transplant status
V45.11	Renal dialysis status
V45.12	Renal dialysis, noncompliance

CKD and diabetes[4]

The following 5th digits are required for all DM codes:

Primary DM (250 category only)

0 = *Type II or unspecified type, not stated as uncontrolled*
1 = *Type I (juvenile type), not stated as uncontrolled*
2 = *Type II or unspecified type, uncontrolled*
3 = *Type I (juvenile type), uncontrolled*

Secondary DM (249 category only)

0 = *Not stated as uncontrolled, or unspecified*
1 = *Uncontrolled*

ICD-9 Code	Description
250.4x	*DM (prim) w/renal manifestations (add 5th digit 0–3 above)**
249.4x	*DM (sec) w/renal manifestations (add 5th digit 0–1 above)** *(Code also the causal condition; sequence in the order of the reason for the visit.)*
**Use additional code(s), if applicable, to identify diabetic manifestation(s) such as:*	
585.x	*Chronic kidney disease or chronic renal failure (For "x", see "Staging chronic kidney disease" table.)*
403.9x	*Hypertensive CKD (For "x", see "CKD, hypertension & heart failure" table.)*
583.81	*Nephritis and nephropathy, NOS*
581.81	*Nephrosis /nephrotic syndrome*
791.0	*Proteinuria, albuminuria, microalbuminuria*

*Note: Use additional code for associated long-term (current) insulin use (**V58.67**) (except type I), if applicable.*

Kidney failure[4]

ICD-9 code	description
584.5	Acute kidney failure with lesion of tubular necrosis
584.6	Acute kidney failure with lesion of renal cortical necrosis
584.7	Acute kidney failure with lesion of renal medullary (papillary) necrosis
584.8	Acute kidney failure with other specified pathological lesion in kidney
584.9	Acute kidney failure, unspecified. acute kidney injury (nontraumatic)
586	Renal failure, unspecified. Uremia NOS

Sources:
1. "Chronic Kidney Disease (CKD)." National Kidney Foundation. National Kidney Foundation. 11 Oct 2012. <http://www.kidney.org/kidneydisease/index.cfm >.
2. National Kidney Foundation, . "NEW ICD-9 CODES FOR CHRONIC KIDNEY DISEASE." KDOQI Clinical Practice Guidelines for Chronic Kidney Disease. National Kidney Foundation, 25 09 2005. Web. 11 Oct 2012. <http://www.kidney.org/professionals/kls/pdf/icd9codes.pdf>.
3. CDC/Department of Health and Human Services, "Prevalence of Chronic Kidney Disease and Associated Risk Factors." *Morbidity and Mortality Weekly Report* 56(08) (2007): 161-165. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5608a2.htm>
4. World Health Organization, *Professional: ICD-9-CM for Physicians-Volumes 1&2.* 2013. Alexandria, VA: OptumInsight, 2012.
5. National Kidney Foundation, "KDOQI Clinical Practice Guidelines for Chronic Kidney Disease: Evaluation, Classification and Stratification." *American Journal of Kidney Disease* 39: 2002 supplement 1.
6. OptumInsight, *Coders' Desk Reference For Diagnoses.* 2013. Alexandria, VA: OptumInsight, 2012: 506.

Screening and Documentation Tool:
Diabetes, chronic kidney disease and peripheral arterial disease

THE CHALLENGE: CONDITION RECOGNITION "GAP"

Diabetes mellitus (DM):	Chronic kidney disease (CKD):	Peripheral arterial disease (PAD):
The prevalence of DM is 26.6%.[1] Among adults ≥ 20 years of age, as many as 30% of individuals with diabetes were undiagnosed.[2]	39.4% of people age 60 and older have CKD.[3]	Although more than half of patients with PAD in one study had leg symptoms, relatively few had classic claudication.[4] It is estimated that only 25% of afflicted individuals receive care.[5]

Documentation tips and tools:

For patients age 65 and older, use of a *Clinical Testing Flow Sheet* (see back of this sheet) will facilitate capture of dates and results of the following:

- **Blood pressure, weight and BMI (every visit):** "Adults with treated or untreated BP > 135/80 mm Hg should be screened for diabetes." (USPSTF recommendation)
- **Ankle-brachial index (ABI):** ABI is used to screen at-risk individuals for asymptomatic lower extremity PAD.[6]
- **Comprehensive dilated eye exam:** Recommended **annually for patients with diabetes;** type 1 began within 5 years of initial diagnosis; type 2 began soon after the diagnosis.[7]
- **Comprehensive foot exam:** **Foot exam includes** inspection, palpation of pedal pulses, testing to detect loss of protective sensation (LOPS), which includes standard monofilament testing combined with an additional test, such as vibration, pinprick sensation or ankle reflexes. Recommended **at least annually.**[7]
- **Testing for diabetes:**[7]*
  1. People with one or more high-risk foot conditions should have a visual inspection of their feet at every clinic visit.[8]
  2. A1C ≥ 6.5%. "The test should be performed in a laboratory using a method that is NGSP-certified and standardized to the DCCT assay." Use of the A1C to diagnose diabetes may not be valid with certain clinical conditions.
  3. Fasting (8 hours): FPG ≥ 126 mg/dl.
  4. Oral glucose tolerance test (OGTT): Plasma glucose ≥ 200 mg/dl 2 hours after 75 gm glucose load.
  5. Random plasma glucose ≥ 200 mg/dl in patients with classic hyperglycemic symptoms.
- **Monitoring glucose control with hemoglobin A1C:**[7]
  - Every 3 months: if modifying therapy or if not meeting glycemic goals
  - Twice a year: if meeting treatment goals and stable glycemic control
- **Diabetic nephropathy screening:** Screen for diabetic nephropathy by testing annually for urine albumin excretion and by determining, at least annually, serum creatinine and estimated GFR.[7]
- **Fasting lipid profile (at least annually):**[7]
  - Without overt CVD, LDL-C goal <100 mg/dl
  - With overt CVD, LDL-C goal of <70 mg/dl (using high dose of a statin) is an option†

• For patients who have been recently diagnosed with diabetes, were determined to be at risk for complications from diabetes, or were previously diagnosed with diabetes before meeting Medicare eligibility requirements, effective January 1, 2011, individual and group diabetes self-management training (DSMT) services are reportable (HCPCS codes G0108 & G0109). For more information, see:

http://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/DiabetesSvcs.pdf.

*In the absence of unequivocal hyperglycemia, "Testing for Diabetes" criteria 1–3 should be confirmed by repeat testing.

†Statin contraindicated in pregnancy

1. "Acute, Complicated and Uncomplicated Diabetes Mellitus" Literature Source (Total Diabetes Mellitus Prevalence Rate): (http://ccwdata.org/index.php) Table B.2 Medicare Beneficiary Prevalence for Chronic Conditions for 2000-2008.
2. Cowie C.C., Rust K.F., Byrd-Holt D.D., Eberhardt M.S., Flegal K.M., Engelgau M.M., et al., "Prevalence of diabetes and impaired fasting glucose in adults in the U.S. population." *Diabetes Care* June 2006. 29(6):1263-8.
3. CDC/Department of Health and Human Services, "Prevalence of Chronic Kidney Disease and Associated Risk Factors." *Morbidity and Mortality Weekly Report* 56(08)(2007):161-165.
4. Hirsch A.T., Criqui M.H., Treat-Jacobson D., et al., "Peripheral arterial disease detection, awareness, and treatment in primary care." *JAMA* 286(2001): 1317-24.
5. Heart Association Statistics Committee and Stroke Statistics Subcommittee, "Heart Disease and Stroke Statistics." *Circulation* 117(2008): e25-e146.
6. ACC/AHA, "Guidelines for the Management of Patients With Peripheral Arterial Disease." *Journal of American College of Cardiology* 47(2006): e1-e192.
7. American Diabetes Association: "Standards of Medical Care in Diabetes — 2010," *Diabetes Care*, January 2010; vol 33: supplement 1.
8. Standards of Medical Care in Diabetes — 2011 *Diabetes Care* January 2011. vol. 34 no. Supplement 1 S4–S10 Singh N, Armstrong DG, et al.
9. World Health Organization, Professional: *ICD-9-CM for Physicians — Volumes 1&2.* 2013. Alexandria, VA: OptumInsight, 2012.
10. National Kidney Foundation, "KDOQI Clinical Practice Guidelines for Chronic Kidney Disease: Evaluation, Classification and Stratification." *American Journal of Kidney Disease 39:* 2002 supplement 1.

ICD-9-CM CODING GUIDE[9]

Diabetes	
Diabetes without mention of complications	**250.00**
Diabetes with mention of complications: *Note: Assign as many 250 codes as needed to identify all the systems affected and then the corresponding codes for the specific manifestations (e.g., **250.70**, **443.81**).*	
renal manifestations	**250.4x**
ophthalmic manifestations	**250.5x**
neurological manifestations	**250.6x**
peripheral circulatory disorders	**250.7x**
other specified manifestations, such as: diabetic hypoglycemia NOS, hypoglycemic shock NOS	**250.8x**
Notes: x = 0 Type 2 or unspecified type, not stated as uncontrolled **x = 1 Type 1, not stated as uncontrolled** **x = 2 Type 2 or unspecified type, uncontrolled** **x = 3 Type 1, uncontrolled**	
Chronic kidney disease*	
GFR value = mL/min/1.73 m^2. *CKD is defined as either kidney damage or GFR < 60 mL/min/1.73 m_2 for ≥ 3 months.*[10]	
Stage I: GFR ≥ 90 with kidney damage *Kidney damage is defined as pathologic abnormalities or markers of damage, including abnormalities in blood or urine tests (e.g., untimed spot urine albumin/creatinine ratio or microalbumin-sensitive dipstick) or imaging studies.*[10]	**585.1**
Stage II: GFR 60–89 with kidney damage	**585.2**
Stage III: GFR 30–59	**585.3**
Stage IV: GFR 15–29	**585.4**
Stage V: GFR less than 15	**585.5**
ESRD: requiring chronic dialysis or transplantation	**585.6**
Chronic kidney disease, unspecified	**585.9**
Nephritis and nephropathy, not specified as acute or chronic, in diseases classified elsewhere	**583.81**
*Use additional code to identify kidney transplant status (V42.0), renal dialysis status (**V45.11**) or noncompliance with renal dialysis (**V45.12**), if applicable.*	
Peripheral arterial disease	
Peripheral arterial disease NOS Peripheral vascular disease NOS Intermittent claudication NOS	**443.9**
Atherosclerosis / arteriosclerosis of native arteries of the extremities:	
with intermittent claudication	**440.21**
with rest pain	**440.22**
with ulceration	**440.23****
with gangrene	**440.24****
unspecified	**440.20**
Atherosclerosis of bypass graft of the extremities, unspecified graft	**440.30**
Peripheral angiopathy in diseases classified elsewhere	**443.81**
***If ulceration, specify the location and code **707.10-707.19, 707.20-707.22, 707.23-707.9**.*	

Diabetes mellitus and associated manifestations

THE FOLLOWING FIFTH–DIGIT SUBCLASSIFICATIONS ARE FOR USE WITH ALL SUBCATEGORY 250.X DM CODES:

0 Type II or unspecified type, not stated as uncontrolled*

2 Type II or unspecified type, uncontrolled

Fifth-digits 0 and 2 are for use for Type II patients, even if the patient requires insulin, depending on the documented control status.

1 Type I [juvenile type], not stated as uncontrolled*

3 Type I [juvenile type], uncontrolled

*When a provider documents "poorly controlled," the Index instructs "code to Diabetes, by type, with 5th digit for not stated as uncontrolled."

Use additional code, if applicable, for associated long-term (current) use of insulin (V58.67) for type II patients only.

Notation (A): All diabetic manifestations are dependent on chart documentation. Assign as many codes from category 250 as necessary to identify all the associated diabetic conditions. Multiple coding is required for this type of complication, with multiple codes for "diabetes with complications" as necessary, followed by a code(s) for the associated manifestation(s) indicating the complication(s).

Notation (B): Although arteriosclerosis occurs earlier and more extensively in diabetic patients, coronary artery disease, cardiomyopathy and cerebrovascular disease are not complications of diabetes and are not included in code **249.7x** or **250.7x**. These conditions are coded separately unless the physician documents a causal relationship. Brown, F. (2011). ICD-9-CM *Coding Handbook 2012 with Answers,* Chicago, IL/AHA Press.

250.0 Diabetes mellitus w/o mention of complication
Refer to the gray section above for the fifth-digit subclassifications.
Diabetes (mellitus), NOS
Diabetes mellitus without mention of complication or manifestation classifiable to 250.1–250.9

250.1–250.3 "Acute diabetes codes"

(250.4–250.8) For diabetes with manifestations:

Refer to the gray section above for the fifth-digit subclassifications for the following 250.X DM codes. Also document causal relationship *(e.g., "due to," or "diabetic").*

250.4 Diabetes w/ renal manifestations
"Diabetic:"
- **581.81 Glomerulosclerosis, Intercapillary**
- **583.81 Nephritis and nephropathy, not specified acute/chronic**
- **581.81 Nephrosis / nephrotic syndrome**

If chronic kidney disease (CKD), use additional codes:
- **585.1 CKD (stage I)** GFR ≥ 90 ml/min Filtration
- **585.2 CKD (stage II)** GFR 60–89 ml/min Filtration
- **585.3 CKD (stage III)** GFR 30–59 ml/min Filtration
- **585.4 CKD (stage IV)** GFR 15–29 ml/min Filtration
- **585.5 CKD (stage V)** GFR < 15 ml/min Filtration
- **585.6 CKD (ESRD)** requiring chronic dialysis / transplantation
- **585.9 CKD, unspecified**
- **V45.11 Dialysis status**
- **V45.12 Noncompliance with renal dialysis**

If hypertension is documented with diabetic CKD, use additional codes:
- 403.90 Nephropathy w/ HTN and CKD, stage I – IV, or unspecified *(code also, if applicable:)*
  - **585.1–585.4, 585.9 Chronic kidney disease** *(see above)*
  - **V45.11 Dialysis status**
- **403.91 Nephropathy w/ HTN and CKD stage V or ESRD**
  (code also, if applicable:)
  - **585.5 CKD (stage V)** GFR < 15 ml/min filtration
  - **585.6 CKD (ESRD)** requiring chronic dialysis / transplantation
  - **V45.11 Dialysis status**

For abnormal lab, report:
- 791.0 Proteinuria, albuminuria, microalbuminuria

250.5 Diabetes w/ ophthalmic manifestations
"Diabetic:"
- **366.41 Cataract**
- 365.44 Glaucoma
- 378.86 Internuclear ophthalmoplegia
- 364.42 Iritis
- **362.07 Macular / retinal edema**
  *Note: This code must be used with a code for diabetic retinopathy (**362.01–362.06**)*
- **362.01 Retinitis**
- **362.01 Retinopathy, background / NOS**
- **362.04 Retinopathy, nonproliferative, mild**
- **362.05 Retinopathy, nonproliferative, moderate**
- **362.03 Retinopathy, nonproliferative, NOS**
- **362.06 Retinopathy, nonproliferative, severe**
- **362.02 Retinopathy, proliferative**

250.6 Diabetes w/ neurological manifestations
"Diabetic:"
- 353.5 Amyotrophy
- 355.71 Causalgia of lower limb (burning pain)
- **340 Dorsal sclerosis**
- 355.9 Mononeuropathy, NEC
- 355.8 Mononeuropathy, unspecified, lower limb
- 354.9 Mononeuropathy, unspecified, upper limb
- **358.1 Myasthenic syndromes in diseases classified elsewhere**
- **336.3 Myelopathy in diseases classified elsewhere**
- 713.5 Neurogenic / neuropathic arthritis / arthropathy (Charcot's)
- **337.1 Peripheral autonomic neuropathy**
  (code also, if applicable:)
  - 536.3 Gastroparalysis / gastroparesis
  - 596.54 Neurogenic bladder, NOS
  - 564.81 Neurogenic bowel, NOS
- **357.2 Polyneuropathy / neuralgia / neuritis / neuropathy/ loss of protective sensation (LOPS) in diabetes**

250.7 Diabetes w/ peripheral circulatory disorders
"Diabetic:"
- **785.4 Gangrene**
- **443.81 Peripheral angiopathy / microangiopathy (PVD)**

If diabetic atherosclerosis is documented, code also:
- **440.20 Atherosclerosis, extremities, NOS**
- **440.21 Atherosclerosis, extremities, with intermittent claudication**
- **440.22 Atherosclerosis, extremities, with rest pain**
  *Note: Includes any condition classifiable to **440.21***
- **440.23 Atherosclerosis, extremities, with ulceration**
  *Note: Includes any condition classifiable to **440.21** and **440.22***
  - **707.1X* Any associated ulcer of lower limbs, except pressure**
- **440.24 Atherosclerosis, extremities, with gangrene**
  *Note: Includes any condition classifiable to **440.21**, **440.22** and **440.23** with the following:*
  - **785.4 Gangrene**
  - **707.1X* Any associated ulcer of lower limbs, except pressure**
- **440.29 Atherosclerosis, extremities, other**

250.8 Diabetes w/ other specified manifestations
(e.g., dermatitis, complication nec, hypoglycemia, hypoglycemic shock)
"Diabetic:"
- 731.8 Bone changes

*Note: Use additional code to specify bone condition such as: osteomyelitis, periostitis and other infections involving bone **(730.00-730.09)***
- 259.8 Glycogenosis, secondary
- **261 Lancereaux's**
- **272.7 Lipoidosis**
- 709.3 Oppenheim-Urbach disease/syndrome
- **707.1X* Ulcer of lower limbs, except pressure**

X = 0 = unspecified 1 = thigh 2 = calf 3 = ankle 4 = heel and midfoot 5 = other part of foot 9 = other part of lower limb
*Assign **250.8X** when ulcers are not due to atherosclerosis*
- **707.8 Ulcer of skin, chronic, other specified sites**
- **707.9 Ulcer of skin, chronic, unspecified site**
- 272.2 Xanthoma

250.9 Diabetes w/ unspecified complication
Note: Known diabetic manifestations should be coded to the highest specificity using subcategories 250.4-250.8. See gray section above for fifth digits.

Source:
World Health Organization, *Professional: ICD-9-CM for Physicians — Volumes 1 & 2*. 2013. Alexandria, VA: OptumInsight, 2012, October. Print.

How can we help you?

Our goal is to help health care professionals facilitate and support accurate, complete and specific documentation and coding with an emphasis on early detection and ongoing assessment of chronic conditions. Through targeted outreach and education we help our clients and their providers:

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- Improve patient care to enhance longevity and quality of life
- Comply with Centers for Medicare & Medicaid Services (CMS) risk adjustment requirements

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