American Medical Association (AMA)

Prediabetes Quality Measures

2025

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Screening for Abnormal Glucose Metabolism in Patients at Risk of Developing Diabetes

The purpose of this measure is to ensure that patients who are at risk of developing diabetes have a screening process initiated for abnormal glucose metabolism at least once every three years in accordance with the United States Preventive Services Task Force (USPSTF) guideline recommendations.

Measure Description	Percentage of adult patients with risk factors for type 2 diabetes who are due for glycemic screening for whom the screening process was initiated during the measurement period
Numerator Statement	Patients who had a glycemic screening test performed and result documented during the measurement period (Table 1)
Denominator Statement	All patients with at least two office visits or one preventive visit during the measurement period who have the following risk factors for type 2 diabetes: • Most recent BMI ≥25 kg/m^2 (BMI ≥23 kg/m^2 for Asian patients) during measurement period AND • Age 35-70 at start of measurement period
Denominator Exclusions/ Exceptions	• Patient is pregnant during measurement period • Patient with diagnosis of advanced illness or limited life expectancy during measurement period • Patient with diagnosis of diabetes during 2-year look-back period • Patient with diagnosis of prediabetes during 2-year look-back period • Patient with glycemic screening performed during 2-year look-back period (Table 1)
Guideline Recommendations	The following evidence statements are quoted verbatim from the clinical guidelines: **Evidence Supporting Denominator Criteria:** *Inclusion Criteria* The USPSTF recommends screening for prediabetes and type 2 diabetes in adults aged 35 to 70 years who have overweight or obesity. Clinicians should offer or refer patients with prediabetes to effective preventive interventions.[1] (Grade B - Table 2) *Exclusion Criteria* Evidence on the optimal screening interval for adults with an initial normal glucose test result is limited. Cohort and modeling studies suggest that screening every 3 years may be a reasonable approach for adults with normal blood glucose levels.[1] **Evidence Supporting Numerator Criteria:** Prediabetes and type 2 diabetes can be detected by measuring fasting plasma glucose or HbA1c level, or with an oral glucose tolerance test. A fasting plasma glucose level of 126 mg/dL (6.99 mmol/L) or greater, an HbA1c level of 6.5% or greater, or a 2-hour postload glucose level of 200 mg/dL (11.1 mmol/L) or greater are consistent with the diagnosis of type 2 diabetes. A fasting plasma glucose level of 100 to 125 mg/dL (5.55-6.94 mmol/L), an HbA1c level of 5.7% to 6.4%, or a 2-hour postload glucose level of 140 to 199 mg/dL (7.77-11.04 mmol/L) are consistent with prediabetes.[1] 1. Davidson KW, Barry MJ, Mangione CM, et al. Screening for Prediabetes and Type 2 Diabetes: US Preventive Services Task Force Recommendation Statement. Jama. 2021;326(8):736-743.
Rationale	This measure was developed by the American Medical Association with support from a measure development team at Health Services Advisory Group (Table 4)

	and a technical expert panel (TEP) that included representatives from stakeholder organizations, guideline developers, quality measure experts, payers, clinical operations, and patients/caregivers (Table 5). This measure is critical to identifying patients with prediabetes who may benefit from interventions to prevent type 2 diabetes and identification of undiagnosed type 2 diabetes. The Centers for Disease Control and Prevention (CDC) estimates that approximately 97.6 million American adults have prediabetes.[2] They note that more than 80% of adults with prediabetes are not aware that they have the condition. Regular screening for prediabetes is a critical first step to helping patients avoid the disability and costs associated with progression to type 2 diabetes. The measure gives credit for three types of tests that can be used to detect abnormal glucose metabolism: HbA1c, oral glucose tolerance, and fasting plasma glucose. When considering which plasma glucose screening codes to include in the measure, the measure development team carefully considered two potential unintended consequences related to the limited use of accompanying fasting status codes. If the measure specified plasma glucose screening too narrowly, it could incentivize over screening, which would impose added burden on clinicians and increased costs to some patients. Alternatively, if the measure specified plasma glucose screening too broadly, it could give credit for non-fasting plasma glucose tests that are not adequate for diagnostic purposes. In the test data, the most common plasma glucose code ordered by both sites was LOINC 2345-7, which does not specify 'fasting' in the test description. However, one of the practices also consistently used an accompanying LOINC code, 49541-5, which is used to indicate a patient's fasting status at the time of the lab. Approximately 90% of the 2345-7 plasma glucose tests were fasting according to the 49541-5 LOINC. The team also found that lab companies (e.g., Labcorp) advise patients to fast for at least 8 hours ahead of the 2345-7 plasma glucose blood draw. Code 2345-7 is the glucose test included in basic and comprehensive metabolic panels in serum or plasma, which also recommend fasting for at least 8 hours prior to the blood draw. A sensitivity analysis compared the measure denominator and numerator with and without the plasma glucose code 2345-7 and found that excluding that code would overestimate the denominator population eligible for screening by approximately 109% and undercount patients with an adequate screening in the numerator by approximately 92%. Including plasma glucose code 2345-7 would underestimate the denominator population by approximately 3% and overcount patients with adequate screening in the numerator by approximately 10%. Therefore, the measure specifications give credit for plasma glucose code 2345-7 because the risk of encouraging over-testing and imposing additional costs on patients outweighs the risk of accepting a relatively small number of non-fasting plasma glucose test results. If the accompanying fasting status LOINC code for glucose tests is used more reliably in the future, the measure can be modified to require fasting for all plasma glucose tests but, in the meantime, the technical expert panel agreed that this approach is acceptable given the benefits of screening and low risk of unintended consequences. 2. CDC. (2024, July 23). National Diabetes Statistics Report. Retrieved November 15, 2024, from Diabetes website: https://www.cdc.gov/diabetes/php/data-research/
Measure Type	Process
Level of Measurement	Individual clinician

Improvement Notation	Higher score indicates better quality
National Quality Strategy Priority/CMS Measure Domain	☐ Person-Centered Care ☐ Equity ☐ Safety ☐ Affordability and Efficiency ☐ Chronic Conditions ☒ Wellness and Prevention ☐ Seamless Care Coordination ☐ Behavioral Health
Supporting Guidance	The measure is limited to patients aged 35 to 70 with overweight or obesity because it is recommended that all patients with those risk factors be screened for diabetes at least once every three years. However, this measure is not intended to discourage screening at younger ages, which the USPSTF recommends considering for adults with overweight or obesity and any of the following risk factors: • Race/ethnicity with disproportionately high incidence and prevalence of diabetes (American Indian/Alaska Native, Asian American, Black, Hispanic/Latino, or Native Hawaiian/Pacific Islander persons) • Family history of diabetes • History of gestational diabetes • History of polycystic ovarian syndrome It is recommended that every patient evaluated by this measure also identify payer, race, ethnicity, and sex, so that results may be reported back to the provider in a stratified manner. If the measure is used for accountability purposes, only the overall rate should be used.

Diabetes Prevention Interventions for Patients at High-Risk for Developing Diabetes

The purpose of this measure is to provide patients who are identified as high-risk for diabetes with evidence-based interventions to prevent progression to type 2 diabetes.

Measure Description	Percentage of adult patients identified as high-risk for developing type 2 diabetes who were offered a diabetes prevention intervention during the measurement period

Numerator Statement	Patients who were provided with or referred to at least one of the following interventions during the measurement period:
	• Intensive lifestyle intervention
	  - Behavioral counseling for obesity
	  - Diabetes education
	  - Diabetes Prevention Programs (DPP)
	  - Diabetes self-management education services
	  - Dietician referral or visit
	  - Nutrition therapy
	  - Weight management or nutrition classes
	• Prescription for metformin

Denominator Statement	All patients with at least two office visits or one preventive visit during the measurement period who have the following risk factors for type 2 diabetes: • Most recent BMI ≥25 kg/m^2 (BMI ≥23 kg/m^2 for Asian patients) during measurement period AND • Age 35-70 at start of measurement period AND • Most recent glycemic screening result during measurement period was in the range of prediabetes (Table 1)
Denominator Exclusions/ Exceptions	**Denominator Exclusions:** • Patient is pregnant during measurement period • Patient with diagnosis of advanced illness or limited life expectancy during measurement period • Patient with diagnosis of diabetes during measurement period or 2-year look-back period • Patient with diagnosis of prediabetes during 2-year look-back period • Patient with glycemic screening performed during 2-year look-back period (Table 1) • Patient with prior referral or documentation that they received an intensive lifestyle intervention prior to measurement period • Patient taking metformin during 2-year look-back period **Denominator Exceptions:** • Patient with documentation during the measurement period of a valid reason for not providing or referring to a diabetes prevention intervention (e.g., patient refusal, medical reason)
Guideline Recommendations	The following evidence statements are quoted verbatim from the clinical guidelines: **Evidence Supporting Denominator Criteria:** *Inclusion Criteria* The USPSTF recommends screening for prediabetes and type 2 diabetes in adults aged 35 to 70 years who have overweight or obesity.[1] (Grade B – Table 2) Prediabetes and type 2 diabetes can be detected by measuring fasting plasma glucose or HbA1c level, or with an oral glucose tolerance test. A fasting plasma glucose level of 126 mg/dL (6.99 mmol/L) or greater, an HbA1c level of 6.5% or

	greater, or a 2-hour postload glucose level of 200 mg/dL (11.1 mmol/L) or greater are consistent with the diagnosis of type 2 diabetes. A fasting plasma glucose level of 100 to 125 mg/dL (5.55-6.94 mmol/L), an HbA1c level of 5.7% to 6.4%, or a 2-hour postload glucose level of 140 to 199 mg/dL (7.77-11.04 mmol/L) are consistent with prediabetes.[1] *Exclusion Criteria* Evidence on the optimal screening interval for adults with an initial normal glucose test result is limited. Cohort and modeling studies suggest that screening every 3 years may be a reasonable approach for adults with normal blood glucose levels.[1] **Evidence Supporting Numerator Criteria:** Clinicians should offer or refer patients with prediabetes to effective preventive interventions.[1] (Grade B – Table 2) Both lifestyle interventions that focus on diet, physical activity, or both and metformin have demonstrated efficacy in preventing or delaying progression to diabetes in persons with prediabetes.[2] However, metformin has not been approved for this specific indication by the US Food and Drug Administration.[1] Clinicians and patients may want to consider several other factors as they discuss preventive interventions for prediabetes. In the Diabetes Prevention Program (DPP) study (which serves as a model for many lifestyle intervention programs in the US), lifestyle intervention was more effective than metformin in preventing or delaying diabetes. In addition to preventing progression to diabetes, lifestyle interventions have a beneficial effect on weight, blood pressure, and lipid levels (increasing high-density lipoprotein cholesterol levels and lowering triglyceride levels). Metformin has a beneficial effect on weight, but it does not appear to affect blood pressure, or to consistently improve lipid levels.[2] In post hoc analyses of the DPP, lifestyle intervention was effective in all subgroups, while similar analyses of the DPP and the DPP Outcomes Study (DPPOS) suggest that metformin was effective in persons younger than 60 years, in persons with a BMI of 35 or greater, in persons with a fasting plasma glucose level of 110 mg/dL (6.11 mmol/L) or greater, or in persons with a history of gestational diabetes.[3,4,1] 1. Davidson KW, Barry MJ, Mangione CM, et al. Screening for Prediabetes and Type 2 Diabetes: US Preventive Services Task Force Recommendation Statement. Jama. 2021;326(8):736-743. 2. Jonas D, Crotty K, Yun JD, et al. Screening for Abnormal Blood Glucose and Type 2 Diabetes Mellitus: An Evidence Review for the U.S. Preventive Services Task Force. Evidence Synthesis No. 207. Agency for Healthcare Research and Quality; 2021. AHRQ publication 21-05276-EF-1. 3. Knowler WC, Barrett-Connor E, Fowler SE, et al; Diabetes Prevention Program Research Group. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. N Engl J Med. 2002;346(6):393-403. doi:10.1056/NEJMoa012512 19. 4. Diabetes Prevention Program Research Group. Long-term effects of metformin on diabetes prevention: identification of subgroups that benefited most in the Diabetes Prevention Program and Diabetes Prevention Program Outcomes Study. Diabetes Care. 2019;42(4):601-608. doi:10.2337/ dc18-1970.
Rationale	This measure was developed by the American Medical Association with support from a measure development team at Health Services Advisory Group (Table 4) and a technical expert panel (TEP) that included representatives from stakeholder organizations, guideline developers, quality measure experts, payers, clinical operations, and patients/caregivers (Table 5).

	This measure assesses the extent to which patients newly diagnosed with prediabetes are offered or referred to an evidence-based intervention. The Centers for Disease Control and Prevention (CDC) estimates that approximately 97.6 million American adults have prediabetes.[5] Expanding utilization of evidence-based interventions for adults with prediabetes would help to avoid or delay the disability and costs associated with progression to type 2 diabetes. 5. CDC. (2024, July 23). National Diabetes Statistics Report. Retrieved November 15, 2024, from Diabetes website: https://www.cdc.gov/diabetes/php/data-research/
Measure Type	Process
Level of Measurement	Individual clinician
Improvement Notation	Higher score indicates better quality
National Quality Strategy Priority/CMS Measure Domain	☐ Person-Centered Care ☐ Equity ☐ Safety ☐ Affordability and Efficiency ☐ Chronic Conditions ☒ Wellness and Prevention ☐ Seamless Care Coordination ☐ Behavioral Health
Supporting Guidance	The measure is limited to patients aged 35 to 70 with overweight or obesity because that is the group most strongly supported by the USPSTF guideline for screening. However, clinicians are encouraged to consider offering or referring patients to diabetes prevention interventions if they have glycemic levels in the prediabetes range and meet the other eligibility criteria for each intervention. Additionally, this measure focuses on interventions for patients who have not already received or been referred to a diabetes prevention intervention. However, clinicians are encouraged to continue to monitor the use of interventions and offer or provide different interventions as appropriate. Note that the prediabetes ranges for the plasma glucose tests assume that the patient had fasted for at least 8 hours prior to having their blood drawn. If a clinician is unsure whether the patient had fasted, the plasma glucose test should be repeated fasting or an HbA1c test should be done to confirm the prediabetes diagnosis prior to offering or referring to a diabetes prevention intervention. It is recommended that every patient evaluated by this measure also identify payer, race, ethnicity, and sex, so that results may be reported back to the provider in a stratified manner. It is also recommended that results be reported by the type of intervention(s) patients received or were referred to in order to facilitate a better understanding of referral patterns.

Diabetes Prevention among Patients at High-Risk for Developing Diabetes

The purpose of this measure is to identify the percentage of patients at high-risk for developing diabetes who do not progress to type 2 diabetes during the measurement period.

Measure Description	Percentage of adult patients who were identified as high-risk for developing diabetes in the 2 years prior to the measurement period who did not receive a diagnosis of type 2 diabetes during the measurement period
Numerator Statement	Patients who did not receive a diagnosis of type 2 diabetes during the measurement period
Denominator Statement	All patients with: • At least one office or preventive visit during the measurement period AND • At least one office or preventive visit during 2-year look-back period and who have the following risk factors for type 2 diabetes: • Most recent BMI ≥25 kg/m^2 (BMI ≥23 kg/m^2 for Asian patients) during 2-year look-back period AND • Age 35-70 at start of 2-year look-back period and who meet either of the following criteria: • Diagnosis of prediabetes during 2-year look-back period OR • Most recent glycemic test result during 2-year look-back period in the range of prediabetes (Table 1)
Denominator Exclusions/ Exceptions	• Patient with diagnosis of diabetes during 2-year look-back period • Patient is pregnant during 2-year look-back period or measurement period • Patient with diagnosis of advanced illness or limited life expectancy during 2-year look-back period or measurement period
Supporting Evidence	The following evidence statements are quoted verbatim from the clinical guidelines and studies demonstrating the linkage between healthcare processes and diabetes outcomes: **Evidence Supporting Denominator Criteria:** *Inclusion Criteria* The USPSTF recommends screening for prediabetes and type 2 diabetes in adults aged 35 to 70 years who have overweight or obesity.[1] (Grade B – Table 2) Prediabetes and type 2 diabetes can be detected by measuring fasting plasma glucose or HbA1c level, or with an oral glucose tolerance test. A fasting plasma glucose level of 126 mg/dL (6.99 mmol/L) or greater, an HbA1c level of 6.5% or greater, or a 2-hour postload glucose level of 200 mg/dL (11.1 mmol/L) or greater are consistent with the diagnosis of type 2 diabetes. A fasting plasma glucose level of 100 to 125 mg/dL (5.55-6.94 mmol/L), an HbA1c level of 5.7% to 6.4%, or a 2-hour postload glucose level of 140 to 199 mg/dL (7.77-11.04 mmol/L) are consistent with prediabetes.[1] **Evidence Supporting Numerator Criteria:** Clinicians should offer or refer patients with prediabetes to effective preventive interventions.[1] (Grade B – Table 2) Both lifestyle interventions that focus on diet, physical activity, or both and metformin have demonstrated efficacy in preventing or delaying progression to diabetes in persons with prediabetes.[2] However, metformin has not been approved for this specific indication by the US Food and Drug Administration.[1] Clinicians and patients may want to consider several other factors as they discuss preventive interventions for prediabetes. In the Diabetes Prevention Program (DPP)

	study (which serves as a model for many lifestyle intervention programs in the US), lifestyle intervention was more effective than metformin in preventing or delaying diabetes. In addition to preventing progression to diabetes, lifestyle interventions have a beneficial effect on weight, blood pressure, and lipid levels (increasing high-density lipoprotein cholesterol levels and lowering triglyceride levels). Metformin has a beneficial effect on weight, but it does not appear to affect blood pressure, or to consistently improve lipid levels.[2] In post hoc analyses of the DPP, lifestyle intervention was effective in all subgroups, while similar analyses of the DPP and the DPP Outcomes Study (DPPOS) suggest that metformin was effective in persons younger than 60 years, in persons with a BMI of 35 or greater, in persons with a fasting plasma glucose level of 110 mg/dL (6.11 mmol/L) or greater, or in persons with a history of gestational diabetes.[3,4,1] **Linkage Between Healthcare Process and Outcome:** The incidence of diabetes was 11.0, 7.8, and 4.8 cases per 100 person-years in the placebo, metformin, and lifestyle groups, respectively. The lifestyle intervention reduced the incidence of diabetes by 58 percent (95 percent confidence interval, 48 to 66 percent) and metformin by 31 percent (95 percent confidence interval, 17 to 43 percent), as compared with placebo; the lifestyle intervention was significantly more effective than metformin. To prevent one case of diabetes during a period of three years, 6.9 persons would have to participate in the lifestyle-intervention program, and 13.9 would have to receive metformin.[3] 1. Davidson KW, Barry MJ, Mangione CM, et al. Screening for Prediabetes and Type 2 Diabetes: US Preventive Services Task Force Recommendation Statement. Jama. 2021;326(8):736-743. 2. Jonas D, Crotty K, Yun JD, et al. Screening for Abnormal Blood Glucose and Type 2 Diabetes Mellitus: An Evidence Review for the U.S. Preventive Services Task Force. Evidence Synthesis No. 207. Agency for Healthcare Research and Quality; 2021. AHRQ publication 21-05276-EF-1. 3. Knowler WC, Barrett-Connor E, Fowler SE, et al; Diabetes Prevention Program Research Group. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. N Engl J Med. 2002;346(6):393-403. doi:10.1056/NEJMoa012512 19. 4. Diabetes Prevention Program Research Group. Long-term effects of metformin on diabetes prevention: identification of subgroups that benefited most in the Diabetes Prevention Program and Diabetes Prevention Program Outcomes Study. Diabetes Care. 2019;42(4):601-608. doi:10.2337/ dc18-1970.
Rationale	This measure was developed by the American Medical Association with support from a measure development team at Health Services Advisory Group (Table 4) and a technical expert panel (TEP) that included representatives from stakeholder organizations, guideline developers, quality measure experts, payers, clinical operations, and patients/caregivers. (Table 5) This measure assesses the extent to which patients with prediabetes and their care teams are effectively preventing the progression to type 2 diabetes. The Centers for Disease Control and Prevention (CDC) estimates that approximately 97.6 million American adults have prediabetes.[5] In 2019, the CDC estimated that 1.4 million adults progressed to type 2 diabetes.[6] Expanding utilization of evidence-based interventions for adults with prediabetes could help to reduce the number of adult patients who progress to type 2 diabetes each year. 5. CDC. (2024, July 23). National Diabetes Statistics Report. Retrieved November 15, 2024, from Diabetes website: https://www.cdc.gov/diabetes/php/data-research/

	6. Incidence of newly diagnosed diabetes. Centers for Disease Control and Prevention, 30 Sept. 2022. https://www.cdc.gov/diabetes/data/statistics-report/newly-diagnosed-diabetes.html. Accessed 14 Nov. 2022.
Measure Type	Outcome
Level of Measurement	Individual clinician
Improvement Notation	Higher score indicates better quality
National Quality Strategy Priority/CMS Measure Domain	☐ Person-Centered Care ☐ Equity ☐ Safety ☐ Affordability and Efficiency ☐ Chronic Conditions ☒ Wellness and Prevention ☐ Seamless Care Coordination ☐ Behavioral Health

Supporting Guidance	The measure is limited to patients aged 35 to 70 with overweight or obesity because that is the group most strongly supported by the USPSTF guideline for screening. However, clinicians are encouraged to consider offering or referring patients to diabetes prevention interventions if they have glycemic levels in the prediabetes range and meet other eligibility criteria for each intervention.
	
	Note that the prediabetes ranges for the plasma glucose tests assume that the patient had fasted for at least 8 hours prior to having their blood drawn. If a clinician is unsure whether the patient had fasted, the plasma glucose test should be repeated fasting or an HbA1c test should be done to confirm the prediabetes diagnosis to ensure the patient should be monitored for progression to type 2 diabetes.
	
	It is recommended that every patient evaluated by this measure also identify payer, race, ethnicity, and sex, so that results may be reported back to the provider in a stratified manner. It is also recommended that results be reported by the type of intervention(s) patients received or were referred to in order to facilitate a better understanding of which interventions are most effective at preventing progression to type 2 diabetes.
	
	To the extent possible, measure results should be stratified to account for differences in underlying patient risk for development of type 2 diabetes. The measure may be stratified by factors such as:
	• Age at start of 2-year look-back period
	  ○ 18-44
	  ○ 45-64
	  ○ ≥65
	• Sex
	  ○ Male
	  ○ Female
	• Most recent BMI during 2-year look-back period
	  ○ ≥25 kg/m^2 and <30 kg/m^2 (≥23 kg/m^2 and <27.5 kg/m^2 for Asian patients)
	  ○ ≥30 kg/m^2 (≥27.5 kg/m^2 for Asian patients)
	• Most recent glycemic result during 2-year look-back period
	  ○ Lower range of prediabetes
	  ▪ Fasting plasma glucose level 100 mg/dL to 109 mg/dL OR
	  ▪ HbA1C 5.7% to 5.9%
	  ○ Upper range of prediabetes

	▪ Fasting plasma glucose level 110 mg/dL to 125 mg/dL OR ▪ Oral glucose tolerance test 140 mg/dL to 199 mg/dL OR ▪ HbA1C 6.0% to 6.4% • Number of comorbidities during 2-year look-back period (e.g., hypertension, cardiovascular disease, dyslipidemia, polycystic ovary syndrome, history of gestational diabetes mellitus)

Table 1. Glycemic Screening Tests

Code	Type	Description	Test Type
17856-6	LOINC	Hemoglobin A1c/Hemoglobin.total in Blood by HPLC	HbA1c
4548-4	LOINC	Hemoglobin A1c/Hemoglobin.total in Blood	HbA1c
4549-2	LOINC	Hemoglobin A1c/Hemoglobin.total in Blood by Electrophoresis	HbA1c
83036	CPT	Hemoglobin; glycosylated (A1C)	HbA1c
3044F	CPT	Most recent hemoglobin A1c (HbA1c) level less than 7.0% (DM)	HbA1c
3051F	CPT	Most recent hemoglobin A1c (HbA1c) level greater than or equal to 7.0% and less than 8.0% (DM)	HbA1c
3052F	CPT	Most recent hemoglobin A1c (HbA1c) level greater than or equal to 8.0% and less than 9.0% (DM)	HbA1c
3046F	CPT	Most recent hemoglobin A1c level greater than 9.0% (DM)	HbA1c
14995-5	LOINC	Glucose^2H post 75 g glucose PO	Oral glucose tolerance
1518-0	LOINC	Glucose^2H post 75 g glucose PO	Oral glucose tolerance
1519-8	LOINC	Glucose^2H post 75 g glucose PO	Oral glucose tolerance
82951	CPT	Glucose Tolerance Test (GTT); three specimens (includes glucose)	Oral glucose tolerance
10450-5	LOINC	Glucose [Mass/volume] in Serum or Plasma – 10 hours fasting	Fasting plasma glucose
1554-5	LOINC	Glucose [Mass/volume] in Serum or Plasma – 12 hours fasting	Fasting plasma glucose
1558-6	LOINC	Fasting glucose [Mass/volume] in Serum or Plasma	Fasting plasma glucose
1557-8	LOINC	Fasting glucose [Mass/volume] in Venous blood	Fasting plasma glucose
2345-7	LOINC	Glucose [Mass/volume] in Serum or Plasma	Plasma glucose
82947	CPT	Glucose; quantitative, blood (except reagent strip)	Plasma glucose

Table 2. USPSTF Recommendation Grade Definition

Grade	Definition
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.
I	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.

Table 3. USPSTF Level of Certainty Definition

Level of Certainty	Description
High	The available evidence usually includes consistent results from well-designed, well-conducted studies in representative primary care populations. These studies assess the effects of the preventive service on health outcomes. This conclusion is therefore unlikely to be strongly affected by the results of future studies.
Medium	The available evidence is sufficient to determine the effects of the preventive service on health outcomes, but confidence in the estimate is constrained by such factors as: • The number, size, or quality of individual studies. • Inconsistency of findings across individual studies. • Limited generalizability of findings to routine primary care practice. • Lack of coherence in the chain of evidence. As more information becomes available, the magnitude or direction of the observed effect could change, and this change may be large enough to alter the conclusion.
Low	The available evidence is insufficient to assess effects on health outcomes. Evidence is insufficient because of: • The limited number or size of studies. • Important flaws in study design or methods. • Inconsistency of findings across individual studies. • Gaps in the chain of evidence. • Findings not generalizable to routine primary care practice. • Lack of information on important health outcomes. More information may allow estimation of effects on health outcomes.

Table 4. Measure Development Team

American Medical Association	Health Services Advisory Group
Heidi Bossley, MSN, MBA	Kyle Campbell, PharmD
Jennie Folk, MHA	Hayley Dykhoff, BA
Kate Kirley, MD, MS, FAAFP	Marie Hall, RN
Koryn Rubin, MHA	Kendra Hanley, MS
Stavros Tsipas, MA	Megan Keenan, MPH
Gregory Wozniak, PhD	Kim Nguyen, MPH

Table 5. Technical Expert Panel (TEP)

Name	Affiliation
Elizabeth (Liz) Joy, MD, MPH, FACSM, FAMSSM	Intermountain Healthcare TEP Co-Chair
Ronald T. Ackermann, MD, MPH	Northwestern University Feinberg School of Medicine TEP Co-Chair
William (Bill) Adams	Patient Representative
Stephen Benoit, MD, MPH	Centers for Disease Control and Prevention
Christine Donohoe	Patient and Caregiver Representative
Nuha Ali ElSayed, MD, MM Sc.	American Diabetes Association
Angela Forfia, MA	Association of Diabetes Care & Education Specialists
William Golden, MD, MACP	Subject Matter Expert
Robert Hopkins, MD, MACP	American College of Physicians / University of Arkansas for Medical Sciences College of Medicine
Mary Krebs, MD, FAAFP	American Academy of Family Physicians
Carol M. Mangione, MD, MSPH, FACP	University of California, Los Angeles (UCLA)
Tannaz Moin, MD, MBA, MSHS	UCLA and VA Greater Los Angeles Healthcare System
Justin Moore, MD, FACP	Kansas Business Group on Health
Joshua Peake, MPH	Prisma Health
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