Modified ADA Diabetes Algorithm: Pharmacologic Treatment

CARDI·OH
Ohio Cardiovascular and Diabetes Health Collaborative

Healthy Lifestyle, Diabetes Self-Management Education & Support, Social Determinants of Health

High Cardiovascular, Kidney Risk
regardless of baseline glycemia or metformin use

ASCVD/high CV risk*
GLP-1 RA or SGLT2i with proven CV benefit

If A1C >goal
+GLP-1 RA or SGLT2i, pioglitazone

HFrEF or HFpEF
SGLT2i with proven HF benefit

If A1C >goal + HFpEF
+GLP-1 RA or GLP-1/GIP RA

CKD (eGFR <60 mL/min/1.73m2, albuminuria [UACR >30 mg/g])
Maximally tolerated RAAS + SGLT2i^ or GLP-1 RA with proven CKD benefit

If A1C >goal
+GLP-1 RA or SGLT2i

If additional CV/kidney risk, weight loss or glycemic lowering is needed

MASLD/MASH
GLP-1 RA or GLP-1/GIP RA +/-pioglitazone

Use insulin if decompensated cirrhosis

Weight and Glycemic Goals

Achieve & Maintain Glycemic Goals
Metformin and/or other agent sufficient to achieve and maintain goal

Prioritize hypoglycemia avoidance in high-risk patients

Weight Management

Efficacy	Glucose Lowering	Weight Loss
Very High	dulaglutide, semaglutide, tirzepatide, insulin, combination	semaglutide, tirzepatide
High	other GLP-1 RA, metformin, SGLT2i, SFU, pioglitazone	dulaglutide, liraglutide
Moderate	DPP4i	other GLP-1 RA, SGLT2i
Neutral		DPP4i, metformin

If A1C >goal, significant hyperglycemia or hypoglycemia or barriers to care

Diabetes Self-Management Education & Support, Social Determinants of Health, CGM

*≥55 years of age with 2+ additional risk factors (obesity, hypertension, smoking, dyslipidemia, or albuminuria).
^if eGFR >20 mL/min/1.73m², continue until needing dialysis. Glucose lowering effect reduced if eGFR <45 mL/min/m².

ASCVD = atherosclerotic cardiovascular disease; CGM = continuous glucose monitoring; CKD = chronic kidney disease; CV = cardiovascular; DPP4i = dipeptidyl peptidase-4 inhibitor; EF = ejection fraction; eGFR = estimated glomerular filtration rate; GIP = gastric inhibitory peptide; GLP-1 RA = glucagon-like peptide-1 receptor agonist; HFpEF = heart failure preserved ejection fraction; HFrEF = heart failure reduced ejection fraction; MASH = metabolic dysfunction associated steatohepatitis; MASLD = metabolic dysfunction associated steatotic liver disease; RAAS = renin angiotensin aldosterone system; SGLT2i = sodium-glucose cotransporter-2 inhibitor; SFU = sulfonylurea; UACR = urine albumin/creatinine.

Adapted from 9. *Pharmacologic approaches to glycemic treatment: standards of care in diabetes-2025. Diabetes Care.*[1]

Table 1. Cardiovascular and Renal Benefits of Medications for Treatment of Type 2 Diabetes[1,2]

Drug	ASCVD	Heart Failure	Chronic Kidney Disease	MASH
SGLT-2i	canagliflozin **empaglifozin**	canagliflozin **empaglifozin** **dapagliflozin** ertugligozin	canagliflozin **dapagliflozin** **empaglifozin**	Possible benefit
GLP-1 RA	dulaglutide liraglutide semaglutide (SQ)	semaglutide* tirzepatide*	**dulaglutide^** liraglutide^ semaglutide (SQ)^	Potential benefit
Thiazolidinediones	**pioglitazone (secondary prevention)**	Avoid		Potential benefit

ASCVD = atherosclerotic cardiovascular disease; GLP-1 RA = glucagon-like peptide-1 receptor agonist; MASH = metabolic dysfunction associated steatohepatitis; SGLT2i = sodium-glucose cotransporter-2 inhibitor; SQ = subcutaneous.

Items in bold are preferred in Ohio Medicaid Unified Formulary.

*Benefit in HFpEF only: semaglutide reduced symptoms and tirzepatide reduced a composite of cardiovascular death or worsening heart failure.

^Semaglutide demonstrated reduction in progression of chronic kidney disease in a dedicated renal study. Dulaglutide and liraglutide demonstrated reduction in albuminuria.

References

1. American Diabetes Association Professional Practice Committee. 9. Pharmacologic approaches to glycemic treatment: standards of care in diabetes-2025. Diabetes Care. 2025 Jan 1;48(Supplement_1):S181-S206. doi: 10.2337/dc25-S009.
2. Ohio Department of Medicaid. 2025 Unified Preferred Drug List. https://dam.assets.ohio.gov/image/upload/medicaid.ohio.gov/PHM/drug-coverage/20250401_UPDL_v2_approved.pdf Published April 1, 2025. Accessed May 5, 2025.

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