

DIABETES MELLITUS

Background

This case definition was developed by the Armed Forces Health Surveillance Center (AFHSC) for the purpose of epidemiological surveillance of a condition important to military-associated populations.

Clinical Description

Diabetes mellitus (DM) refers to a group of common metabolic disorders that share the characteristic of abnormally high levels of glucose in the blood (hyperglycemia). Factors contributing to the hyperglycemia include insufficient insulin secretion by the pancreas, decreased glucose utilization, increased glucose production, and insulin resistance. The metabolic effects associated with DM causes changes in multiple organ systems that impose a tremendous burden on the individual with diabetes and on the health care system.¹

Case Definition and Incidence Rules

For surveillance purposes, a case of diabetes mellitus is defined as:

- *One hospitalization* with any of the defining diagnoses of diabetes mellitus (see ICD9 code list below) in the *primary* diagnostic position; or
- *Two or more outpatient medical encounters*, occurring *within 90 days* of each other, with any of the defining diagnoses of diabetes mellitus (see ICD9 code list below) in the *primary* diagnostic position.
- For type 1 diabetes: a primary diagnosis specific to type 1 diabetes (ICD9 fifth digit 1 or 3) on the first and *all* subsequent diabetes encounters in an individual's entire record.
- For type 2 diabetes: a primary diagnosis specific to type 2 diabetes (ICD9 fifth digit 0 or 2) on the first and *all* subsequent diabetes encounters in an individual's entire record.

Incidence rules:

For individuals who meet the case definition:

- The incidence date is considered the date of the first hospitalization or outpatient medical encounter that includes a diagnosis of diabetes mellitus.
- An individual is considered an incident case only *once per lifetime*.

Exclusions:

- Females with a hospitalization for labor and delivery (ICD9 codes: 650-669, V27) in any diagnostic position within 6 months after their incident diabetes diagnosis.

¹ Braunwald, E., Fauci, A., Longo, D. et al. 2008. *Harrison's Principles of Internal Medicine*. 17th ed. United States: McGraw-Hill Professional.



Codes

The following ICD9 codes are included in the case definition:

Condition	ICD-9-CM codes	CPT Codes
Diabetes Mellitus	250.00-250.03 (diabetes mellitus without mention of complication) 250.10-250.13 (diabetes with ketoacidosis) 250.20-250.23 (diabetes with hyperosmolarity) 250.30-250.33 (diabetes with other coma) 250.40-250.43 (diabetes with renal manifestations) 250.50-250.53 (diabetes with ophthalmic manifestations) 250.60-250.63 (diabetes with neurological manifestations) 250.70-250.73 (diabetes with peripheral circulatory disorders) 250.80-250.83 (diabetes with other specified manifestations) 250.90-250.93 (diabetes with unspecified complication)	NA

Development and Revisions

- The case definition was originally developed by the AFHSC Medical Surveillance Monthly Report (MSMR) staff for the MSMR article on diabetes mellitus.²

Code Set Determination and Rationale

- ICD9 code 249 (secondary diabetes mellitus) is not included in this case definition because it was added to the ICD9 code list after this case definition was originally developed.
- Females who have any of the following ICD9 codes for labor and delivery in any diagnostic position within 6 months after their incident diabetes diagnosis are excluded from the analysis due to the assumption of gestational diabetes:
 - 650 – 659 (normal delivery and other indications for care in pregnancy, labor, and delivery)
 - 660 – 669 (complications occurring mainly in the course of labor and delivery)
 - V27 (outcome of delivery)

Reports

None

² Armed Forces Health Surveillance Center. Diabetes Mellitus, Active Component, U.S. Armed Forces, 1997-2007. *Medical Surveillance Monthly Report (MSMR)*. 2009 Feb; Vol 16(2): 7-9.

