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**VA/DoD Clinical Practice Guideline for the Management of  
Diabetes Mellitus in Primary Care  
PROVIDER REFERENCE CARDS  
Diabetes  
version 3**

**Diabetes**

## Level “A” Recommendations

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**RECOMMENDATIONS WITH THE HIGHEST EVIDENCE:** The highest evidence for recommendations is A, defined as “a strong recommendation based on randomized controlled trials that the intervention is always indicated and acceptable.”

The following practices are strongly recommended based on evidence reviews:

1. For patients with very mild or no microvascular complications of diabetes, and those free of major concurrent illnesses and with a reasonable life expectancy, the HbA<sub>1c</sub> target should be < 7 percent. [R=A]
2. Initial monotherapy with a sulfonylurea or biguanide (i.e., metformin) should be used as first-line drug therapy. Sulfonylurea can be considered for most patients with type 2 diabetes; however, for those who are significantly overweight (body mass index [BMI] > 25), initial monotherapy with a biguanide may be preferable. [R=A]
3. In patients treated with large doses of insulin, addition of a thiazolidinediones (TZD) may reduce the insulin requirement and produce improved glycemia, with reduction of HbA<sub>1c</sub> by 1 percent. [R=A]
4. The use of insulin lispro or glargine is not recommended for routine use in the treatment of type 2 DM, as there is no evidence that it has any inherent superiority to more established insulin preparations in lowering HbA<sub>1c</sub> levels. [R=A]
5. Patients with impaired glucose tolerance (IGT) (i.e., a fasting plasma glucose [FPG]  $\geq$  110 mg/dL and < 126 mg/dL) should be counseled about prevention of DM. Intensive lifestyle interventions to prevent diabetes include both regular aerobic exercise and a calorie-restricted diet to promote and maintain weight loss. [R=A]
6. Persons with diabetes should be assessed for contraindications to angiotensin converting enzyme inhibitor (ACEI) use. [R=A]
7. Start/adjust treatment with ACEIs. [R=A]
8. Prescribe aspirin therapy (75 to 325 mg/day) for all adult patients with diabetes and evidence of cardiovascular disease. [R=A]



## KEY ELEMENTS

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### Primary Prevention

- Consider screening all adults (age  $\geq 45$ ) for impaired glucose tolerance.
- Consider aerobic exercise and diet to achieve weight loss and prevent the progression of impaired fasting glucose.

### Secondary Prevention

- Achieve individualized HbA<sub>1c</sub> target through diet, exercise, medication, and patient education to prevent micro- and macrovascular complications.
- Reduce and control blood pressure to improve quality and length of life, and prevent micro- and macrovascular complications.
- Control cholesterol to reduce risk of cardiovascular disease.

### Tertiary Prevention

- Screen annually for kidney disease.
- Screen annually for retinopathy using a dilated eye examination or retinal photography for patients with ocular risk factors or who have had retinopathy detected on a prior examination.
- Screen annually for lower extremity complications and risk stratification.

### Health Preventive Measures

- Consider aspirin therapy to reduce the risk of cardiovascular fatal events.
- Advise tobacco use cessation.
- Provide influenza vaccination in season.
- Provide pneumonia vaccine, if indicated.

### Patient Education

- Empower patients to make informed decisions about their self-care of diabetes.

## DETERMINATION OF TARGET HBA<sub>1</sub>C LEVEL

Major Comorbidity <sup>(d)</sup> or Physiologic Age	Microvascular Complications		
	Absent or Mild <sup>(a)</sup>	Moderate <sup>(b)</sup>	Advanced <sup>(c)</sup>
<b>Absent</b> >15 years life expectancy	7% (<1% above upper normal range)	<8% (<2% above upper normal range)	<9% (<3% above upper normal range)
<b>Present<sup>(e)</sup></b> 5 – 15 years life expectancy	<8 % (<2% above upper normal range)	<8% (<2% above upper normal range)	<9% (<3% above upper normal range)
<b>Marked<sup>(f)</sup></b> <5 years life expectancy	<9% (<3% above upper normal range)	<9% (<3% above upper normal range)	<9% (<3% above upper normal range)

- (a) Mild microvascular disease is defined by early background retinopathy, and/or microalbuminuria, and/or mild neuropathy.
- (b) Moderate microvascular disease is defined by pre-proliferative (without severe hemorrhage, intra-retinal microvascular anomalies [IRMA], or venous bleeding) retinopathy or persistent, fixed proteinuria (macro albuminuria) and/or demonstrable peripheral neuropathy (sensory loss).
- (c) Advanced microvascular disease is defined by severe non-proliferative (with severe hemorrhage, IRMA, or venous bleeding) or proliferative retinopathy and/or renal insufficiency (serum creatinine level > 2.0 mg/dL) and/or insensate extremities or autonomic neuropathy (e.g., gastroparesis, impaired sweating, or orthostatic hypotension).
- (d) Major comorbidity includes, but is not limited to, any or several of the following conditions: cardiovascular disease, chronic obstructive pulmonary disease, chronic liver disease, stroke, and malignancy.
- (e) Moderate degree of major comorbid condition.
- (f) Severe degree or end-stage major comorbid condition.



## SELF-MANAGEMENT PRINCIPLES

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### Health Care Provider Influence and Disease Management



Health care providers, in general, are very influential in determining how patients view and manage their illness. Research suggests that such provider influence is a strong predictor of disease management and behavioral change. Yet, most providers would agree that encouraging their patients to follow their medical and self-care regimen is one of the most difficult challenges they face. Several theories have been proposed to help understand an individual's attitudes, feelings, and capacity for disease self-management and behavioral change. Almost all emphasize the importance of patient empowerment and can be easily applied to understanding diabetes self-management. The main principle of patient empowerment is that each patient has ultimate responsibility for his/her diabetes care. The provider is responsible for ensuring that the patient has the necessary information and support to make informed decisions on managing his/her diabetes.

### Behavioral Change Model

Numerous models of behavioral change have emerged in the research literature over the last few years. Prochaska and DiClemente's "Stages of Change" is one such model. This model is based on the premise that change is a gradual process and patients differ in their readiness to change any particular behavior. Further, their theory states that providers will be most effective facilitating change if they can gauge where their patients are in the process of change and tailor their interventions to that point. Using the Prochaska, et. al model as inspiration, one can envision patients in one of three levels of diabetes self-management: NOT ENGAGED with their care, AMBIVALENT regarding their care, or ENGAGED with their care. Providers can gauge this level by listening to patient concerns and understanding the reasons for incomplete behavioral change. After identifying the level, providers can then use motivation principles to promote awareness and action for the next step in the process of change.



## SELF-MANAGEMENT PRINCIPLES (CONTINUED)

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### Motivational Interviewing

Motivation is an inherent quality. Patients are already motivated to change; however, they are motivated toward their own goals. A strategy that has been widely used to promote behavioral change is motivational interviewing proposed by Miller and Rollnick. This approach has been successfully applied to the treatment of alcohol addiction, smoking cessation, exercise behavior, and weight management. The main goals of motivational interviewing are to identify the factors that motivate patients presently, understand and appreciate what needs they are attempting to meet, and assist patients in deciding whether the tools they are using to meet those needs are effective.



Motivational interviewing strategies can be incorporated into brief medical visits (lasting 5 to 15 minutes) and are easily adaptable for use by providers. One strategy is to avoid the use of terms such as “non-compliant,” “unmotivated,” or “non-adherent” when describing a patient’s commitment to change. These words are punitive and imply a character flaw in the patient rather than taking into account the difficult nature of managing a chronic illness, such as diabetes. Other strategies include expressing empathy, avoiding argumentation, rolling with resistance, supporting self-efficacy and pointing out discrepancies between goals and behaviors. Research indicates behavioral change is associated more with encouragement and praise than discouragement or punishment.

### Providers and the Change Process

Providers should remember that setbacks are common in the change process. It is important to help patients understand that something can be learned from the setback and to focus on the successes they have achieved. The following table is a provider guide to motivational interviewing strategies that encourage patients based on their level of engagement in their diabetes self-management.



**VA/DoD Clinical Practice Guideline for the Management of Diabetes Mellitus in Primary Care**  
**DIABETES SELF-MANAGEMENT PROCESS**

Patients may cycle repeatedly over years through three stages of the diabetes self-management process before optimum care becomes established. Relapses should be expected! Providers are most effective when they maintain their relationships and influence over the *long-term*.

<b>NOT ENGAGED</b>	<b>AMBIVALENT</b>	<b>ENGAGED</b>
<p>Patient does not perceive diabetes management as a problem or is discouraged because of previous failed efforts.</p> <p><b>GOAL:</b> Patient will begin thinking about change.</p> <p><b>PROVIDER STRATEGIES:</b></p> <p><b>ASK:</b> <i>“Have you tried to make changes in the past? What happened?”</i></p> <p><b>AVOID:</b></p> <ul style="list-style-type: none"> <li>▪ Lecturing, advice-giving, scare tactics, confrontational behavior.</li> </ul> <p><b>DO:</b></p> <ul style="list-style-type: none"> <li>▪ Communicate self-efficacy and hope.</li> </ul> <p><i>“You’re here today; that probably means you want to improve your health.”</i></p> <p><i>“I know you can do it. Many of my patients, just like you, have struggled and been successful.”</i></p> <p><i>“I’m here to support you, whatever you decide.”</i></p>	<p>Patient is ambivalent about behavioral change, while acknowledging the problem and weighing the pros and cons.</p> <p><b>GOAL:</b> Patient will actively examine costs/benefits to change.</p> <p><b>PROVIDER STRATEGIES:</b></p> <p><b>ASK:</b> <i>“What are the barriers today that keep you from changing?”</i></p> <p><b>AVOID:</b></p> <ul style="list-style-type: none"> <li>▪ Trying to “fix” each barrier that the patient lists. This can lead to “yes buts” if you provide solutions before the patient has fully committed to change.</li> </ul> <p><b>DO:</b></p> <ul style="list-style-type: none"> <li>▪ Listen carefully to barriers and try to engage the patient in problem-solving about those barriers.</li> </ul> <p><i>“What do you hope to get out of good diabetes management?”</i></p> <p><i>“What has stood in the way of staying on a program?”</i></p>	<p>Patient is committed to active disease self-management and has been successful with small changes.</p> <p><b>GOAL:</b> Reinforce success and build confidence for further change.</p> <p><b>PROVIDER STRATEGIES:</b></p> <p><b>ASK:</b> <i>“You’ve done a good job with your diabetes management so far. How has that gone for you? Hard, easy?”</i></p> <p><b>AVOID:</b></p> <ul style="list-style-type: none"> <li>▪ Neglecting to compliment success.</li> <li>▪ Overwhelming the patient with information or recommendations because you think they are now fully engaged in the process.</li> </ul> <p><b>DO:</b></p> <ul style="list-style-type: none"> <li>▪ Engage the patient in developing the next modest step for self-management.</li> <li>▪ Carefully assess patient skill level for the next step in self-care.</li> </ul>

Miller, W.R., & Rollnick, S. (2002). *Motivational Interviewing, Preparing people for change*, second edition. New York: The Guilford Press

Prochaska, J.O., & DiClemente, C.C. (1986). Toward a comprehensive model of change. In W.R. Miller & N. Heather (Eds.), *Treating addictive behaviors: Processes of change* (pp. 3-27). New York: Plenum.

# VA/DoD Clinical Practice Guideline for the Management of Diabetes Mellitus in Primary Care

## Oral Pharmacologic Agents

### Sulfonylureas

- Efficacy: estimate reduction in HbA<sub>1c</sub> = 1.0 – 2.0 %
- 1<sup>st</sup> generation sulfonylureas are no longer commonly used
- No difference in long-term efficacy or failure rate has been demonstrated among the sulfonylureas
- The preferred agents have shorter half-lives and inactive metabolites
- 1<sup>st</sup> generation sulfonylureas are 100% renally eliminated. Chlorpropamide and tolazamide have active metabolites.
- Glipizide, glyburide, and glimepiride are renally eliminated by 80 – 85%, 50%, and 60%, respectively. All but glipizide have active metabolites.
- Inexpensive

Agents	Dose		Contraindications	Adverse Events
<b>1<sup>st</sup> generation</b>				
Chlorpropamide	100 – 500 mg qd		<ul style="list-style-type: none"> <li>• Hypersensitivity</li> <li>• Pregnancy</li> </ul>	<ul style="list-style-type: none"> <li>• Hypoglycemia</li> <li>• Hypersensitivity</li> <li>• Weight gain</li> </ul>
Tolazamide	1000 mg qd or in 2 divided doses			
Tolbutamide	250 – 2000 mg in 2 – 3 divided doses			
<b>2<sup>nd</sup> generation</b>				
Glimepiride	1 – 4 mg once daily			
Glipizide* Glipizide XL*	2.5 – 40 mg qd or in 2 divided doses 5 – 10 mg once daily	<ul style="list-style-type: none"> <li>• Taken 30 minutes before a meal</li> <li>• Doses &gt;15 mg should be divided into 2 doses</li> </ul>		
Glyburide*	1.25 – 20 mg once daily or in 2 divided doses			
Micronized glyburide*	0.75 – 12 mg once daily or in 2 divided doses	<ul style="list-style-type: none"> <li>• Doses &gt;6 mg may provide a better response when divided</li> <li>• If the response to a single daily dose of glyburide or glipizide does not achieve treatment goals, dividing the dose may be effective</li> </ul>		

### Biguanide

- Efficacy: estimate reduction in HbA<sub>1c</sub> = 1.0 – 2.0%
- The major blood glucose lowering effect is through decreasing hepatic glucose production with some decrease in peripheral insulin resistance
- May restore ovulation in premenopausal anovulatory females
- Monitor renal function prior to drug initiation and at least annually thereafter
- Inexpensive when using generic

Agents	Dose		Contraindications	Adverse Events
Metformin	Initial – 500 mg bid or 850 mg q am Maintenance – 850 mg bid with meals Maximum – 2550 mg/day in 3 divided doses	If on 500 mg bid, dosage increase may be made by 500 mg increments weekly up to 1000 mg bid If on 850 mg q am, dosage increase of 850 mg may be made every other week (given as 850 mg bid) The dose response curve usually plateaus after 2000 mg/day Take with food to avoid possible GI symptoms	<b>Contraindications</b> <ul style="list-style-type: none"> <li>• Renal dysfunction (SCr &gt;1.5 mg/dl for males or &gt;1.4 mg/dl for females)</li> <li>• CHF requiring pharmacologic management</li> <li>• Acute or chronic metabolic acidosis</li> <li>• Hold prior to IV dye procedures and for 48 hours after the procedure. Reinstigate only after renal function is found to be normal.</li> </ul>	<ul style="list-style-type: none"> <li>• Potential for lactic acidosis when used in patients for whom the drug is contraindicated</li> <li>• Transient dose-related GI symptoms (diarrhea, nausea, vomiting, bloating, flatulence, anorexia)</li> <li>• Decrease in vitamin B12 levels</li> </ul>
Metformin extended release	Initial – 500 mg qd with the evening meal	Dose may be increased by 500 mg per week to a maximum of 2000 mg once daily. If glycemic control is not achieved, consider dividing into 2 doses.	<b>Not Recommended</b> <ul style="list-style-type: none"> <li>• Age ≥80 unless normal creatinine clearance, and the dose should not be escalated to the maximum in elderly patients due to increased susceptibility to lactic acidosis</li> <li>• Hepatic disease or excessive ethanol intake</li> <li>• Withhold in the presence of any condition associated with hypoxemia, dehydration or sepsis</li> </ul>	



## VA/DoD Clinical Practice Guideline for the Management of Diabetes Mellitus in Primary Care

<b>Alpha-glucosidase inhibitors</b>				
<ul style="list-style-type: none"> <li>• Efficacy: estimate reduction in HbA<sub>1c</sub> = 0.4 – 1.0%</li> <li>• Delays the digestion of carbohydrates, thereby decreasing postprandial hyperglycemia</li> <li>• Allows for flexible meal dosing</li> <li>• Moderately expensive</li> </ul>				
Agents	Dose		Contraindications	Adverse Events
Acarbose Miglitol	Initiate – 25 mg tid Maintenance – 50 mg tid. Maximum – 100 mg tid	Or initiate gradually: 25 mg qd x 1-2 weeks followed by 25 mg bid for 1 – 2 weeks followed by 25 mg tid. Once a 25 mg tid dosing regimen is reached, further increases may be made at a 4 – 8 week intervals. Max dose for acarbose if weight <60 kg = 50 mg tid Dose is to be taken with the first bite of each main meal If the patient misses or adds a meal, he/she should omit or add the dose	<b>Contraindications</b> • Presence of intestinal complications (inflammatory bowel disease, colonic ulceration, intestinal obstructions, digestion or absorption disorders) • Acarbose is contraindicated in patients with cirrhosis. Miglitol pharmacokinetics are not altered in cirrhosis and may be used. <b>Not Recommended</b> • SCr > 2.0 mg/dl	<ul style="list-style-type: none"> <li>• Transient dose-related GI symptoms (diarrhea, abdominal pain, flatulence) can limit compliance with therapy</li> <li>• Acarbose, especially at doses greater than 50 mg tid, may cause serum AST/ALT elevation; monitor serum levels every 3 months during the first year of treatment</li> </ul>
<b>Thiazolidinediones</b>				
<ul style="list-style-type: none"> <li>• Efficacy: estimate reduction in HbA<sub>1c</sub> = 1.0 – 1.5%</li> <li>• Enhances insulin sensitivity in skeletal muscle, hepatic, and adipose tissue without directly stimulating insulin secretion from the pancreas. Also has a small effect on inhibiting hepatic glucose</li> <li>• Liver function and bilirubin should be tested every 2 months for 1 year, then periodically thereafter. If ALT is &gt;3x upper limit of normal, recheck another level as soon as possible. If ALT remains &gt;3x the upper limit, discontinue use</li> <li>• May restore ovulation in premenopausal anovulatory females</li> <li>• Very expensive</li> </ul>				
Agents	Dose		Contraindications	Adverse Events
Rosiglitazone Pioglitazone	4 – 8 mg qd or divided into 2 doses 15 – 45 mg qd	May be given without regard to meals, no dosage adjustment required for renal insufficiency, and the current sulfonylurea, metformin, or insulin dose should be continued when adding rosiglitazone or pioglitazone. When using with insulin, if plasma glucose levels decrease to less than 100-120 mg/dL, the dose of insulin should be decreased by 10-25%. Continue to monitor the patient for further adjustments Slow onset of action	<b>Not Recommended</b> • New York Heart Association Classes III and IV • Do not initiate in patients with ALT >2.5x the upper limit of normal	<ul style="list-style-type: none"> <li>• Edema</li> <li>• Weight gain</li> <li>• Decrease Hgb/HCT</li> <li>• Hepatotoxicity (rare)</li> </ul>
<b>Meglitinides</b>				
<ul style="list-style-type: none"> <li>• Efficacy: estimate reduction in HbA<sub>1c</sub> = 0.6 – 1.9%</li> <li>• Like sulfonylureas (SFU), it stimulates pancreatic secretion of insulin. It has a faster onset and shorter duration of action than SFUs, therefore postprandial glucose is affected to a greater extent than fasting blood glucose</li> <li>• Allows for flexible meal dosing</li> <li>• Do not use in patients who have failed sulfonylurea therapy</li> <li>• Expensive</li> </ul>				
Agents	Dose		Contraindications	Adverse Events
Repaglinide  Nateglinide	Initial – 0.5 mg in patients with HbA <sub>1c</sub> <8%. 1 or 2 mg in patients previously treated with hypoglycemics or if HbA <sub>1c</sub> >8% Maximum – 4 mg per meal  120 mg before each meal.	Take 1 – 30 minutes before a meal. If the patient misses or adds a meal, he/she should omit or add the dose	<b>Use With Caution</b> <b>Repaglinide</b> • Hepatic impairment • Severe renal impairment <b>Nateglinide</b> • Moderate-severe hepatic impairment	<ul style="list-style-type: none"> <li>• Hypoglycemia</li> <li>• Weight gain</li> </ul>

\*In general, the hypoglycemic effects of glyburide and glipizide tend to plateau at 10 mg and 20 mg, respectively.

## VA/DoD Clinical Practice Guideline for the Management of Diabetes Mellitus in Primary Care

<b>Insulin</b>					
Insulin (see Annotation J-3 Insulin Therapy)					
<ul style="list-style-type: none"> <li>• Efficacy: Dose can be adjusted to achieve a wide range of glucose lowering</li> <li>• Requires intensive patient education</li> <li>• Regular, neutral protamine Hagedom insulin [NPH], and lente – inexpensive</li> <li>• Insulin analogs – moderately expensive</li> </ul> <p><b>Contraindications:</b> Hypersensitivity to insulin</p> <p><b>Adverse Events:</b> Hypoglycemia, hypersensitivity, injection site reactions, weight gain</p>					
Insulin	Onset (hours)	Peak (hours)	Duration (hours)	Compatible Mixed With	Appearance
<b>RAPID-ACTING</b>					
Regular (Novolin R <sup>®</sup> , Humulin R <sup>®</sup> )	0.5 – 1	2 – 5	6 – 10	NPH, lente, ultralente	Clear
Lispro (Humalog <sup>®</sup> )	0.25 – 0.5	0.5 – 2.5	3 – 6.5	Human NPH, human ultralente <sup>c,d</sup>	Clear
Aspart (Novolog <sup>®</sup> )	0.17 – 0.33	1 – 3	3 – 5	Human NPH <sup>c,e</sup>	Clear
<b>INTERMEDIATE-ACTING</b>					
NPH (Novolin N <sup>®</sup> , Humulin N <sup>®</sup> )	1 – 1.5	4 – 12	16 – 24	Regular	Cloudy
Lente (Novolin L <sup>®</sup> , Humulin L <sup>®</sup> )	1 – 2.5	7 – 15	16 – 24	Regular	Cloudy
<b>LONG-ACTING</b>					
Ultralente (Humulin U <sup>®</sup> )	4 – 6	8 – 20	24 – 28	Regular	Cloudy
Insulin glargine (Lantus <sup>®</sup> )	1.1	2 – 20	Up to 24	Not to be mixed with other insulins	Clear

<b>Insulin</b>		
Insulin (see Annotation J-3 Insulin Therapy) cont.		
Insulin	Compatible Mixed With	Appearance
<b>PRE-MIXED PRODUCTS</b>		
70% NPH/ 30% Regular (Novolin 70/30, Humulin 70/30); 50% NPH/ 50% regular (Humulin 50/50)	Not to be mixed with other insulins	Cloudy
75% intermediate/25% lispro (Humalog mix 75/25)	Not to be mixed with other insulins	Cloudy

- (a) Adapted from AHFS Drug Information, American Society of Health-System Pharmacists, Inc., 2002
- (b) The time course of action is intended as a general guide as many factors may influence these parameters (e.g., type of preparation, dose, site of administration, and patient-related variables).
- (c) The effects of mixing insulin lispro or insulin aspart with insulins of animal source have not been studied. The only animal source insulin remaining on the market is purified pork as regular, NPH, and lente.
- (d) The effects of mixing insulin lispro with insulins produced by manufacturers other than Eli Lilly has not been studied.
- (e) The effects of mixing insulin aspart with insulins produced by manufacturers other than Novo Nordisk has not been studied.



## POPULATION LEVEL METRICS

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- ◆ % with one or more A1c test(s)
- ◆ % with A1c > 9.0% (poor control)
- ◆ % with at least one LDL-C test
- ◆ % with most recent LDL-C < 130 mg/dl
- ◆ % with at least one test for microalbumin or who had evidence of medical attention for existing nephropathy
- ◆ % with dilated eye exam or evaluation of retinal photographs by an eye care specialist during reporting year or during the prior year if patient low risk (must have all three: not on insulin, A1c < 8%, no evidence of retinopathy in prior year)
- ◆ % with comprehensive foot exam
- ◆ % with BP < 140/90 mm Hg
- ◆ % screened and documented for tobacco use

# DIABETES MELLITUS ICD-9-CM CODES

**Diabetes Codes 250.0X – 250.8X must end in one of the following fifth digits:**

Diabetes Mellitus, Type 2	0	Diabetes Mellitus, Type 2 uncontrolled	2
Diabetes Mellitus, Type 1	1	Diabetes Mellitus, Type 1 uncontrolled	3

**Note: If a Patient is Pregnant These Codes Do Not Apply**

**Diabetes without Complications 250.0X**

**Diabetes with Ketoacidosis 250.1X**

**Diabetes with Hyperosmolarity 250.2X**  
(diabetic hyperosmolarity, diabetic w hyperosmolar coma)

**Diabetes with Other Coma 250.3X**  
(diabetic coma, NOS or diabetic hypoglycemic coma or insulin coma, NOS)

**Diabetes with Renal Manifestations 250.4X**

**List ICD 9 Code 250.4X First - Use Additional Code for:**

Diabetic Nephrosis	581.81
Diabetic Nephrotic Syndrome	581.81
Diabetic Nephropathy, NOS	583.81
Diabetic Acute Renal Failure	584.9
Diabetic Chronic Renal Failure	585
Diabetic Renal Failure, NOS	586

**Diabetes with Ophthalmic Manifestations 250.5X**

**List ICD-9 Code 250.5X First – Use Additional Code for:**

Diabetic Retinopathy, NOS	362.01
Diabetic Background Retinopathy	362.01
Diabetic Retinal or Macular Edema	362.01
Diabetic Retinal Hemorrhage	362.01
Diabetic Proliferative Retinopathy	362.02
Diabetic Cataract	366.41
Blindness due to Diabetes	

**Contact Coder or Coder Help Desk\***

**Diabetes with Neurological Manifestations 250.6X**

**List ICD-9 Code 250.6X First – Use Additional Code for:**

Diabetic Autonomic Neuropathy	337.1
Diabetic Peripheral Autonomic Neuropathy	337.1
Diabetic Mononeuropathy Lower Extremity	355.8
Diabetic Mononeuropathy Unspecified Site	355.9
Diabetic Neuropathy or Polyneuropathy	357.2
Diabetic Gastroparesis	536.3 & 337.1
Diabetic Impotence (due to neuropathy)	607.84

**Use Additional Code for:**

Diabetic Ulcer of Thigh w/o Gangrene	707.11
Diabetic Ulcer of Calf w/o Gangrene	707.12
Diabetic Ulcer of Ankle w/o Gangrene	707.13
Diabetic Ulcer of Heel and/or Midfoot w/o Gangrene	707.14
Diabetic Ulcer of Other Part of the Foot (Toes) w/o Gangrene	707.15
Diabetic Ulcer of Other Part Lower Limb (Knee) w/o Gangrene	707.19

**If Atherosclerosis is present contact Coder or Help Desk\***

**Use Additional Code for:**

Diabetic Ulcer of Thigh w Gangrene	707.11 & 785.4
Diabetic Ulcer of Calf w Gangrene	707.12 & 785.4
Diabetic Ulcer of Ankle w Gangrene	707.13 & 785.4
Diabetic Ulcer of Heel and/or Midfoot w Gangrene	707.14 & 785.4
Diabetic Ulcer of Other Part of Foot (Toes) w Gangrene	707.15 & 785.4
Diabetic Ulcer of Other Part of Lower Limb (Knee) w Gangrene	707.19 & 785.4

**If Atherosclerosis is present contact Coder or Help Desk\***

## DIABETES MELLITUS ICD-9 CM CODES (continued)

**Diabetes Codes 250.0X – 250.8X must end in one of the following fifth digits:**

Diabetes Mellitus, Type 2	0	Diabetes Mellitus, Type 2 uncontrolled	2
Diabetes Mellitus, Type 1	1	Diabetes Mellitus, Type 1 uncontrolled	3

**Note: If a Patient is Pregnant These Codes Do Not Apply**

### Diabetes with Peripheral Circulatory D/O 250.7X

**List ICD-9 Code 250.7X First – Use Additional Code for:**

Diabetic Ulcer of Thigh w/o Gangrene	707.11
Diabetic Ulcer of Calf w/o Gangrene	707.12
Diabetic Ulcer of Ankle w/o Gangrene	707.13
Diabetic Ulcer of Heel and/or Midfoot w/o Gangrene	707.14
Diabetic Ulcer of Other Part of Foot (Toes) w/o Gangrene	707.15
Diabetic Ulcer of Other Part of Lower Limb (Knee) w/o Gangrene	707.19

**If Atherosclerosis is present contact Coder or Help Desk\***

Use Additional Code for:

Diabetic Ulcer of Thigh w Gangrene	707.11 & 785.4
Diabetic Ulcer of Calf w Gangrene	707.12 & 785.4
Diabetic Ulcer of Ankle w Gangrene	707.13 & 785.4
Diabetic Ulcer of Heel and/or Midfoot w Gangrene	707.14 & 785.4
Diabetic Ulcer of Other Part of Foot (Toes) w Gangrene	707.15 & 785.4
Diabetic Ulcer of Other Part of Lower Limb (Knee) w Gangrene	707.19 & 785.4

**If Atherosclerosis is present contact Coder or Help Desk\***

Use Additional Code for:

Diabetic Impotence (due to Peripheral Circulatory Disorder)	607.84
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**\* Coding Help Desk: [www.pasba.amedd.army.mil](http://www.pasba.amedd.army.mil)  
Click on "Data Coding"**

### Diabetes with Other Specified Manifestations 250.8X

**List ICD-9 Code 250.8X First - Use Additional Code for:**

Diabetic Ulcer of Thigh w/o Gangrene	707.11
Diabetic Ulcer of Calf w/o Gangrene	707.12
Diabetic Ulcer of Ankle w/o Gangrene	707.13
Diabetic Ulcer of Heel and/or Midfoot w/o Gangrene	707.14
Diabetic Ulcer of Other Part of Foot (Toes) w/o Gangrene	707.15
Diabetic Ulcer of Knee w/o Gangrene	707.19

**If Atherosclerosis is present contact Coder or Help Desk\***

Diabetic Hyperlipidemia	272.4
Diabetic Impotence (NOT due to Peripheral Circulatory or Neurological Disorder)	607.84

### Other Associated Codes

Physician Educational Services Rendered to Patients in a Group Setting	CPT Code 99078
Nurse Visit – Office or Outpt	CPT Code 99211
Diabetic Mgt Program, Group Session	HCPCS Level II Code – S9455
Diabetic Mgt Program, Nurse Visit	HCPCS Level II Code – S9460
Diabetic Mgt Program, F/U Visit to Non-MD Provider	HCPCS Level II Code – S9140
Diabetic Mgt Program, F/U Visit to MD Provider	HCPCS Level II Code – S9141

