

A Whole-Patient Approach to medication selection for patients with T2D



Review previous/existing treatments and risk factor control

7.0% A generally appropriate target A1c for nonpregnant adults

6.5% A more stringent target may be preferred when it can be achieved safely

8.0% Consider less stringent targets when patients have significant comorbidities, limited life expectancy, or are at risk of severe hypoglycemia

(M) **Metformin** is the preferred initial agent for the treatment of T2D; continue for as long as tolerated

Additional agents should be added as required to maintain glycemic control, and should be selected based on a **patient-centered approach**



Comorbidities



Hypoglycemia



Body weight



Side effects



Cost



Patient preference

Does your patient have CVD?

PATIENTS WITH KNOWN ASCVD

(A) Consider **ACE inhibitor or ARB** therapy for patients with hypertension to reduce the risk of CV events

PATIENTS WITH ESTABLISHED ASCVD OR MULTIPLE ASCVD RISK FACTORS

(S) An **SGLT2 inhibitor or GLP-1 RA** with demonstrated CV benefit is recommended

Does your patient have CKD?

- Optimize blood pressure and glycemic control to reduce the risk or slow the progression of CKD

eGFR (mL/min/1.73 m²)

75

60

45

30

15

(A) **ACE inhibitor or ARB** is recommended for patients with hypertension

(S) Consider **SGLT2 inhibitors** to reduce risk of CKD progression, CV events, or both

Refer patients to a nephrologist if eGFR <30 mL/min/1.73 m², if there are difficult management issues, or rapidly progressing kidney disease

(M) Reassess treatment with **metformin**

(M) **Metformin** is contraindicated

(G) In patients at increased risk for CV events, a **GLP-1 RA** may reduce risk of progression of albuminuria, CV events, or both

Does your patient have HF?

- (M)** Avoid **metformin** in unstable HF or hospitalized patients
- (S)** In established HF, an **SGLT2 inhibitor** may reduce risk of HF hospitalization as part of the patient's glucose-lowering regimen
- (T)** Avoid **thiazolidinediones** for patients with symptomatic HF

Does your patient have a high BMI?

- High-intensity interventions (diet/physical activity/behavioral therapy) to achieve and maintain **7% weight loss** are recommended, with long-term weight maintenance support for patients who achieve weight loss goals

Patient BMI **Patient BMI cut-off for Asian Americans**

40 kg/m²

37.5 kg/m²

Metabolic surgery recommended when patients cannot achieve durable weight loss and improvement in comorbidities with nonsurgical methods

35 kg/m²

32.5 kg/m²

Consider metabolic surgery when patients do not achieve durable weight loss/improvement in comorbidities with nonsurgical methods

30 kg/m²

27.5 kg/m²

Consider weight loss medications, but evaluate potential benefits vs potential risks

27 kg/m²

- Consider the effect on weight when selecting glucose-lowering medications

WEIGHT LOSS

(M) **(S)** **(G)** **(A)**

Metformin, SGLT2 inhibitors, GLP-1 RA, α-glucosidase inhibitors

WEIGHT NEUTRAL

(D)

DPP-4 inhibitors

WEIGHT GAIN

(I) **(T)** **(Su)**

Insulin secretagogues, thiazolidinediones, SUs, insulin

Treatments by drug class

(M) **Metformin** (\$4/mo)

(I) **Insulin** (\$25+/mo)

(S) **SGLT2 inhibitors***

- Canagliflozin, dapagliflozin, empagliflozin, ertugliflozin

(G) **GLP-1 RA***

- For weight loss, semaglutide > liraglutide > dulaglutide > exenatide > lixisenatide
- Dulaglutide, liraglutide, and semaglutide have associated CV benefits

(Su) **SUs**

- Later generation SUs are recommended to reduce the risk of hypoglycemia
- Glimepiride, glipizide (\$4/mo)

(T) **Thiazolidinediones**

- Pioglitazone (\$11/mo)

(A) **α-Glucosidase inhibitor**

- Acarbose (\$19/mo)

*Drug costs for all GLP-1RAs and SGLT2 inhibitors are estimated at more than \$100/mo and in some cases may be more than \$1000/mo

ABBREVIATIONS

A1c, glycated hemoglobin; ACE, angiotensin-converting enzyme; ARB, angiotensin receptor blocker; ASCVD, atherosclerotic cardiovascular disease; BMI, body mass index; CKD, chronic kidney disease; CV, cardiovascular; CVD, cardiovascular disease; DPP-4, dipeptidyl peptidase-4; eGFR, estimated glomerular filtration rate; GLP-1 RA, glucagon-like peptide-1 receptor agonist; HF, heart failure; SGLT2, sodium-glucose co-transporter 2; SU, sulfonylurea; T2D, type 2 diabetes

Guidance based on the *Standards of Medical Care in Diabetes—2020* Abridged for Primary Care Providers. American Diabetes Association. *Clin Diabetes*. 2020;38:10-38.

All drug prices were taken from GoodRx. Available at: <https://www.goodrx.com/>