



American Academy
of Value Based Care

Diabetes Mellitus

Quick Reference Guide

2025

AAVBC Diabetes Mellitus Quick Reference Guide

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1. CLINICAL SNAPSHOT

Definition: Diabetes mellitus (DM) is a chronic metabolic disease characterized by hyperglycemia resulting from defects in insulin secretion, insulin action, or both (CDC, WHO, NIH)¹⁻³

ICD-10 Codes: E10.x (Type 1), E11.x (Type 2), E08.x (secondary), E09.x (drug-induced), E13.x (other specified)⁴

HCC V28 Mapping: **HCC 36** (Diabetes with acute complications) E10.10 (Diabetes type 1 with ketoacidosis), with RAF (0.166); **HCC 37** (Diabetes with chronic complications) E11.22 (Diabetes type 2 with CKD), E11.59 (Diabetes with other circulatory complications) with RAF (0.166); **HCC 38** (Diabetes with Glycemic, Unspecified or no complications) E11.9 (Diabetes type 2 without complications), E11.649 (Diabetes type 2 with hypoglycemia without coma) with RAF (0.166)^{4,5}

Prevalence (U.S): 11.6% of adults (\approx 38.4M), 29.2% of adults >65 diagnosed with DM; estimated 8.7M of adults are undiagnosed (22.8% of adults with DM are undiagnosed); 97.6M adults are prediabetic and are at risk for developing type 2 diabetes, 81% of them don't know they have it; Annual total cost \$412.9B, 61% of diabetes costs are for adults aged >65, \$5,876 PMPY^{2,6}

2. RECOGNITION & DIAGNOSIS

Medicare Screenings⁷⁻⁹

Test	Coverage	Frequency	Code(s)	Notes
USPSTF Grade B	Adults 35-70yrs BMI \geq 25kg/m ²	q3 years	Prediabetes & T2DM Screening, FPG, HbA1c, OGTT	HbA1c \geq 5.7% threshold for prediabetes
HbA1c (Glycemic Monitoring)	Medicare covered	q3-6 mo	CPT 83036 (\$18)	Use to monitor glycemic control; document MEAT for DM management visit
Dilated Eye Exam	For retinopathy detection	Yearly	CPT 92004/92014 + 2022F-2026F ¹	Ensure documentation of "annual retinal exam" in note; supports quality measures
Comprehensive Foot Exam	Medicare covered for diabetes	Yearly	G0245-G0247	Document monofilament and pedal pulse findings; supports HEDIS foot exam measure
Medicare Diabetes Prevention Program (MDPP)	BMI \geq 25, HbA1c 5.7-6.4%, or FPG 110-125 mg/dL	Once/lifetime	G9873-G9891	Structured lifestyle program reducing T2DM progression risk by ~58%
Diabetes Self-Management Training (DSMT)	Eligible Medicare beneficiaries with diabetes	10 hrs first year, 2 hrs annually thereafter	G0108 (individual) G0109 (group)	Encourage DSMT referral; linked to improved A1c control and CMS preventive coverage

Subtle Early Signs in Adults >65 yrs^{3, 9, 10}

- **Fatigue mistaken for aging** → Check postprandial glucose >180 mg/dL
- **Cognitive decline preceding motor symptoms** → Undiagnosed diabetes increases dementia risk ~2×
- **Nocturia attributed to prostate/aging** → Evaluate for polyuria due to hyperglycemia
- **Recurrent UTIs** → Glucosuria promotes bacterial overgrowth
- **Slow wound healing** → Check glucose in any non-healing wound

Geriatric Risk Factors

Factor	Risk Signal(s)	Notes
Polypharmacy (>5 meds) ¹¹	↑ falls and adverse events	Prioritize deprescribing (high-risk agents for hypoglycemia, orthostasis)
Falls history ¹²	RR/HR ~1.6 OR 1.3–2.9	Hypoglycemia/neuropathy risk
Social isolation/Loneliness ¹³	HR ~1.32 for incident T2D	Poor self-care
Systemic Corticosteroids ¹⁴	Steroid-induced hyperglycemia ~34–50% incidence in inpatients	If steroids are necessary: plan proactive SMBG/CGM, adjust basal-bolus or add NPH with daytime dosing
Thiazide diuretics (higher dose, e.g., HCTZ ≥25 mg) ¹⁵	↑ risk of impaired glucose ~20–30%	Dose-related; mitigated by potassium; Prefer low-dose thiazide or thiazide-like agents; monitor glucose/K ⁺ after up-titration

RED FLAGS - URGENT ACTION⁹

- **DKA:** Glucose >250 mg/dL, pH <7.30 or HCO₃⁻ ≤18 mEq/L, positive ketones, anion gap ↑, dehydration → **ED transfer**
- **Hyperosmolar Hyperglycemic State (HHS):** Glucose >600 mg/dL, effective osmolality >320 mOsm/kg, minimal/absent ketones, altered mental status → **ED transfer**
- **Severe hypoglycemia:** Glucose <54 mg/dL or needs assistance. Treat immediately (15–20 g rapid carbohydrate; glucagon if unable to take PO)
- **Acute vision change/loss:** Sudden floaters, "curtain" across vision, or acute painless vision loss → **urgent ophthalmology** (rule out vitreous hemorrhage/retinal detachment; proliferative DR)

Diagnostic Thresholds^{7,9,12}

Test	Diagnostic Value	Notes
HbA1c	≥6.5%	Confirm on another day unless clear hyperglycemia. Target 7.5–8.5% if frail. Avoid if inaccurate (anemia, CKD, hemoglobinopathy)—use glucose-based test

Fasting plasma glucose	≥126 mg/dL (7.0 mmol/L) after ≥8 h fast	Confirm on a separate day
Random plasma glucose	≥200 mg/dL (11.1 mmol/L)	With classic symptoms (polyuria, polydipsia, weight loss); If asymptomatic, repeat (or perform FPG/OGTT)
2-hr OGTT (75 g)	≥200 mg/dL (11.1 mmol/L)	Higher sensitivity than A1c for early dysglycemia; useful when A1c may be unreliable (anemia, CKD)

Clues to Dig Deeper⁹

- **eGFR 45–59 (CKD G3a):** Repeat serum creatinine/eGFR and urine ACR in ~3 months to confirm chronicity; evaluate albuminuria and ACEi/ARB/SGLT2 indications
- **Unexplained anemia or neuropathy (metformin user):** Check vitamin B12; long-term metformin associated with B12 deficiency—test if anemia/neuropathy present or after >4 years use
- **ALT elevation/metabolic dysfunction–associated steatotic liver disease (MASLD/NAFLD):** Prevalent in T2D (~50–70%). If persistent ALT↑ or steatosis on imaging, risk-stratify fibrosis (e.g., FIB-4), manage weight, and consider SGLT2i/GLP-1 RA for metabolic/weight benefit
- **Triglycerides:** If ≥500 mg/dL, treat to prevent pancreatitis (fibrate/omega-3, optimize glycemia)

Common Oversights^{2,9}

- **Attributing fatigue or confusion to "aging"** → Always check glucose and HgbA1c in elderly with new fatigue, confusion or falls
- **Missing latent autoimmune diabetes in adults (LADA)** → Non-obese "T2DM" failing oral agents → check GAD, IA-2, ZnT8 Abs; code E13.x if confirmed
- **Steroid-induced** → May persist after discontinuation = E09.9, not R73.9
- **"Honeymoon phase" T1DM** → Temporary partial remission ≠ cure → continue close monitoring and insulin titration

Key Differentials in Elderly^{9,10}

Presentation	Differential Diagnosis	Key Tests
Fatigue	DM vs Depression vs. Hypothyroidism vs. B12 deficiency	PHQ-9, TSH, B12
Early satiety	DM vs Gastroparesis vs malignancy	Gastric emptying study
Proximal weakness	DM vs Diabetic amyotrophy vs PMR	ESR, CK
Confusion	DM vs Hypoglycemia vs dementia vs UTI	Check glucose first, UA

Comorbidity Screening^{9,10}

Condition	Recommended Screening	Frequency	Notes
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DM	Monofilament, vibration, reflexes	Annual	CPT G0245-G0247; document sensation + pulses
CKD	Urine ACR + eGFR; if stage $\geq 3a$, check PTH \pm vit D	Annual	Use E11.22 + N18.x for diabetic CKD
CHF + DM	Sleep apnea screen (56% prevalence in DM)	Once	Use G47.33 if OSA confirmed; improves glycemic control
Depression	PHQ-2/9 (2-3x higher in DM)	Annual	Use F32.x/F33.x; positive screen \rightarrow referral/therapy

ADA 2024 Staging/Severity by Frailty⁹

Status	HbA1c Target	Management
Robust elderly	<7.0%	Standard therapy; Full treatment intensity if low comorbidity, intact cognition, and low hypoglycemia risk
Pre-frail	<8.0%	Caution with tight control; Prioritize avoidance of hypoglycemia; de-intensify sulfonylureas/insulin if risk
Frail/limited life expectancy	<8.5%	Simplify regimen; Use long-acting/low-risk agents; discontinue non-beneficial drugs. Focus on comfort and safety

3. MEAT DOCUMENTATION ESSENTIALS^{5,9-11}

- **MONITOR:** "HbA1c 7.8% (\uparrow from 7.2% 3mo ago), home glucose logs 140-180 mg/dL fasting, CGM 65% TIR, annual eye exam 10/2024 mild NPDR"
- **EVALUATE:** "Urine albumin-to-creatinine ratio 45mg/g + eGFR 52 = diabetic nephropathy stage 3a CKD; PHQ-9=12 moderate depression; monofilament abnormal 3/10 sites bilateral feet"
- **ASSESS:** "T2DM with poor control (A1c 9.2%) due to dietary non-adherence during holidays, complicated by stage 3a diabetic nephropathy and peripheral neuropathy affecting ambulation"
- **TREAT:** "Increased metformin XR to 2000 mg daily (adjusted for GFR), added empagliflozin 10mg for CV/renal protection, enrolled in DSMES program 10hrs covered by Medicare"

Clinical Documentation Elements

- **Clinical relationships:** When diabetes contributes to a complication, document the relationship clearly (e.g., "*Type 2 diabetes mellitus with diabetic nephropathy*" rather than listing conditions separately)
- **Disease onset:** Capture year of diagnosis "T2DM diagnosed 2015"
- **Show control:** Use descriptive control language supported by data "Well-controlled, HbA1c 6.8%" NOT "stable"
- **Specify complications:** Specify diabetic complications and how they are monitored or managed. Use E11.22 for diabetic CKD (not separate codes), Supports HCC 37 (Chronic Complications)

Reframing Common Documentation Shortcuts

Instead of...	Prefer documenting...
"Stable"	"HbA1c 6.8%, no hypoglycemia x 3 months"
"Feet OK"	"Feet examined: no ulcers, pulses 2+ bilaterally"
"Doing well"	"ROS: denies polyuria/polydipsia; PE: no pedal edema."
"Noncompliant"	"Declined ophthalmology referral, risks discussed"

These alternatives preserve clinician judgment while avoiding language that can feel dismissive, ambiguous, or non-specific.

4. TREATMENT & REFERRAL QUICK GUIDE^{8,9,16}

Therapy Escalation Criteria

Trigger	Action	Notes
A1c >7.5% on metformin x3mo	Add SGLT2i or GLP-1 RA	Prefer SGLT2i if ASCVD, HF, or CKD; GLP-1 RA if obesity or ASCVD; Confirm renal function (avoid SGLT2i if eGFR <20 mL/min)
A1c >9% or symptomatic hyperglycemia	Start basal insulin (e.g., glargine, detemir, NPH)	Continue metformin and GLP-1 RA if tolerated; Start 10 U nightly or 0.1–0.2 U/kg/day, titrate q3–7 days
A1c >8% on basal + orals	Intensify to MDI (add mealtime insulin or premix)	Simplify for older/frail adults: 1–2 bolus injections or premix twice daily; Document reason for intensification.
≥4 fingersticks daily or any insulin use	Consider CGM	Covered by Medicare Part B when on insulin or with recurrent hypoglycemia

ADA 2024-Aligned Recommendations

Clinical Scenario	First Choice	Alternative
Initial therapy	Metformin + lifestyle (diet, physical activity, etc..)	Unless eGFR <30 mL/min/1.73 m ² → use GLP-1 RA or basal insulin
ASCVD or HF	SGLT2i (e.g., dapagliflozin, empagliflozin)	GLP-1 RA (liraglutide)
CKD (eGFR ≥20)	GLT2i preferred for renal protection	GLP-1 RA if SGLT2i not tolerated
Obesity/weight management	GLP-1 RA (semaglutide, tirzepatide)	SGLT2i

Non-Rx Treatment Documentation

"Referred to RD for MNT (3hrs year 1 Medicare-covered); taught carb counting 45-60 g/meal; prescribed 150min/week walking program; sleep hygiene for dawn phenomenon"

When to Refer

Specialty	URGENT (<1 week)	ROUTINE (2-4 weeks)
Endocrinology	A1c >12%, recurrent DKA, suspected T1DM	A1c >9% despite optimization, pump/CGM
Ophthalmology	Sudden vision changes	T1: within 5yr dx; T2: at dx, then annual
Nephrology	Rapid eGFR decline >5 mL/min per yr or nephrotic range proteinuria	eGFR <30 or ACR >300 mg/g
Podiatry	Infected ulcer or acute osteomyelitis	Deformity, prior amputation

Follow-up Timing

- **New diagnosis:** 2-4 weeks for titration → Assess self-monitoring, tolerance, and reinforce DSMES
- **Medication change:** ~4 weeks → Evaluate response, adherence, side effects
- **Stable controlled:** Every 3-6 months → HbA1c, renal function, blood pressure, complications
- **Poor control/complications:** Monthly until stable → Review home logs, reinforce self-care, and address barriers

Patient Education & Adherence

"Demonstrated glucose meter use, verbalized hypoglycemia symptoms (<70mg/dL), provided sick day management handout, discussed medication adherence barriers - cost addressed with \$35 insulin cap"

Comorbidity Management

Condition	Avoid	Reason
EF <40% (HF rEF)	TZDs (pioglitazone, rosiglitazone)	Fluid retention; ↑ HF hospitalization
eGFR <30 mL/min	Metformin	Lactic acidosis risk
Recurrent UTIs/genital infections	SGLT2i	Glycosuria-related infection risk
Gastroparesis/severe GI disease	GLP-1 RA	Delayed gastric emptying; worsens symptoms

Cost-Smart Options

Brand	Generic/Alternative	Approx. Monthly Savings
Metformin brand	Generic XR	~\$4/month
Lantus/Novolog	NPH/Regular	~\$25 vs \$300
Lantus (glargine)	Biosimilar glargine (Semglee, Rezvoglar)	~15% less
Any insulin	Medicare insulin cap	~\$35/month

Quality Metrics Tie-In

Measure	Target	Impact
A1c <8%	HEDIS/CMS Star	Key Star Rating metric; reflects glycemic control quality
Annual eye exam	HEDIS	Use CPT II codes 2022F–2026F; supports retinal screening measure
Statin use (age 40–75)	CMS Star /Quality bonus	Auto-populates for T2DM unless statin contraindicated
BP <130/80 mmHg	HEDIS	Separate CMS measure; ensure same-day BP entry in EMR flowsheet

CODING REMINDERS & CASE EXAMPLES⁴⁻⁷

Specificity Requirements

- **Type:** Differentiate **E10.x (Type 1)** vs **E11.x (Type 2)**
- **Control:** E11.65 (hyperglycemia), E11.649 (hypoglycemia); Avoid generic “controlled/uncontrolled.” Must link to A1c or symptom data
- **Complications:** Specify per organ system (e.g., E11.321 mild NPDR with macular edema; E11.22 CKD). Add causal linkage (“due to diabetes”) to ensure HCC 37 or 38 validity
- **Laterality:** Include when applicable (e.g., retinopathy, neuropathy, ulcers)

Annual Clinical Review and Confirmation

Ensuring the medical record reflects current, active conditions.

- **Annual review:** Diabetes must be reassessed once per calendar year via face-to-face or synchronous audio-video encounter, with MEAT documented by 12/31
- **Visit modality:** In-person or audio-video telehealth encounters qualify when they support meaningful assessment of glycemic control, complications, and treatment
- **Clinical context:** Under HCC V28, complicated and uncomplicated diabetes share the same risk weight (≈ 0.166), reinforcing documentation of **clinical reality** rather than category selection³⁻⁵

Good Documentation is Comprehensive Coding

Insufficient	Comprehensive
"DM controlled"	→ "T2DM well-controlled, A1c 7.2%, no hypoglycemia"
"CKD" alone	→ "Diabetic nephropathy, CKD stage 3a, eGFR 52 mL/min"
Missing link	→ "T2DM with diabetic polyneuropathy" (one code)
"Retinopathy" unspecified	→ "Mild NPDR with macular edema, right eye, due to T2DM"
No MEAT	→ Add current A1c, medications, monitoring plan

EHR Tips

- Use **.dmMEAT** template for structured documentation
- **Problem list:** Flag as **"HCC_REQUIRED"** for annual face-to-face review
- **Best Practice Alert:** Configure to fire when A1c >6 months old
- **Order set:** Use **"DM_ANNUAL"** order set (labs, referrals, CPT II codes preloaded)

Case Examples

SUCCESS CASE: "75yo T2DM with diabetic neuropathy documented as 'E11.42, bilateral feet, monofilament 5/10 sites abnormal, gabapentin started'"

Result: Proper HCC 37 capture, RAF maintained under V28

PITFALL CASE: "82yo noted 'diabetes stable' without A1c or complications"

Result: risk of potential \$2400 clawback and impact on standards of care

FIX: "T2DM well-controlled, A1c 7.2%, no complications (E11.9)"

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