2025 ADA Standards of Medical Care in Diabetes: Updates!

Although the ADA Standards of Care is a living document throughout the year, annually in Dec/Jan they release a large update. For the purposes of this edition of Pharm Aid, I have highlighted the updates that are pertinent to primary care practice in the table below.

Please find the full Standards of Care here: https://professional.diabetes.org/standards-of-care

This site includes the full standards in PDF and other useful tools:

- Full Standards of Care 2025
- Slide Decks:
  - Full Standards of Care 2025 (349 slides)
  - Abridged Standards of Care 2024 (107 slides – with easy to follow graphics)
- Free Updated APP ----*including interactive tools!*

The KEY highlights are for 2025 are:

1. **Continued emphasis** on:
   a. Person-first, inclusive, empowering terminology and consideration for Social Determinants of Health.
      i. Avoid the term "diabetic" – instead use PERSON with DIABETES (PWD)
   b. NEW terminology: Cardiorenal metabolic disease or cardiovascular-kidney-metabolic health (CKM)
   c. Weight-based approach to treatment and use of medications to help with weight loss
   d. Team-based care
   e. Broader use of CGM – beyond just persons on insulin
2. **Glycemic Algorithm** continues to aligns with EASD/ADA and AACE: Choose agents with a focus on drug efficacy, Cardiorenal risk reduction, and weight loss. ADDED drugs indicated for MASLD or MASH
3. **Endorsements:**
   a. American Society for Bone and Mineral Research (Bone Health in Section 4)
   b. The Obesity Society (Section 8 – Obesity and Weight Management)
   c. American College of Cardiology (Section 10 – CV disease and risk management)
   d. NEW this year: the American Geriatrics Society (Section 13 – Older Adults)
4. **TYPE 1 DIABETES updates:**
   a. Antibody based screening for pre-symptomatic T1D in family members of people w/T1 and others at risk:
      i. Type 1 DM risk: use islet autoantibody tests and criteria for *preclinical stages* of type 1 to look for potential to delay onset using teplizumab-mzwv (Tzield) in:
         1. All 1st degree relatives of PWT1D
         2. Newly diagnosed adults
         3. Based on Consensus guidance
   b. Autoimmune Disease Screening in Type 1:
         1. THYROID: Initial and REPEAT screenings recommended at regular intervals
         2. Celiac: in presence of GI symptoms, or clinical suspicion
   c. NEW recommendations for persons at risk of DKA: AVOID CANNABIS due to risk of hyperemesis syndrome
5. **Drug Updates:**
   a. Use of GLP1-RA
      i. How to handle shortages and substitutions
      ii. Expanded recommendations: Established/High Risk for ASCVD, HFpef, CKD
6. **Liver Updates:**
   a. Change in Terminology
      i. Nonalcoholic fatty liver disease (NAFLD) updated to: metabolic dysfunction–associated steatotic liver disease (MASLD)
      ii. Nonalcoholic steatohepatitis (NASH) updated to and metabolic dysfunction–associated steatohepatitis (MASH)
   b. Drug Therapy for MASLD/MASH:
      i. DM meds with potential benefits: GLP1-RA, GIP/GLP1-RA and pioglitazone (phase 2 trial data)

1. Use combination pio/GLP in adults with biopsy proven MASH or at higher risk of fibrosis

ii. Resmetirom – thyroid hormone receptor beta agonist approved for MASLD with fibrosis- treatment in adults (see Section 4) – to be prescribed by specialists only

7. **Screening Updates:**

a. General:

i. Assessment for disability at initial visit, with functional decline assessment at each visit

ii. PAD screening – using ankle-brachial index testing in asymptomatic persons at risk for PAD, or any person with DM > 10 years duration and high CV risk

b. Male/Female sexual health

i. Men – screen for erectile dysfunction, and monitor serum testosterone if symptomatic of hypogonadism in men

ii. Women – sexual health, and symptoms of genitourinary syndrome of menopause

c. Psychosocial issues:

i. Screen PWD *and caregivers* for concerns including diabetes distress, depression, anxiety, fear of hypoglycemia, and disordered eating behaviors

d. Fasting:

i. Utilize the Diabetes and Ramadan International Alliance comprehensive pre-fasting risk assessment to stratify risk

UPDATES by SECTION

Section 1: Improving Care and Promoting Health in Populations	1. Promotes the use of interprofessional teams and quality improvement initiatives – with *actionable* guidance on how to improve care delivery, and how to screen for, measure and address health disparities, affordability, and social determinants of health. 2. Continues to include information on online platforms to support behavior change/well-being
Section 2: Diagnosis and Classification of DM	1. Same 4 categories of Dx: Type 1, Type 2, DM due to other causes, GDM 2. DIAGNOSIS parameters are the same, with more guidance and the addition of random plasma glucose in a symptomatic person: **Table 2.1—Criteria for the diagnosis of diabetes in nonpregnant individuals** A1C ≥6.5% (≥48 mmol/mol). The test should be performed in a laboratory using a method that is NGSP certified and standardized to the DCCT assay.* OR FPG ≥126 mg/dL (≥7.0 mmol/L). Fasting is defined as no caloric intake for at least 8 h.* OR 2-h PG ≥200 mg/dL (≥11.1 mmol/L) during OGTT. The test should be performed as described by the WHO, using a glucose load containing the equivalent of 75 g anhydrous glucose dissolved in water.* OR In an individual with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose ≥200 mg/dL (≥11.1 mmol/L). Random is any time of the day without regard to time since previous meal. DCCT, Diabetes Control and Complications Trial; FPG, fasting plasma glucose; OGTT, oral glucose tolerance test; NGSP, National Glycohemoglobin Standardization Program; WHO, World Health Organization; 2-h PG, 2-h plasma glucose. *In the absence of unequivocal hyperglycemia, diagnosis requires two abnormal results from different tests which may be obtained at the same time (e.g., A1C and FPG), or the same test at two different time points. 3. NEW TABLE 2.3 – considerations related to the interpretation of lab measurements 4. NEW recommendation for approach to the person with features of BOTH Type 1 and Type 2 diabetes. Continues to differentiate forms of diabetes: Type 1, LADA, Type 2, monogenic syndromes (MODY), pancreatic disease (CF, pancreatitis), drug/chemical induced, gestational 5. NEW emphasis on the importance of antibody based screening for pre-symptomatic Type 1 in persons with Family History or elevated genetic risk. Reminder: teplizumab-mzwv infusion is available to delay onset of type 1 in persons ≥ 8 yrs. with stage 2 type 1. (Info in Section 3) 6. GDM subsection updated 7. UPDATED: immune checkpoint inhibitors, role of gut microbiome, and monogenic diabetes

	8. Screening thresholds: a. All adults should be *screened starting at age 35* b. All overweight/obese adults (BMI≥ 25) with any risk factors (FH, high-risk race, ASCVD, HTN, HLD, PCOS, inactivity) i. If results are normal, screen every 3 years ii. If pre-DM level (A1C 5.7 – 6.4%), re-test yearly c. Youth: screen all who are overweight with 1 or more additional risk factors d. Screen for people on medications with risks for hyperglycemia: glucocorticoids, statins, thiazides, HIV meds (baseline and q 3-6 months), 2nd generation anti-psychotics (baseline and 12-16 wks. later)
Section 3: Prevention or Delay of Diabetes and Associated Comorbidities	1. Emphasis on INDIVIDUAL Risk/Benefit Assessment of pre-diabetes 2. NEW: highlights SLEEP as a central component (equal to eating patterns and physical activity) for management 3. Non-Drug: a. All overweight/obesity persons at risk should get INTENSIVE lifestyle behavior change referral b. Care Goals: Include 3-7% weight loss/prevention of weight gain with attention to CV risk i. INTENSIVE goals recommended if BMI > 35 kg/m2, A1C > 6%, Hx of GDM c. Recommend local DPP: https://www.cdc.gov/diabetes/prevention/find-a-program.html d. NEW: discussion on the use of VITAMIN D to prevent Type 2 DM (advocated by the US Endocrine Society). *Dose is not clear, and more research is needed for a recommendation.* 4. Drug Therapy: (no changes) a. Consider anti-hyperglycemic drug therapy to reduce progression to DM in high risk individuals b. **Metformin** – *consider* in pts 25-59 years with BMI ≥ 35 kg/m2, fasting PG > 110 mg/dL , A1C > 6%, women w/GDM c. Recommend PIOGLITAZONE to reduce risk of stroke/MI in people w/stroke hx and pre-DM, although need to balance w/the risk of weight gain, edema, and fractures (lower dose)
Section 4: Comprehensive Medical Evaluation and Assessment of Comorbidities	1. Immunization Updates: a. Table 4.3 includes consideration for: COVID-19, Hepatitis B, Influenza, Pneumococcal, RSV, Tdap, Zoster 2. BONE HEALTH updates: a. When to do Bone Mineral Density (BMD) testing i. Initial: All older adults (≥65 yo), and younger persons with multiple risk factors every 2 to 3 years b. In those at risk: i. Avoid meds with association to *higher fracture risk (*pioglitazone, sulfonylureas) ii. Avoid meds with hypoglycemia or fall risk c. Recommended Calcium intake 1000-1200mg/day *with Vitamin D* d. When to start antiresorptive and osteoanabolic agents: i. Older adults at high risk of fracture: Risk Assessment Tool score (≥3% for hip, ≥ 20% for osteoporotic), BMD T-score ≤ 2, hx of fracture (hip/pelvis, vertebral, forearm) 3. NEW subsection: DENTAL CARE a. Dental Exam at least once per year 4. Updates to assessment for: a. Disability and decline (every visit) b. Sexual health, erectile dysfunction and potential hypogonadism in men 5. NEW Subsection: FEMALE SEXUAL DYSFUNCTION a. Ask about sexual health (esp w/hx of depression, anxiety, UTIs) b. Screen for s/sx of genitourinary syndrome of menopause 6. NEW Updates to LIVER: a. Terminology changed: i. Nonalcoholic fatty liver disease (NAFLD) is now: metabolic dysfunction–associated steatotic liver disease (MASLD) ii. Nonalcoholic steatohepatitis (NASH) was updated to and metabolic dysfunction–associated steatohepatitis (MASH)

	• SCREENING recommendations: LFTs should be monitored and if ALT elevated, assess risk and/or refer to liver specialist • RISK stratification: Use Fibrosis-4 Index to assess, or FIB-4 (FIB-4> 1.3), then refer to GI or hepatologist. See Figure 4.2 – diagnostic algorithm • NEW: MASLD Treatment Algorithm (Fig 4.3): MANAGE with weight loss, meds with evidence (GLP1-RA, dual GLP/GIP, Pioglitazone) • NEW: treatment with a thyroid hormone receptor beta agonist (resmetirom) in adults with prediabetes, type 2 and MASLD with moderate or advanced liver fibrosis. Med to be dosed and monitored by specialty
Section 5: Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes	1. NEW - Screen people with diabetes, caregivers, and family for diabetes distress at the same critical times as screening for DSMES needs: *UPDATED in 2024: DSMES should be provided to **ALL persons with DM** at least 5 critical times:* at diagnosis, annually, when not meeting targets/complication factors arise, during transitions of life and care 2. Re-enforced the use of technology for Diabetes Self-Management Education and Support (DSMES)– mobile apps, simulation tools, digital coaching are effective methods AND recommended a focus on Social Determinants of Health for design and delivery of education programs. 3. Dietary Recommendations: a. Emphasis on the *quality of food sources* (nutrient-dense, high-fiber, non-processed, healthy fats) regardless of carbohydrate amount eaten. b. See TABLE 5.3 – Nutrition Behaviors to ENCOURAGE c. Impact of high protein/high fat mixed meals and insulin dosing adjustments noted d. Continue screening for food insecurity e. Non-nutritive sweetener section expanded: conditional recommendations – still recommended over sugar-sweetened products, but in moderation for SHORT TERM f. **WATER** is preferred over nutritive and non-nutritive sweetened beverages (DIET) g. UPDATED information on religious fasting and chrono nutrition 4. NEW: FASTING guidance: -- Risk Stratification is recommended BEFORE religious fasting – see the NEW guidance for this that comes from Diabetes and Ramadan International Alliance a. Fig 5.1 – differences between religious and intermittent fasting b. Table 5.4 – Risk calculation and scoring c. Table 5.5 – Med changes during fasting 5. Weight loss: a. Goal: 3-7% based on nutrition, physical activity, and behavior therapy i. up to 15%: to support possible REMISSION of DM b. NEW recommendation: Counsel patients who are losing weight to include muscle-strengthening exercise in order to avoid sarcopenia. 6. Smoking Cessation: NEW – recommendation to *AVOID cannabis* due to risk of cannabis hyperemesis syndrome and potential DKA 7. Psychosocial Care – REVISED to recommend routine/at least annual *screening* for diabetes distress, depression, anxiety, fear of hypoglycemia, and disordered eating behavior – in PWD and caregivers a. Table 5.7 – Association of PS concerns and DM -related outcomes
Section 6: Glycemic Goals and Hypoglycemia	1. NEW subsection: epidemiology, diagnostic criteria & outpatient prevention of DKA and HHS a. NEW Tables: risk factors and clinical presentation of DKA and HHS 2. NEW graphic to help clarify Individualization of A1C Goals: a. This helps to support when DEINTENSIFYING medications is appropriate when the harms of treatment (hypoglycemia) may be greater than the benefits and goals should be adjusted. (Decreased life expectancy, co-morbidities)

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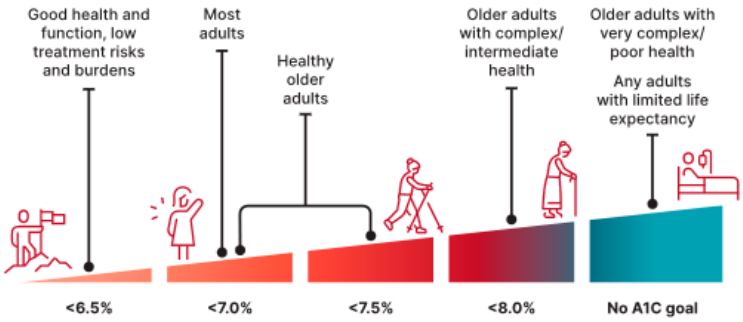

Modifying Factors
<table>
<tr><th>Favor more stringent goal</th><th>Favor less stringent goal</th></tr>
<tr><td>Short diabetes duration</td><td>Long diabetes duration</td></tr>
<tr><td>Low hypoglycemia risk</td><td>High hypoglycemia risk</td></tr>
<tr><td>Low treatment risks and burdens</td><td>High treatment risks and burdens</td></tr>
<tr><td>Pharmacotherapy with cardiovascular, kidney, weight, or other benefits</td><td>Pharmacotherapy without nonglycemic benefits</td></tr>
<tr><td>No cardiovascular complications</td><td>Established cardiovascular complications</td></tr>
<tr><td>Few or minor comorbidities</td><td>Severe, life-limiting comorbidities</td></tr>
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<tr><td>Section 7: Diabetes Technology</td><td>1. CGM should be offered for ALL PWD (at diagnosis) that can understand how to use it
a. Higher recommendation for persons on multiple daily injections or pumps, or medications that can cause hypoglycemia.
b. Benefits in PWT2 and non-intensive therapy are also highlighted
2. MODIFIED:
a. Table 7.2 and 7.4 – ALL potential substances/medical conditions that can affect glucose levels
b. Includes NEW OTC CGM devices in this section
c. Sections on insulin pumps and AID systems with clinical trial data
d. Recommendation to combine technology with online or virtual coaching
e. Emphasis to use Pumps and AIDs in hospitalized patients that already use them</td></tr>
<tr><td>Section 8: Obesity and Weight Management for the Prevention and Treatment of Type 2 DM</td><td>1. >90% of PWT2D are obese
2. REVISIONS include recommendations to:
a. Avoid therapeutic inertia and address weight stigma and bias
b. Monitor anthropometric measurements at least every 3 months during active weight loss
3. <u>AFTER</u> achieving weight loss goals:
a. CONTINUE monitoring and support to MAINTAIN weight loss
b. CONTINUE weight loss pharmacotherapy to reduce cv risks
c. Screen for Malnutrition
d. Utilize CGM post-metabolic surgery to improve safety from hypoglycemia risks
4. UPDATED Drug Therapy
a. TABLES updated: efficacy, adr’s, safety, costs of approved options
b. <u>Efficacy:</u> Tirzepatide (Mounjaro®, Zepbound®) > Semaglutide (Ozempic®, Wegovy®) > Liraglutide (Victoza®, Saxenda®) > Dulaglutide (Trulicity®) > Exenatide (Bydureon®)
c. 2025 New agent (not yet in guidelines) to watch: Triple Agonist: Retatrutide</td></tr>
<tr><td>Section 9: Pharmacologic Approaches to Glycemic Treatment</td><td>1. RE-organized and EXPANDED
2. NEW SUB-SECTION: Special Circumstances and Populations:
a. Continue to routinely assess ALL PWD for financial obstacles and cost reduction
b. NEW: Guidance on how to handle med shortages
c. Recommendations for med choice for persons of childbearing potential (use of contraception, glycemic goals, how to prepare for pregnancy)
i. Decreased efficacy of oral contraception when using GLP1-RA or GIP drugs
d. Guidance to mitigate DKA in persons on SGLT-2 inhibitors and ketogenic diet: knowing risks and signs, and having tools to measure ketones
e. Considerations for PWD secondary to chemotherapy, or with other types of DM
i. Specific chemo agents can increase insulin resistance: in those cases, <u>metformin</u> is the treatment of choice, followed by pioglitazone or SGLT2-i
3. NEW: INSULIN administration section expanded to include INHALED insulin and BOLUS patches
4. <u>ALGORITHM updates:</u>
a. Includes healthy behaviors, education, avoidance of therapeutic inertia, and SDOH</td></tr>
</table>

b. Prioritize agents to meet MULTIPLE TX GOALS: Efficacy, improve cv, kidney, liver, weight, reduce hypoglycemia with consideration for COST, ACCESS, Risk of ADRs, and PWD preference
c. NEW: assess the need or dose of drugs that have a higher hypo risk (SFU, meglitinides, insulin), and DECREASE when adding new meds
d. NEW: GLP-1RA recommended for PWD and symptomatic *HF with preserved EF, and obesity* – irrespective of A1C (although the algorithm still only has SGLT2-inhibitors on it for HF)
e. **AVOID** using DPP4-inhibitors with GLP1-RA (lack of benefit)
f. **ADDED:** recommendations for PWD and MASLD or MASH
g. **Where does Metformin fit?** – As an add on to any of the drugs used for co-morbidities, and as a starting agent for persons without any of the co-morbidities:

ASCVD (Or high risk) Independent of A1c	Heart Failure	CKD eGFR 20 – 60 ml/min/1.73m^2 And/or albuminuria (ACR> 30) On Max tolerated ACEi or ARB	NEW: MASLD or MASH
GLP1-RAs: Dula/Lira/Sema- -or- SGLT2-i Cana/Dapa/Empa- -Or combo-	SGLT2-i Cana/Dapa/ Empa/Ertu GLP1-RA (sema) if symptomatic and pEF & obesity	NEW: EITHER GLP1-RA Sema > Lira > Dulaglutide -or- SGLT2-I: cana/dapa/empa- w/eGFR > 20 -Or combo-	GLP1-RA or GIP/GLP1-RA (esp if obese) Pioglitazone (NOT if obese) -Or combo of GLP/pio-

CKD:
i. SGLT2-inhibitor is recommended to prevent CKD progression, although *glycemic benefit is reduced at eGFR < 45 ml/min*.
ii. If eGFR < 30 ml/min – *GLP-1RA is preferred*

5. **INSULIN UPDATES:**
a. GLP1-RA or GLP/GIP – *PREFERRED to insulin when there is NO evidence of insulin deficiency*
b. INSULIN recommended for A1C > 10% or symptomatic (polyuria/polydipsia, weight loss, hypertriglyceridemia, ketosis)
c. If insulin IS used, combination with GLP or GLP/GIP is recommended
d. NEW – guidance on *switching between basal insulins:*
e. Usually unit:unit, although in persons on tight management or high risk of hypo, cut dose 10-20% when switching.
f. NEW: When assessing for over-basalization, basal dose > 0.5 U/kg/day has been REMOVED! Instead**, assess by** significant HS to AM -or- pre to post prandial differences (> 50 mg/dL), hypoglycemia occurrence, and high glycemic variability
g. REMINDER:
i. When initiating insulin, CONTINUE Metformin, SGLT2-I, GLP1-RA
ii. STOP sulfonylureas, meglitinides and Dpp-4i --- they have NO additional beneficial effects on cv/kidney/weight/liver… and increase risk of hypoglycemia and wt gain

Section 10: Cardiovascular Disease and Risk Management

Endorsed by ACC and AHA
1. TO reduce complications, include all 4:
a. Glycemic Management
b. BP Management
c. Lipid Management
d. Use Agents with CV and Kidney benefit (GLP1-RA and SGLT2-inhibitors)

NEW Screening Recommendations:

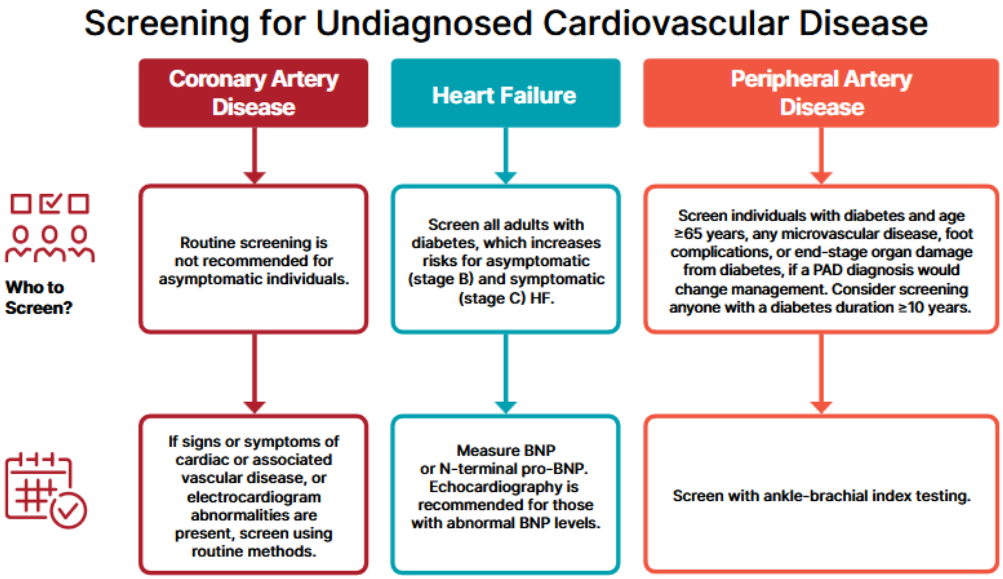


Figure 10.5—Recommendations for screening of asymptomatic and undiagnosed cardiovascular disease. BNP, B-type natriuretic peptide; HF, heart failure; PAD, peripheral artery disease. Adapted from *"Standards of Care in Diabetes—2024* Abridged for Primary Care Professionals" (325).

2. **HTN Recommendations**: Diagnosis remains:
    a. Elevated BP: ≥ 130 mmHg systolic **OR** ≥ 80 mmHg diastolic -OR- a single BP ≥ 180/110 mmHg
    b. BP GOAL: < 130/80 mmHg if can be done safely
        i. Initiate lifestyle interventions if BP > 120/80 mmHg
        ii. Start an agent if BP > 130/80 mmHg
        iii. Start 2 agents if BP > 150/90 mmHg
    c. CLARITY on med classes: ACE-I/ARB, Thiazide or CCB
        i. ACE-I or ARB: *FIRST LINE if CAD, or UACR > 30 mg/g*
            1. MONITOR SCr, Potassium
            2. AVOID if childbearing potential without contraception: ACE-I, ARB, MRAs, neprilysin inhibitors
        ii. DIURETICS: monitor Scr/potassium 7-14 days after initiation
        iii. MRA (spironolactone/eplerenone) – use for resistant HTN (if already on 3 recommended classes, and secondary causes ruled out)
        iv. Beta-blockers – only if prior MI, active angina, or HFrEF
    d. In Pregnancy: Initiate therapy if BP > 140/90 mmHg
        i. Drugs considered effective and safe: methyldopa, labetalol, nifedipine ER
        ii. BP < 90/60 mmHg – DE-intensify therapy
3. **STATIN recommendations:**
    a. **NEW** – avoid in childbearing potential persons not using reliable contraception
    b. NEW – figures 10.3 and 10.4:

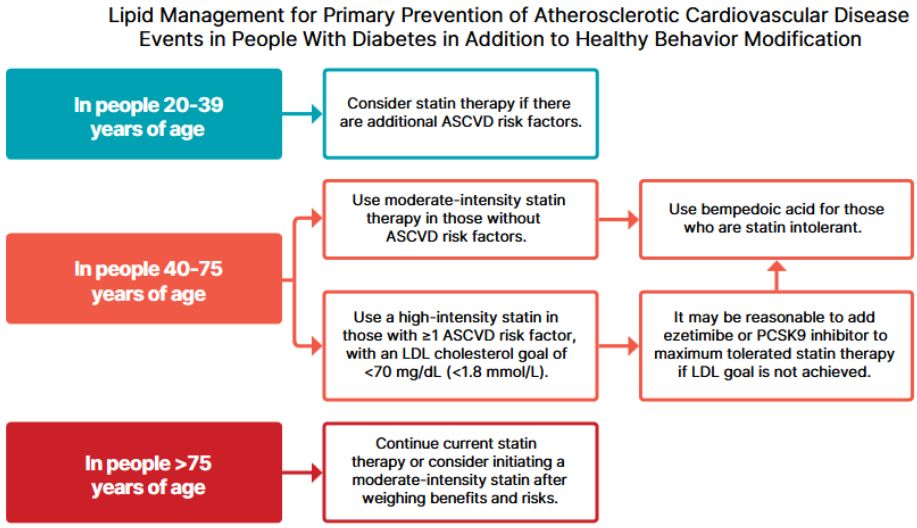


Figure 10.3—Recommendations for primary prevention of atherosclerotic cardiovascular disease (ASCVD) in people with diabetes using cholesterol-lowering therapy. Adapted from *"Standards of Care in Diabetes—2024* Abridged for Primary Care Professionals" (325).

Intolerance to statin therapy:

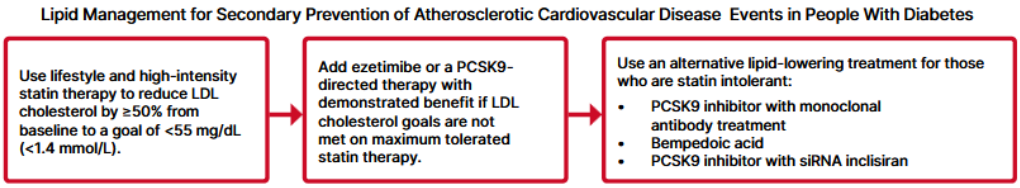


Figure 10.4—Recommendations for secondary prevention of atherosclerotic cardiovascular disease (ASCVD) in people with diabetes using cholesterol-lowering therapy. Adapted from *"Standards of Care in Diabetes—2024* Abridged for Primary Care Professionals" (325).

4. **HYPERTRIGLYCERIDEMIA:**
   a. NEW – Thresholds updated:
      i. FASTING > 150 mg/dL -or- NON-FASTING > 175 mg/dL
      ii. Fasting > 500 mg/dL: evaluate for secondary causes and consider fibrates or fish oil to reduce pancreatitis risk
      iii. If ASCVD, addition of icosapent ethyl can be considered if TG 150 – 499 mg/dL
5. **HEART FAILURE (HF):**
   a. NEW – Figure 10.6 – Recommendations for prevention of symptomatic HF:

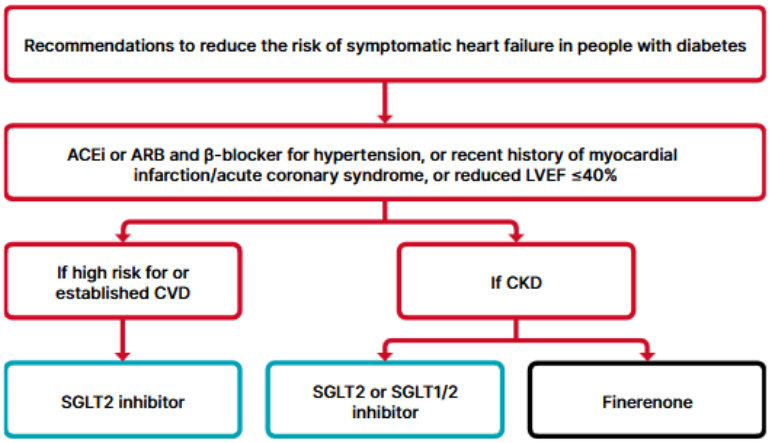


Figure 10.6—Overview of recommendations for the prevention of the development of symptomatic heart failure in people with diabetes. ACEi, ACE inhibitor; ARB, angiotensin receptor blocker; CKD, chronic kidney disease; CVD, cardiovascular disease; LVEF, left ventricle ejection fraction; SGLT2, sodium–glucose cotransporter 2. Adapted from *"Standards of Care in Diabetes—2024* Abridged for Primary Care Professionals" (325).

   b. EDUCATE on DKA s/sx, management (hold the med when ill) for any persons on SGLT2i and ketogenic diets

Section 11: Chronic Kidney Disease and Risk Management

ALIGNS with KDIGO consensus report: https://kdigo.org/guidelines/diabetes-ckd/

- Categorize patients with DKD by measuring BOTH eGFR and ALBUMINURIA
  a. Need 2 of 3 urine albumin-to-creatinine ratio (UACR) collected and abnormal
  b. Albuminuria as a target: in pts with CKD and > 300mg/day urine albumin
     i. GOAL: to reduce albuminuria by ≥ 30% & to slow progression of CKD.

Treatment

- ACE-I or ARB: IF they have albuminuria (UACR > 30 mg/g)
  - NO NEED for ACEI or ARB in people with NORMAL BP, normal UACR and normal eGFR
  - NEW: If on ACE-I or ARB: titrate to MAX tolerated dose
  - If already on MAX tolerated ACEI or ARB, ADD finerenone(NSMRA) if eGFR > 25 - to improve CV outcomes and reduce progression of CKD.
  - NEW: if on ACE-I or ARB or NSMRA: Monitor SCr & Potassium

TREATMENT of GLYCEMIA in a Person with CKD:

- SGLT2i is recommended for patients with an eGFR < 60 ml/min and UACR ≥ 200 mg/g (or any level) --- do not initiate if eGFR< 20 ml/min
- NEW: GLP-1 RA with demonstrated benefit (semaglutide at this time) should be used

REFER to NEPHROLOGY:

- Continuous increase in urinary albumin or decrease in eGFR
- eGFR < 30 ml/min

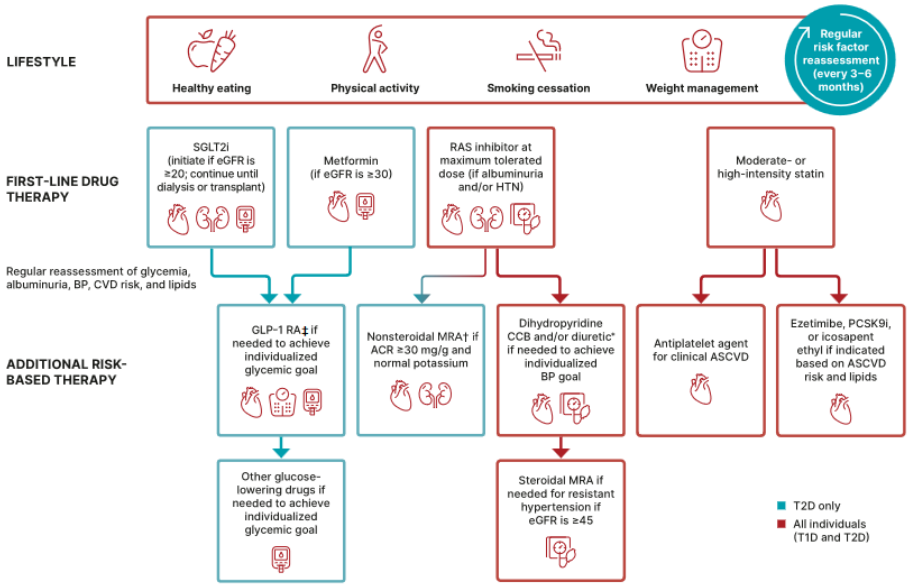


Figure 11.2—Holistic approach for improving outcomes in people with diabetes and CKD. Icons presented indicate the following benefits: BP cuff, BP lowering; glucose meter, glucose lowering; heart, cardioprotection; kidney, kidney protection; scale, weight management. eGFR is presented in units of mL/min/1.73 m^2. *ACEi or ARB (at maximal tolerated doses) should be first-line therapy for hypertension when albuminuria is present. Otherwise, dihydropyridine calcium channel blocker or diuretic can also be considered; all three classes are often needed to attain BP targets. †Finerenone is currently the only ns-MRA with proven clinical kidney and cardiovascular benefits. ‡Semaglutide can be used as another first-line agent for people with CKD. ACEi, angiotensin-converting enzyme inhibitor; ACR, albumin-to creatinine ratio; ARB, angiotensin receptor blocker; ASCVD, atherosclerotic cardiovascular disease; BP, blood pressure; CCB, calcium channel blocker; CVD, cardiovascular disease; eGFR, estimated glomerular filtration rate; GLP-1 RA, glucagon-like peptide 1 receptor agonist; HTN, hypertension; MRA, mineralocorticoid receptor antagonist; ns-MRA, nonsteroidal mineralocorticoid receptor antagonist; PCSK9i, proprotein convertase subtilisin/kexin type 9 inhibitor; RAS, renin-angiotensin system; SGLT2i, sodium–glucose cotransporter 2 inhibitor; T1D, type 1 diabetes; T2D, type 2 diabetes. Adapted from de Boer et al. (1).

Section 12: Retinopathy, Neuropathy, and Foot Care

1. Eyes: Initial dilated and comprehensive exam at diagnosis and again every 1 to 2 years if no evidence of retinopathy and glycemia is within goal range.
2. NEUROPATHY: Additional screening criteria for AUTONOMIC Neuropathy recommended:
    a. Ask about symptoms: orthostatic dizziness, syncope, early satiety, ED, changes in sweating patterns, dry cracked skin in extremities, resting tachycardia
    b. Assess for PAD via food screening, educate and REFER for work up
3. NEUROPATHY TREATMENT to include:
    a. Glycemic, lipid, BP and weight control
    b. Meds: gabapentinoids, SNRIs, TCA, sodium channel blockers
    c. NEW: AVOID Opioids
4. NEW: Foot Care – increasing role of surgery
    a. Annual distal symmetric polyneuropathy assessment: monofilament, vibration, and vascular assessment. If ANY sensory loss, recommend feet inspection at EVERY VISIT
    b. Re-enforced: The importance of smoking cessation for PAD prevention!

Section 13: Older Adults

UPDATE: 4Ms framework: Mentation, Medications, Mobility, and what Matters Most

Using the 4Ms Framework of Age-Friendly Health Systems to Address Person-Specific Issues That Can Affect Diabetes Management

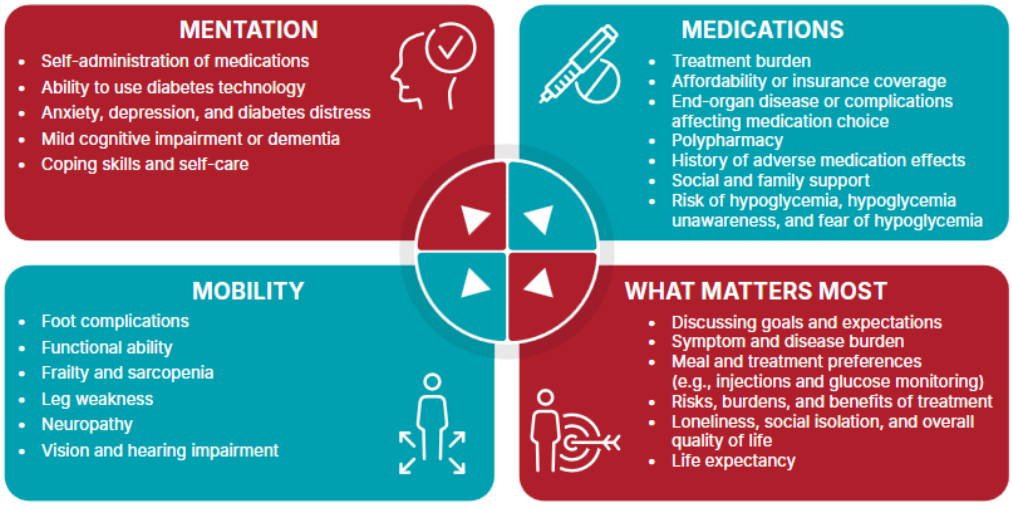
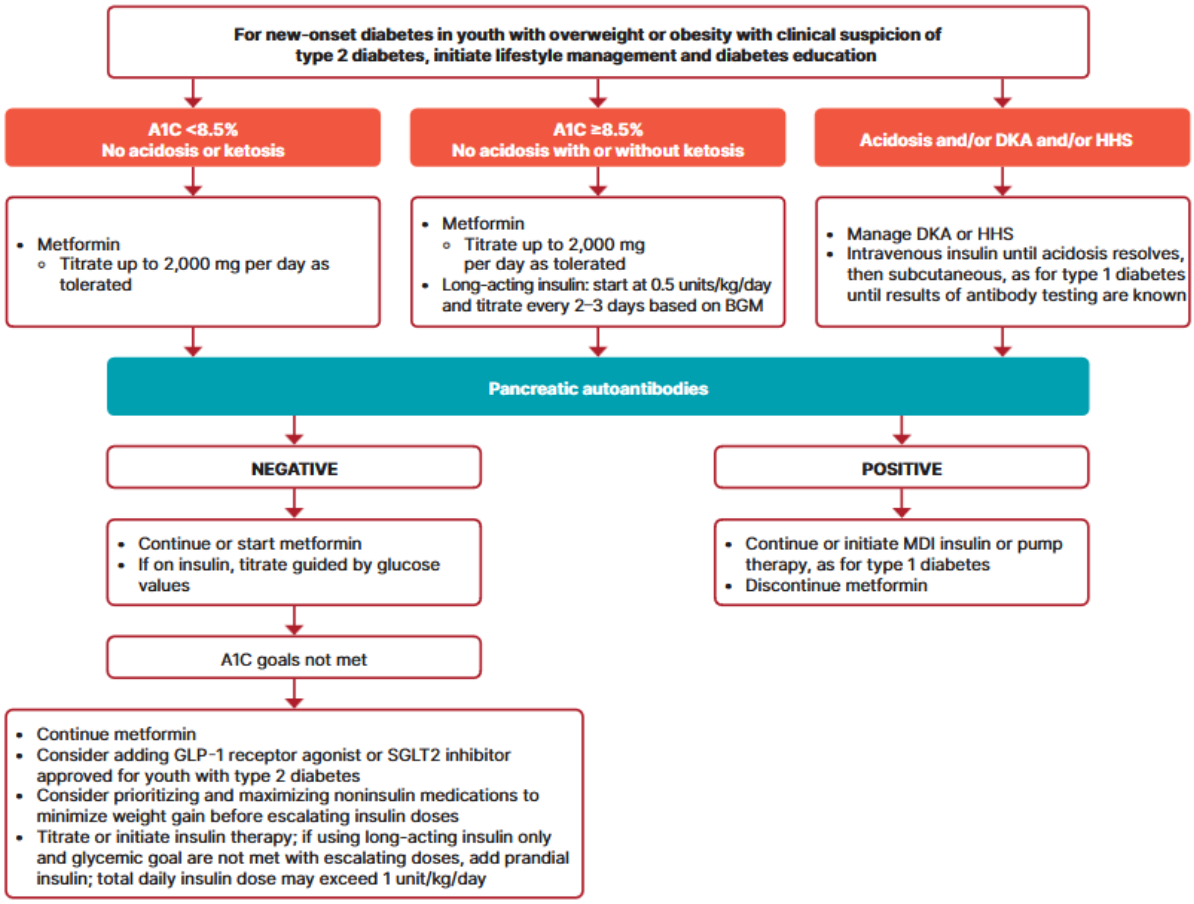


Figure 13.1—Using the 4Ms framework of age-friendly health systems to address person-specific issues that can affect diabetes management.

REMINDERS: Older adults who are otherwise healthy with few coexisting chronic conditions can have adult glycemic goals of A1C < 7-7.5% and TIR ~ 70%. Individualize using the 4 M's

	1. Deintensification goals – reduce risk of hypoglycemia (increase A1C target to < 7.5% or < 8%) a. AVOID hypo-glycemia causing medications; switch to those with lower risks b. Include agents to reduce cardiorenal risk, regardless of glycemia. 2. Simplification goals – decrease polypharmacy, regimen, burden of disease – **see Figure 13.1** for algorithm
Section 14: Children and Adolescents	Many small updates to this section. Re-enforced the importance of treatment (due to rapid progression of complications in youth) and psychosocial care: clarify diabetes distress and lower engagement in self-management behavior. Of note: • BP: Lifestyle modification, weight management ○ If needed, ACE-I or ARB, with reliable contraception if indicated • Lipids: Lifestyle ○ Age-approved statins (rosuvastatin >6 years old) with LDL goal < 100 mg/dL ○ WITH reliable contraception if indicated • Key nutritional principles include specific examples of healthy food choices and what to avoid • NEW: A1C goal < 6.5% - for most children and adolescents • NEW: Benefits and Safety of GLP-1 RAs reinforced • NEW: avoid vaping, avoid cannabis NEW: Treatment choices:  **Figure 14.1**—Management of new-onset diabetes in youth with overweight or obesity with clinical suspicion of type 2 diabetes. A1C 8.5% = 69 mmol/mol. BGM, blood glucose monitoring; CGM, continuous glucose monitoring; DKA, diabetic ketoacidosis; GLP-1, glucagon-like peptide 1; HHS, hyperosmolar hyperglycemic state; MDI, multiple daily injections; SGLT2, sodium–glucose cotransporter 2. Adapted from the ADA position statement "Evaluation and Management of Youth-Onset Type 2 Diabetes" (3). 2. If additional medication is needed: (≥ 10 years old) • *Consider these meds before intensifying insulin:* • GLP1-RAs approved for use in adolescents: (in addition to metformin) ○ > 12 years old: Liraglutide (Victoza), exenatide (Bydureon) and Semaglutide (Wygovy) ○ > 10 years old: Dulaglutide (Trulicity) • SGLT2-inhibitor: empagliflozin (Jardiance®)

Section 15: Management of Diabetes in Pregnancy (PG)	NEW: RESTRUCTURED: the care of Pregnant women with all types: T1, T2 and GDM. Instead of separate sections, they are merged
	NEW: Table 15.1 updates: Added Folic Acid 400-800 mcg/day, update on immunizations
	• Updates: expanded use of CGM, and considerations for AID
	• Glycemic Goals: ALL pregnant persons should monitor fasting, pre-prandial and postprandial glucose
	  ○ Goals:
	  ▪ Fasting < 95 mg/dL (70-95 mg/dL)
	  ▪ 1 h Postprandial < 140 mg/dL (110 – 140 mg/dL)
	  ▪ 2 h postprandial < 120 mg/dL (100 – 120 mg/dL)
	  ○ CGM goals:
	  ▪ Target Range: 63-140 mg/dL
	  ▪ Time below range goal < 4%, (<1% below 54 mg/dL)
	  ▪ Time above range goal < 25 %
	  ○ A1C is lower due to increased RBC turnover, so goal of < 6% is ideal
	Blood Pressure Targets remain:
	  • Goal: 110-135/85 mmHg
	  • Treat if > 140/90 mmHg
	• Updates to use of Aspirin therapy for preeclampsia to match US Preventative Services Task Force
	• Further Explanation on why hyperglycemia in PG should *NOT be treated with metformin and glyburide* as first line agents; LIFESTYLE and INSULIN are recommended. If on metformin for PCOS, it should be stopped after the 1st trimester
	• Updated:
	  ○ Harmful meds in pregnancy to stop: ACE-I, ARBs, MRAs
	  ○ *Consider statin continuation* in high-risk persons when benefit > risk

Section 16: Diabetes Care in the Hospital	Treatment should start at a threshold of > 180 mg/dL
	• Individualize Targets: if can be reached WITHOUT significant hypoglycemia
	  • Critically ill target range of 140-180 mg/dL
	  ○ Recommend continuous IV insulin infusion
	  • Noncritically ill patients: Target ranges 100 – 180 mg/dL
	  • Preferred regimen is basal, prandial, with correction insulin doses
	NEW:
	  • While in hospital: continue insulin pump or AID when clinically appropriate
	  • Guidance on use of GLP agents in the perioperative setting included in the narrative
	NEW for DKA/HHS:
	  • Transition to subcutaneous insulin administration outlined
	  • Fig 16.1 – new treatment pathways for DKA and HHS

Section 17: Diabetes Advocacy	Updated advocacy statement on Diabetes care in the school setting and Diabetes and Driving New subsection on Diabetes Management in Detention Facilities

American Diabetes Association Professional Practice Committee. Standards of care in diabetes—2025. *Diabetes Care* 1 January 2025;48(Supplement_1):S1-S352.