

D0411 and D0412 – ADA Quick Guide to In-Office Monitoring and Documenting Patient Blood Glucose and HbA1C Level

Introduction

Diabetes, in its various types, is one of the most common conditions and practicing dentists are likely to encounter it frequently. Diabetes is also a risk factor for periodontal disease.

This ADA guide is published to educate dentists and others in the dental community **on coding for two unique in-office monitoring procedures pertinent to this chronic disease**. The procedures reported with these codes can help dentists better manage patients with medical comorbidities by assessing their condition chair-side. Findings from these procedures can affect planned oral care treatment and may also prompt dentists to refer patients who may need to be seen by their physicians for follow-up and management of the chronic condition.

The CDT Code Entries for These Procedures

D0411 HbA1c in-office point of service testing

D0412 blood glucose level test – in-office using a glucose meter

This procedure provides an immediate finding of a patient's blood glucose level at the time of sample collection for the point of service analysis.

Why are these Procedures Needed?

Dentists are not expected to diagnose diabetes but in-office monitoring of patient blood glucose levels on an ongoing basis or immediately prior to treatment are appropriate activities. Findings from monitoring the patient's glycemic control may prompt a dentist to amend the patient's oral care treatment planning.

There are several factors associated with increased risk of diabetes, some of which may already be in their dental records, such as:

- Obesity or being overweight
- Ethnic background (diabetes happens more often in Hispanic/Latino Americans, African-Americans, Native Americans, Asian-Americans, Pacific Islanders, and Alaska natives)
- Sedentary lifestyle (exercise less than three times a week)
- Family history (parent or sibling who has diabetes)

A resource that helps a dentist identify patients who might be candidates for referral to a diabetes prevention program is the Centers for Disease Control and Prevention (CDC) online publication – [Preventing Type 2 Diabetes | Diabetes | CDC](#).

For patients who have not had a medical diagnosis of diabetes there are two self-administered risk assessment tests to identify high-risk individuals:

1. The CDC's paper form that a patient may download and complete – [Prediabetes Risk Test \(cdc.gov\)](#).
2. The American Diabetes Association online questionnaire, with results returned by email – [Risk Test | ADA \(diabetes.org\)](#).



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According to the [National Diabetes Statistics Report | Diabetes | CDC](#) over 30 million people have diabetes and 84 million people have prediabetes. Further, the U.S. Preventive Services Task Force (USPSTF) recommends that adults with treated or untreated hypertension (i.e., sustained blood pressure >135/80 mm Hg) should be screened for diabetes. Additional USPSTF information is available online at – [Recommendation: Prediabetes and Type 2 Diabetes: Screening | United States Preventive Services Taskforce \(uspreventiveservicestaskforce.org\)](#).

If a person with diabetes or at risk for the condition is about to undergo a long complex dental procedure, it is important to know their current blood glucose level – and the code D0412 procedure determines the patient’s blood glucose level at the time of sample collection. HbA1c measures the proportion of hemoglobin that is glycosylated (to which glucose is bound) and provides a summary measure of a patient’s average circulating blood glucose level over the previous 2-to-3-month period.

Even though the patient’s HbA1c percentage may indicate good glycemic control, glucose levels vary during the course of a day. Therefore, the patient’s actual blood glucose level at the time of procedure delivery could be very low, or very high.

A dentist can determine, using the code D0412 procedure, how the patient’s blood glucose level, may affect treatment scheduled for the day’s appointment.

- A glucose level below 70mg/dl is the clinical definition of hypoglycemia alert level, which means the patient is at risk of a hypoglycemic event during the procedure. Therefore, the procedure should not be initiated until the patient’s blood sugar level is in the acceptable range.
- A glucose level over 300 mg/dl could lead to delayed healing of the surgical site and severe infection. This suggests that elective surgical procedures be rescheduled and delivered when the patient’s circulating glucose level is in the acceptable range.

Information on in-office recognition of and action on diabetic emergencies – hypoglycemia or hyperglycemia – is available in “*The ADA Practical Guide to Patients with Medical Conditions*”. This manual may be ordered online at [Store Homepage - American Dental Association \(ada.org\)](#) or by calling 800-947-4746.

Questions and Answers

The following Questions and Answers are intended to provide readers with insight and understanding of both procedures and their reporting, including points to consider before offering either the code D0411 or D0412 service to your patients.

1. What type of equipment is needed for these in-office testing procedures?

As dentists are not expected to diagnose diabetes, in-office monitoring of patient blood glucose levels on an ongoing basis or immediately prior to treatment may utilize “finger-stick” measurement tools. Neither of the two CDT Code entries specify the measurement tool used for the procedure. Selection of the appropriate tool is determined by the dentist.

There are federal regulations to consider. Laboratories and providers performing in-office testing are regulated under the Clinical Laboratory Improvement Amendments of 1988 (CLIA). The dental office may require a “CLIA Certificate of Waiver” in order to perform blood glucose testing using CLIA waived test kits. Waived tests typically include systems cleared by the FDA for home use. Providers providing patient testing with a CLIA certificate of waiver must follow manufacturer’s instructions and perform testing only with test kits that have been assigned a “CLIA waived” status by the FDA.

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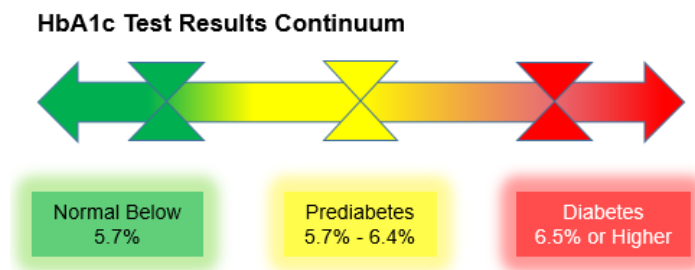
2. How are these “finger-stick” procedures delivered?

There are established protocols for acquiring and assaying the small sample of blood for a Point of Contact Test (POCT). Protocol steps include: a) finger selection; b) massaging, cleaning and drying the site; c) skin puncture with a lancet; d) wiping away the first blood before collecting the sample without “milking the finger” site; e) placing the sample into the analyzing device; and f) reading the results.

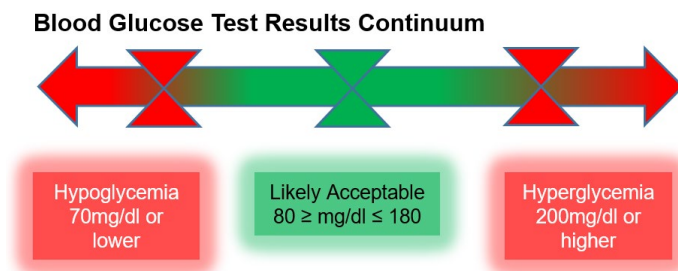
Every blood donor has experienced skin puncture with a lancet. There can be some variations in steps e) and f), dependent on the test device used.

3. What do the code D0411 or D0412 procedure results indicate?

For the code D0411 procedure the analyzing device reports the percentage of hemoglobin that is glycosylated. There is a recognized range of percentages that is used to indicate whether the patient’s HbA1c is considered to be in the normal, prediabetes or diabetes range, as illustrated:



For the code D0412 procedure the analyzing device reports blood glucose as a milligrams per deciliter (mg/dl) figure. There is a recognized range of hypoglycemic (low) through hyperglycemic (high) blood sugar levels, as seen in this high level illustration:



More information about the above results continuums (e.g., different levels of hypoglycemia and interventions) is published online by the American Diabetes Association – [Practice Guidelines Resources | American Diabetes Association](#)

4. Are there rules or regulations regarding in office HbA1c testing documented with CDT code D0411, or in-office blood-glucose level testing documented with CDT code D0412?

Yes, be sure to check your state’s Dental Practice Act to determine if testing is within the scope of your license. There are also federal and state regulations that may affect your business decision to provide this service. Remember the purpose of these tests is to understand the risk of glycemia related complications at the time of the scheduled appointment and not to render a diagnosis of diabetes.

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5. What is HbA1c?

Hemoglobin A1c, also known as glycated hemoglobin, is a measure of the amount of glucose attached to the hemoglobin in red blood cells and is directly proportional to the average circulating glucose levels. Patient fasting is not required prior to the HbA1c test.

6. What are a dentist's ethical obligations to deliver these procedures to patients (e.g., all patients; those presenting with signs or symptoms or medical history)?

Within dentistry there is no consensus that blood sugar monitoring is considered a standard of care. In fact, the New Jersey State Board of Dentistry has explicitly stated that HbA1c screening is not presumed to be a standard of care. A dentist should provide a patient with sufficient information about the monitoring procedure, including its relevance to both oral and general health, so that she or he can make an informed decision.

7. How do I close the referral loop – informing the patient's physician – of the finger-stick findings?

The findings should be conveyed to the patient's physician or appropriate health care provider. Before doing so be sure to have an information release form signed by the patient on file. These referrals must be tracked and documented. Failure to do so may lead to liability issues.

8. What should I do with the results if the patient does not have a physician or other health care provider who can act on the information?

The patient should be informed of the screening's findings, be directed towards resources containing more information, and encouraged to become a physician's patient of record for their other health needs. These actions must be noted in the patient's dental records, with appropriate follow-up when possible (e.g., next visit).

9. What components of the code D0411 or D0412 procedure may be delegated to staff, and which may only be performed by the dentist

As with any procedure, the practitioner providing the service is determined by state law and licensure. Direct or indirect supervision by a dentist may, or may not, be a requirement.

10. What documentation should I maintain in my patient records, and what will be needed on a claim submission when reporting code D0411 procedure?

The patient's records would include the same information about services provided as is done with other dental procedures – plus notations of the activities described in the answers to questions 7, 8 and 9 above, as applicable.

A dental claim would be coded and completed in the same manner as other dental procedures (e.g., date of service, CDT code, full fee).

11. What factors should I consider when determining my full fee for the D0411 or D0412 service?

Dentists and other practitioners in the dental community acquire their skills and expertise through training and experience. It is up to each individual to determine the value of their time and the time required to provide the service when determining their full fee. Other unique factors such as the cost of acquiring and maintaining a supply of the finger-stick test materials may also be considered.



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Questions or Assistance?

Call 800-621-8099 or send an email to dentalcode@ada.org.

Notes:

- This document includes content from the ADA publication – *Current Dental Terminology (CDT)*.