Diabetes mellitus (DM)

ICD-10-CM
Clinical overview

Disclaimer

This document is intended for physicians and office staff. The information here is not intended to serve as official coding or legal advice. All coding should be considered on a case-by-case basis and should be supported by medical necessity and the appropriate documentation in the medical record.

Definition

Diabetes mellitus: A chronic, lifelong disease that involves impaired metabolism of carbohydrates, proteins and fats. It is marked by high levels of sugar in the blood due to insufficient secretion of insulin by the pancreas, tissue resistance to insulin produced by the pancreas, or both.

Background

Normally, sugar from food is converted to glucose, which enters the bloodstream and is used by the body for energy. Insulin produced in the pancreas "unlocks" the tissue cells in the body, allowing glucose to enter to provide fuel and energy for the cells.

Types

- **Type 1 diabetes mellitus** – Usually (but not always) diagnosed in childhood. The pancreas produces little to no insulin and daily insulin injections are required. The exact cause of type 1 diabetes mellitus is not known.
- **Latent autoimmune diabetes in adults (LADA)** – Also known as type 1.5 diabetes, this is a form of diabetes in which an adult has features of both type 1 and type 2 diabetes. Individuals with LADA demonstrate both the autoimmune destruction of beta cells of type 1 diabetes and the insulin resistance characteristic of type 2 diabetes. People with type 1.5 diabetes have autoantibodies to insulin-producing beta cells and gradually lose their insulin-producing capability, requiring insulin within 5–10 years of diagnosis. (AHA Coding Clinic, Type 1.5 diabetes mellitus, Third Quarter 2018, pages 4-5)
- **Type 2 diabetes mellitus** – Far more common than type 1, this type usually occurs in adulthood. The pancreas does not produce enough insulin to maintain normal glucose levels, often because the body tissues do not respond well to insulin (insulin resistance). In some cases, daily insulin injections are required. The exact cause of type 2 diabetes mellitus is not known, but excess weight and inactivity appear to be contributing factors.
- **Secondary diabetes mellitus** – Always caused by another condition, such as malignant neoplasm of the pancreas, pancreatectomy, adverse drug effects or poisoning.

Risk factors for type 2 diabetes mellitus

- Age (older than 45 years)
- Obesity
- High cholesterol levels
- Polycystic ovary syndrome in women
- History of gestational diabetes or delivering a baby weighing more than nine pounds
- Physical inactivity
- Heart disease
- Family history of diabetes
- History of glucose intolerance
- Ethnicity (certain ethnic groups are at higher risk)

Signs and symptoms

- Frequent urination (polyuria)
- Excessive thirst (polydipsia)
- Excessive hunger (polyphagia)
- Unusual weight loss
- Fatigue
- Irritability
- Blurry vision

Complications

Acute complications

- Infections
- Stroke
- Diabetic ketoacidosis – an acute life-threatening condition requiring immediate medical attention. Develops when cells in the body are unable to get the sugar (glucose) they need for energy. The body begins to break down fat and muscle for energy. This process produces ketones, which enter the bloodstream and cause a chemical imbalance. Severe diabetic ketoacidosis carries a coma risk and even death.

Long-term complications

(Tend to be chronic, but can be reversible in some cases)

- Diabetic neuropathy
- Diabetic retinopathy
- Hypertension
- Diabetic nephropathy
- Hyperlipidemia
- Atherosclerotic peripheral vascular disease

Diagnostic tools

- Medical history and physical exam
- Urinalysis
- Blood tests (fasting or random blood sugar, glucose tolerance tests, glycohemoglobin (HbA1c), metabolic profiles)

Treatment

Treatment depends on the type of diabetes. May include insulin injections or oral medications. Other treatments: dietary management; regular exercise; control of weight, blood pressure and cholesterol; close monitoring of blood glucose levels; diabetes education; and monitoring for complication.

Subjective

In the subjective section of the office note, document the presence or absence of all current symptoms related to diabetes. If there are no current symptoms, this section should show the patient was screened for symptoms.

Objective

The objective section should describe current physical exam findings related to DM and its complications or manifestations with cause-and-effect linkage clearly documented. Include results of related laboratory and other diagnostic testing.

Final assessment

Abbreviations: Limit or avoid acronyms and abbreviations. DM is a commonly accepted medical abbreviation for diabetes mellitus but can represent other medical conditions (diastolic murmur or distal metastasis). The meaning of an abbreviation can often be determined based on context, but not always. Best practice is to spell out the diagnosis in full in the final assessment/impression.

Specificity: Document DM to the highest level of specificity. Include all of the following:

- **Type or cause** – Type 1, type 2, due to an underlying condition (specify condition), due to drugs or chemicals (specify drug or chemical), due to other condition or event (specify condition or event), type 1.5 aka latent autoimmune diabetes in adults (LADA)
- **All complications or manifestations** with clear cause-and-effect linkage. Best practice: Describe each complication as "diabetic," even when there are multiple complications. For example:
  "Diabetes mellitus type 2 with diabetic peripheral neuropathy and diabetic foot ulcer."
- **Current status of diabetes control** – In ICD-10-CM, "uncontrolled" is considered a diabetic complication.
  - o Do not describe diabetes as uncomplicated *and* uncontrolled, as this represents a contradiction. If diabetes is uncontrolled, it is not uncomplicated.
  - o ICD-10-CM requires the physician to specify whether "uncontrolled" means hyperglycemia, hypoglycemia or both. There is no coding path in the ICD-10-CM manual for "uncontrolled" with no further specification. Note: Coders cannot interpret glucose or HbA1c values.
  - o Avoid vague descriptions such as "inadequately controlled," "out of control" or "poorly controlled."

"Long-term current use of insulin" is a diagnostic statement that should be included in the final assessment when appropriate. Best practice is to also include all of the following:

- o Name(s) of the insulin being used
- o Clear linkage of insulin therapy to diabetes
- o Dosage regimen that shows regular and routine insulin use with ongoing refills

Example: "Long-term current use of insulin – continue Levemir FlexTouch 14 units every day at bedtime for diabetes mellitus, 3 refills."

Plan

Document a specific and concise treatment plan for diabetes and all diabetic complications. Examples include insulin or oral medication dosage and instructions; orders for lab or other diagnostic testing; diet and exercise instructions; referrals to specialists or for diabetic teaching; and the date of the next appointment.

Presumed cause-and-effect linkage

The ICD-10-CM classification presumes cause-and-effect linkage between diabetes and certain conditions unless the physician specifically indicates the conditions are not related. Conditions that appear in the alphabetic index as indented subterms under the various types of "Diabetes, with" are coded as diabetic complications, even in the absence of physician documentation explicitly linking them, unless the documentation clearly indicates these conditions are not caused by diabetes — for example, by stating:

- o The actual nondiabetes-related cause
- o The cause is not diabetes
- o Diabetes is without complications
- o The cause is unknown

Excerpt from alphabetic index:
Diabetes, diabetic (mellitus) (sugar) E11.9
    with
        amyotrophy E11.44
        arthropathy NEC E11.618
        autonomic (poly) neuropathy E11.43
        cataract E11.36
        Charcot's joints E11.61Ø
        chronic kidney disease E11.22
(See alphabetic index under the various types of diabetes for a complete list of indented subterms under **Diabetes** > with).

Electronic health record (EHR) issues

Other and unspecified codes with descriptions:
Some electronic health records (EHRs) insert ICD-10-CM codes with corresponding descriptions into the assessment section of the office note rather than a provider-stated final diagnosis. For example:

> "E13.69 Other specified diabetes mellitus with other specified complication"

> "E11.8 Type 2 diabetes mellitus with unspecified complications"

These are vague descriptions and incomplete diagnoses.
- Codes titled "other" or "other specified" are for use when the medical record provides a specific diagnosis description for which a specific code does not exist.
- The "other" ICD-10-CM code with description should not be used, by itself, as a final diagnosis without clear documentation that specifies the particular "other" condition.
- Unspecified diagnosis descriptions should be used only when sufficient clinical information is not known or available to the provider at the time of the encounter.

Mismatch between final diagnostic statement and EHR-inserted diagnosis code with description:
Another scenario that causes confusion is when the assessment section documents a provider-stated diagnosis *PLUS* an EHR-inserted diagnosis code with description that does not match, or may even be contradictory. Example:

> **Assessment: Type 2 diabetes mellitus uncomplicated**
> E11.4Ø Type 2 diabetes mellitus with diabetic neuropathy, unspecified

Here the final diagnosis in **bold** in the Assessment is "Type 2 diabetes mellitus uncomplicated", which codes to E11.9.

The EHR-inserted diagnosis code with description that follows, however, is E11.4Ø, Type 2 diabetes mellitus with diabetic neuropathy, unspecified.

This can lead to confusion regarding which diagnostic statement is correct and which diagnosis code should be reported. Documentation elsewhere in the record does not always provide clarity.
To avoid confusion and ensure accurate diagnosis code assignment, the provider-stated final diagnosis must either
a) match the code with description; or
b) it must classify in ICD-10-CM to the EHR-inserted diagnosis code with description.

Note: ICD-10-CM is a statistical classification; it is not a substitute for a healthcare provider's final diagnostic statement. It is the provider's responsibility to provide legible, clear, concise and complete documentation of each final diagnosis described to the highest level of specificity, which is then translated to a code for reporting purposes. It is not appropriate for healthcare providers to simply list a code number or select a code number from a list of codes in place of a written final diagnosis.

Consistency issues:
Care should be taken to ensure information remains consistent throughout the electronic health record. Keep in mind, many EHR systems default to "normal" values that may conflict with previous "abnormal" entries.

Other examples of an inconsistent, conflicting and contradictory EHR include documentation during the same encounter with diabetes described as both:
- Type 1 **and** Type 2
- Controlled **and** uncontrolled
- With **and** without complications
- Without complications **and** uncontrolled due to hyperglycemia, hypoglycemia or both – uncontrolled diabetes is considered complicated.

Diabetes mellitus (DM)

ICD-10-CM
Tips and resources for coders

Coding basics

For accurate and specific diagnosis code assignment, the coder must review the entire medical record and note the exact description of diabetes and all related conditions documented in the medical record. Then, in accordance with the ICD-10-CM official coding conventions and guidelines:

- Search the alphabetic index for those specific descriptions.
- Verify the codes in the tabular list, carefully following all instructional notes.

Coding diabetes mellitus

In ICD-10-CM, the codes for diabetes mellitus begin with the letter E and are found in Chapter 4: Endocrine, Nutritional, and Metabolic Diseases. The diabetes codes are combination codes that identify:

- o The type of diabetes mellitus
- o The body system(s) affected
- o The particular complications that affect each body system

Diabetes mellitus is coded from categories EØ8 – E13:

EØ8   Diabetes mellitus due to underlying condition
EØ9   Drug or chemical induced diabetes mellitus
E1Ø   Type 1 diabetes mellitus
E11   Type 2 diabetes mellitus
E13   Other specified diabetes mellitus

4th, 5th, 6th and, in some cases, 7th characters are required to further describe the diabetic condition with the highest level of specificity.

- "Code first" and "use additional code" notes are present for some of the diabetes mellitus categories and subcategories.
  - o The underlying condition is sequenced first, followed by the complication/manifestation.
  - o The "use additional code" note appears at the etiology code and the "code first" note at the complication/manifestation code.

- The "***Excludes1***" note (meaning "not coded here") appears under all the diabetes mellitus categories. An ***Excludes1*** note indicates that the code excluded should never be used at the same time as the code above the ***Excludes1*** note.

Type of diabetes mellitus

- When the type of diabetes mellitus is not documented in the medical record, the default is type 2, which classifies to category E11.

- Diabetes mellitus type 1.5 with no further specification should be coded to category E13, Other specified diabetes mellitus (AHA Coding Clinic, Third Quarter 2018, pages 4-5, Type 1.5 diabetes mellitus).

Current status of diabetes control

- There is no ICD-10-CM code for diabetes mellitus described as "uncontrolled" without specification of hypoglycemia versus hyperglycemia. Coders should query physicians, if possible, for clarification when diabetes uncontrolled is documented without further specification.
- Per the alphabetic index, diabetes mellitus described as "inadequately controlled," "out of control" or "poorly controlled" defaults to diabetes, by type, with hyperglycemia.

Diabetic complications/manifestations

Diabetic patients often experience one or more complications of diabetes that particularly affect the eyes, the feet, the kidneys, the nervous system and the circulatory system. These complications can occur at any time in the course of diabetes.

- A patient may have multiple diabetic complications in more than one body area or system. To fully describe all of the diabetes complications that are present, assign as many codes as needed from categories EØ8 – E13 and within each particular subcategory. Codes are sequenced based on the reason for the encounter.
- As noted in the documentation section on page 2 of this guideline, ICD-10-CM presumes cause-and-effect linkage between diabetes and certain conditions that appear in the alphabetic index as indented subterms under the various types of "**Diabetes**, with." These conditions are coded as diabetic complications, even in the absence of documentation explicitly linking them, unless the documentation clearly indicates these conditions are not caused by diabetes — for example, by stating:
  - o The actual nondiabetes-related cause
  - o The cause is not diabetes
  - o Diabetes is without complications
  - o The cause is unknown

Excerpt from alphabetic index:

Diabetes, diabetic (mellitus) (sugar) E11.9

with

amyotrophy E11.44
arthropathy NEC E11.618
autonomic (poly) neuropathy E11.43
cataract E11.36
Charcot's joints E11.61Ø
chronic kidney disease E11.22

(This example list is not all-inclusive. For complete lists, see alphabetic index under the various types of diabetes followed by indented subterm "with.")

Note: The diabetes "with" guideline does not apply to "not elsewhere classified (NEC)" index entries that cover broad categories of conditions. Rather, the NEC extension in the alphabetic index is applied when the medical record documents a specific diagnosis that is clearly linked to diabetes as the cause, but for which ICD-10-CM does not provide a specific combination code.

For example, to link diabetes and a specific skin complication, such as cellulitis, the healthcare provider would need to document the cellulitis as a diabetic skin complication.

Example	
Final diagnosis	Cellulitis of right lower extremity due to diabetes mellitus type 2
ICD-10-CM codes	E11.628 Type 2 diabetes mellitus with other skin complications LØ3.115 Cellulitis of right lower limb

Peripheral arteriosclerosis is a type of peripheral angiopathy. When a medical record documents peripheral arteriosclerosis, peripheral vascular disease or peripheral arterial disease in a diabetic patient – and there is no documentation that clearly indicates these conditions are not caused by diabetes – the coder should presume cause-and-effect linkage and code these conditions as diabetic peripheral angiopathy.

- An additional code from subcategory I7Ø.2-, Atherosclerosis of native arteries of the extremities, should also be assigned to fully capture the patient's condition when the documentation provides specificity about the atherosclerosis, such as laterality or affected vessel, as well as additional manifestations of the disease (e.g., claudication, rest pain, etc.).

- See AHA Coding Clinic references:
  - Diabetes with peripheral angiopathy, Second Quarter 2018, Page 7
  - Diabetes mellitus with arteriosclerotic peripheral artery disease, Third Quarter ICD-10 2018, page 4

Each record is unique, and the relationship between diabetes and the specific complication should be clearly documented. When appropriate, coders should query the healthcare provider for clarification about the linkage, and whether diabetes caused the specific complication.

For conditions not specifically linked by the word "with" or "in" the code title, alphabetic index or tabular list, the documentation must clearly link the conditions to code them as related. Examples of linking terms include "due to," "secondary to," "associated with" and "related to."

Diabetes combination codes

ICD-10-CM Official Guidelines for Coding and Reporting (Section I.B.9) advise a combination code is a single code used to classify two diagnoses; or a diagnosis with an associated secondary process (manifestation) or a diagnosis with an associated complication

Combination codes are identified by referring to subterm entries in the Alphabetic Index and by reading the inclusion and exclusion notes in the Tabular List.

Assign only the combination code when that code fully identifies the diagnostic conditions involved or when the Alphabetic Index so directs. Multiple coding should not be used when the classification provides a combination code that clearly identifies all of the elements documented in the diagnosis. Example of a single combination code that fully identifies the diagnostic conditions involved:

E11.42 Type 2 diabetes mellitus with diabetic polyneuropathy

When the combination code lacks necessary specificity in describing the manifestation or complication, an additional code should be used as a secondary code. Example:

E11.22 Type 2 diabetes mellitus with diabetic chronic kidney disease

N18.3Ø Chronic kidney disease, stage 3 (unspecified)

Diabetes mellitus (DM), hypertension (HTN) and chronic kidney disease (CKD)

When a medical record documents current diagnoses of CKD, HTN and DM, with

- no cause-and-effect linkage between any combination of the three, and
- no statement that CKD is unrelated to HTN or DM

Presume CKD is linked to both HTN and DM and code both hypertensive CKD and diabetic CKD.

When a medical record documents DM coexisting with "hypertensive CKD" with no cause-and-effect linkage between DM and CKD:

- Code only hypertensive CKD; do not code diabetic CKD. The descriptor "hypertensive" specifically identifies hypertension as the cause of CKD.
- CKD should not be coded as diabetic since the physician has specifically documented a different cause (HTN).

When a medical record documents HTN coexisting with diabetic CKD with no cause-and-effect linkage between HTN and CKD:

- Code only diabetic CKD; do not code hypertensive CKD. The descriptor "diabetic" specifically identifies diabetes as the cause of CKD.

CKD should not be coded as hypertensive since the physician has specifically documented a different cause (DM).

Use of insulin, oral hypoglycemics, and injectable non-insulin drugs

Long-term (current) use of insulin does not affect the selection of the type of diabetes. Insulin use does not automatically mean the patient is type 1. Patients with other types of diabetes mellitus may also require insulin.

When the medical record documentation does not specify the type of diabetes, the default is type 2 diabetes (category E11).

When the medical record does not indicate the type of diabetes but does indicate the patient uses insulin, code E11-, Type 2 diabetes mellitus, is assigned. Additional code(s) should be assigned from category Z79 to identify the long-term (current) use of insulin, oral hypoglycemic drugs, or injectable non-insulin antidiabetic, as follows:

- If the patient is treated with both oral hypoglycemic drugs and insulin, both code Z79.4, Long term (current) use of insulin, and code Z79.84, Long term (current) use of oral hypoglycemic drugs, should be assigned.
- If the patient is treated with both insulin and an injectable non-insulin antidiabetic drug, assign codes Z79.4, Long-term (current) use of insulin, and Z79.85, Long-term (current) use of injectable non-insulin antidiabetic drugs.
- If the patient is treated with both oral hypoglycemic drugs and an injectable non-insulin antidiabetic drug, assign codes Z79.84, Long-term (current) use of oral hypoglycemic drugs, and Z79.85, Long-term (current) use of injectable non-insulin antidiabetic drugs.
- Code Z79.4 should not be assigned if insulin is given temporarily to bring a diabetic patient's blood sugar under control during an encounter.

Code Z79.4 should not be coded from a medication list alone. Assign code Z79.4 when the following medical record documentation is present:

- A provider-stated final diagnosis of long-term, current use of insulin; or
- Clear linkage of insulin therapy to diabetes and evidence the patient was on insulin before and leading up to the encounter and will continue insulin after the encounter

Secondary diabetes mellitus

Secondary diabetes mellitus is always caused by another condition or event (e.g., cystic fibrosis, malignant neoplasm of pancreas, pancreatectomy, adverse effect of drug or poisoning). Secondary diabetes with associated complications/manifestations classifies to the following categories:

- E08 Diabetes mellitus due to underlying condition
- E09 Drug or chemical induced diabetes mellitus
- E13 Other specified diabetes mellitus (identify)

Sequencing of secondary diabetes codes in relationship to codes for the cause of the diabetes is based on the tabular list instructions for categories E08, E09 and E13.

Secondary diabetes mellitus due to pancreatectomy (lack of insulin due to surgical removal of all or part of the pancreas) codes to E89.1, Postprocedural hypoinsulinemia. Assign a code from category E13 and a code from subcategory Z90.41-, Acquired absence of pancreas, as additional codes.

222005ALL0523-D

Secondary diabetes mellitus due to drugs may be caused by an adverse effect of correctly administered medications, poisoning or sequela of poisoning. (See ICD-10-CM Official Guidelines for Coding and Reporting: Sections I.C.19.e and I.C.20)

Prediabetes, borderline diabetes, latent diabetes

Prediabetes, borderline diabetes mellitus and latent diabetes mellitus all classify to code R73.Ø3, Prediabetes.

Abnormal glucose, abnormal glucose tolerance

Abnormal glucose and abnormal glucose tolerance classify to code R73.Ø9, Other abnormal glucose.

Diabetes mellitus resolved

Generally speaking, diabetes mellitus is a chronic, lifelong condition. However, diabetes mellitus may be described as resolved in some cases. For example:

- Type 1 diabetes mellitus resolved following pancreas transplant
- Type 2 diabetes mellitus resolved after significant weight loss following gastric bypass surgery

When a medical record documents diabetes mellitus as resolved, the condition cannot be coded as current.

References: American Heart Association; American Hospital Association Coding Clinic; Dorland's Medical Dictionary; ICD-10-CM Official Guidelines for Coding and Reporting; Mayo Clinic; MedlinePlus.