

Oscar Clinical Guideline: Antidiabetic Agents - Glucagon-like Peptide-1 (GLP-1) Receptor Agonists
(PG152, Ver. 2)

Antidiabetic Agents - Glucagon-like Peptide-1 (GLP-1) Receptor Agonists

- Dual Glucose-dependent Insulinotropic Polypeptide (GIP) and GLP-1 Receptor Agonists
 - Mounjaro (Tirzepatide)
- Glucagon-like Peptide-1 (GLP-1) Receptor Agonists
 - Bydureon (Exenatide)
 - Bydureon BCise (Exenatide)
 - Byetta (Exenatide)
 - Ozempic (Semaglutide)
 - Rybelsus (Semaglutide)
 - Trulicity (Dulaglutide)
 - Victoza (Liraglutide)

Disclaimer

Clinical guidelines are developed and adopted to establish evidence-based clinical criteria for utilization management decisions. Clinical guidelines are applicable according to policy and plan type. The Plan may delegate utilization management decisions of certain services to third parties who may develop and adopt their own clinical criteria.

Coverage of services is subject to the terms, conditions, and limitations of a member's policy, as well as applicable state and federal law. Clinical guidelines are also subject to in-force criteria such as the Centers for Medicare & Medicaid Services (CMS) national coverage determination (NCD) or local coverage determination (LCD) for Medicare Advantage plans. Please refer to the member's policy documents (e.g., Certificate/Evidence of Coverage, Schedule of Benefits, Plan Formulary) or contact the Plan to confirm coverage.

Summary

Incretin mimetics, also known as glucagon-like peptide-1 (GLP-1) receptor agonists, are an important class of antidiabetic agents that potentiate glucose-dependent insulin secretion, suppress glucagon secretion, slow gastric emptying, and promote satiety. They are used to manage diabetes, a long-term

medical condition characterized by high blood sugar levels due to the pancreas not producing enough insulin, or the body not responding effectively to insulin.

Among the incretin mimetics, Tirzepatide (Mounjaro) is a unique dual glucose-dependent insulinotropic polypeptide (GIP) and GLP-1 receptor agonist. In clinical trials with type 2 diabetes patients, Tirzepatide has shown superior efficacy in reducing A1C (2-2.5%) and body weight (7-13 kg) compared to placebo, semaglutide, insulin degludec, and insulin glargine. Cardiovascular outcomes trials for Tirzepatide are ongoing. While Tirzepatide demonstrated significant weight loss (15-21%) in patients without type 2 diabetes, it is not yet FDA-approved for weight management.

Other notable GLP-1 receptor agonists include Bydureon (Exenatide), Bydureon BCise (Exenatide), Byetta (Exenatide), Ozempic (Semaglutide), Rybelsus (Semaglutide), Trulicity (Dulaglutide), and Victoza (Liraglutide). Several of these medications, particularly Dulaglutide, Liraglutide, and Semaglutide, have been shown to reduce the risk of major adverse cardiovascular events (MACE) in adults with established cardiovascular disease and reduce macroalbuminuria. However, their impact on hospitalization for heart failure or progression of chronic kidney disease is yet to be determined.

It is noteworthy that Exenatide and Lixisenatide have produced mixed results in trials, with neither proving superior to placebo in reducing MACE or hospitalization for heart failure. However, Semaglutide (Wegovy) and Liraglutide (Saxenda) have FDA approval for chronic weight management in doses higher than those used for type 2 diabetes treatment.

Diabetes management typically includes diet, exercise, and weight loss, but most patients require antihyperglycemic drug therapy. Metformin is generally preferred for initial treatment, but in some patients, an SGLT2 inhibitor or a GLP-1 receptor agonist may be added or substituted. When metformin alone is insufficient, the choice of a second antihyperglycemic drug is generally based on the presence of comorbid conditions such as atherosclerotic cardiovascular disease (ASCVD), heart failure (HF), chronic kidney disease (CKD), and obesity.

NOTE:

1. The Plan requires that members either be unable to use, or have tried and failed preferred medication(s) first. Requests for non-formulary medications are subject to Medical Necessity Criteria for Non-Formulary Products (PG069).
2. Coverage for prescription medications intended for obesity treatment, weight loss, weight reduction, or dietary control is determined by each member's specific benefit policy. Please refer to the member's benefit plan document for information on benefit eligibility and terms of

coverage. In cases where the plan includes coverage for drugs prescribed for obesity treatment or weight management, the Oscar Clinical Guideline: Weight Loss Agents (PG070) may also apply.

Table 1: Incretin mimetics antidiabetics

Classification	Drug#	FDA-Approved Indications
Dual Glucose-dependent Insulinotropic Polypeptide (GIP) and GLP-1 Receptor Agonists	Mounjaro (Tirzepatide)	Adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus. ^{1 2}
	Bydureon (Exenatide)	Adjunct to diet and exercise to improve glycemic control in adults and pediatric patients aged 10 years and older with type 2 diabetes mellitus. ^{1 2 4 5}
Incretin mimetics Antidiabetics	Bydureon BCise (Exenatide)	Adjunct to diet and exercise to improve glycemic control in adults and pediatric patients aged 10 years and older with type 2 diabetes mellitus ^{1 2 4 5}
	Byetta (Exenatide)	Adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus. ^{1 2 5}
	Ozempic (Semaglutide)	Diabetes mellitus, type 2, treatment: ^{1 2} <ul style="list-style-type: none"> as an adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus. to reduce the risk of major adverse cardiovascular events (cardiovascular death, non-fatal myocardial infarction or non-fatal stroke) in adults with type 2 diabetes mellitus and established cardiovascular disease.
	Rybelsus (Semaglutide)	Adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus. ^{1 2}
	Trulicity (Dulaglutide)	Diabetes mellitus, type 2, treatment: ^{1 2} <ul style="list-style-type: none"> As an adjunct to diet and exercise to improve glycemic control in adults and pediatric patients 10 years of age and older with type 2 diabetes mellitus; risk reduction of major cardiovascular events (cardiovascular death, nonfatal myocardial infarction, nonfatal stroke) in adults with type 2 diabetes mellitus who have established cardiovascular disease or

		multiple cardiovascular risk factors.
	Victoza (Liraglutide)	<p>Diabetes mellitus, type 2, treatment: ^{1 6}</p> <ul style="list-style-type: none"> • As an adjunct to diet and exercise to improve glycemic control in children ≥10 years of age, adolescents, and adults with type 2 diabetes mellitus; • risk reduction of major cardiovascular events (cardiovascular death, nonfatal myocardial infarction, nonfatal stroke) in adults with type 2 diabetes mellitus and established cardiovascular disease.

include both brand and generic and all dosage forms and strengths unless otherwise stated

Limitations of Use:

¹ has not been studied in patients with a history of pancreatitis. Consider other antidiabetic therapies in patients with a history of pancreatitis

² is not indicated for use in patients with type 1 diabetes mellitus

³ has not been studied in patients with gastroparesis and is not recommended in patients with gastroparesis.

⁴ is not recommended as first-line therapy for patients who have inadequate glycemic control on diet and exercise because of the uncertain relevance of the rat thyroid C-cell tumor findings to humans

⁵ should not be used with other products containing the active ingredient exenatide.

⁶ should not be coadministered with other liraglutide-containing products.

Definitions

“**Insulin**” is a hormone produced by the beta cells in the pancreas. It facilitates the entry of glucose into cells for energy production. Insufficient insulin leads to a high blood glucose level, a condition known as diabetes. Oral and injectable medications can help increase insulin production, enhance the body's sensitivity to insulin, and decrease blood sugar levels.

“**Incretin Mimetics**” are a class of medications that imitate the function of incretins, natural hormones in the body that help lower post-meal blood sugar levels. These medications, also known as glucagon-like peptide-1 (GLP-1) receptor agonists, slow digestion, prevent the liver from making too much glucose, and help the pancreas produce more insulin when needed.

“**Type 1 Diabetes**” is an autoimmune condition where the pancreas's beta cells are unable to produce sufficient insulin, leading to elevated blood glucose levels. Patients with Type 1 diabetes often require daily insulin injections to regulate their blood glucose.

“**Type 2 Diabetes**” is a metabolic disorder characterized by insufficient insulin production or insulin resistance in the body cells. It is more common than Type 1 and often managed through lifestyle changes, non-insulin medications, and, if necessary, insulin injections.

“**Blood Glucose**” is the primary sugar found in the bloodstream, serving as the body's main energy source. Chronic high blood glucose levels can lead to complications from blood vessel damage.

“**Hemoglobin A1c (HbA1c)**” is a blood test that measures average blood glucose levels over the past 2 to 3 months. It is also referred to as the A1C or glycosylated hemoglobin test. Various factors, such as age, ethnicity, certain conditions, and pregnancy, can affect A1C results.

“**Hyperglycemia**” is the medical term for high blood glucose. It can occur due to inadequate fasting (fasting hyperglycemia) or post-meal (postprandial hyperglycemia).

“**Hypoglycemia**” is a condition characterized by abnormally low blood glucose, typically less than 70 mg/dL. Symptoms include hunger, nervousness, dizziness, confusion, and in severe cases, unconsciousness. Immediate treatment involves consuming carbohydrate-rich foods or using injectable glucagon for severe cases.

“**Cardiovascular Disease**” refers to a class of diseases involving the heart and blood vessels. It is a common complication in individuals with long-term Type 2 diabetes and is often a key consideration when selecting an appropriate diabetes medication.

Medical Necessity Criteria for Authorization

The Plan considers **incretin mimetics antidiabetics** medically necessary when **ALL** the following criteria are met:

1. The medication is age-appropriate for the member as per the FDA-approved indications, specifically:
 - a. For Bydureon, Bydureon BCise, Trulicity, and Victoza, the member must be 10 years of age or older.
 - b. For other incretin mimetics, the member must be 18 years of age or older.
2. The member has a diagnosis of type 2 diabetes mellitus based on at least **ONE** of the following diagnostic criteria:
 - a. A fasting glucose level of greater than 126 mg/dL; **and/or**
 - b. A 2-hour glucose tolerance test result of greater than 200 mg/dL.; **and/or**

- c. Hemoglobin A1c $\geq 6.5\%$; **and/or**
 - d. Symptoms of hyperglycemia plus a random plasma glucose ≥ 200 mg/dL; **AND**
NOTE: Abnormal results must be confirmed on a second occasion unless they are unequivocal.
3. The member has **ONE** of the following:
- a. is unable to use, or has adequately tried and failed metformin at a minimum dose of 1500 milligrams daily for 90 days[#]; **or**
 - b. requires combination therapy **AND** has an A1c (hemoglobin A1c) of 7.5 percent or greater; **or**
 - c. has established cardiovascular disease, **AND** the request is for **ONE** of the following:
 - i. Ozempic (semaglutide); **or**
 - ii. Trulicity (dulaglutide); **or**
 - iii. Victoza (liraglutide); **or**
 - d. has multiple cardiovascular risk factors, **AND** the request is for Trulicity (dulaglutide); **or**
 - e. has been receiving the requested drug for at least 3 months, **AND** one of the following:
 - i. has demonstrated a reduction in A1c (hemoglobin A1c) since starting this therapy; **or**
 - ii. has established cardiovascular disease, **AND** the request is for **ONE** of the following:
 - 1. Ozempic (semaglutide); **or**
 - 2. Trulicity (dulaglutide); **or**
 - 3. Victoza (liraglutide); **or**
 - iii. has multiple cardiovascular risk factors, **AND** the request is for Trulicity (dulaglutide).

If the above prior authorization criteria are met, the requested drug will be approved for 12 months.

Experimental or Investigational / Not Medically Necessary

Incretin mimetics antidiabetics for any other indication is considered not medically necessary by the Plan, as it is deemed to be experimental, investigational, or unproven.

Appendix

Metformin in Type 2 Diabetes

[#]The recommendation for a minimum effective dose of 1500 milligrams daily of metformin is derived from clinical findings which show that this dosage effectively regulates both fasting blood glucose and glycosylated hemoglobin levels - crucial markers of long-term glucose control.

Metformin functions by decreasing glucose production in the liver and enhancing insulin sensitivity in both the liver and peripheral tissues. This enhancement in turn improves the uptake and usage of glucose. The efficacy of metformin is dose-dependent, with the most clinically meaningful responses usually not seen at doses below 1500 milligrams per day.

The strategy of starting metformin treatment at a lower dose and gradually stepping up the dose over time (typically over a period of weeks) is useful in reducing the occurrence and intensity of gastrointestinal side effects. These side effects are the most common adverse reactions linked with metformin therapy and can include symptoms such as nausea, vomiting, diarrhea, abdominal cramping, and bloating. Commencing therapy at a lower dose (for instance, 500 mg twice daily or 850 mg once daily) and progressively increasing the dosage over time allows patients to better tolerate metformin. This results in improved medication adherence and ultimately, superior glycemic control.

- For patients who need further glycemic control beyond what can be achieved with a total daily dose of 2000 mg, the dosage of metformin can be boosted up to a maximum of 2550 mg per day, given in divided doses. This upper limit is based on clinical trials that show doses above this level do not provide an additional glycemic control benefit but may increase the risk of adverse effects.
- For pediatric patients, the same principle of beginning at a lower dose and incrementally increasing applies, with a maximum limit of 2000 mg per day given in divided doses.

Table 2: Metformin in Diabetes Treatment

Clinical Consideration	Recommendation
Understanding Metformin	Metformin is frequently used due to its efficacy, cost-effectiveness, and cardiovascular benefits. However, GI adverse effects are common and could limit its use.
Managing Patient Expectations	Inform patients that side effects are often temporary and encourage patience during the dosage adjustment period.

Choosing Metformin Type	Extended-release (ER) versions are generally preferred due to fewer daily doses and reduced discontinuation rates. However, consider cost and insurance coverage.
Initiating Metformin	Start at a low dose (500 mg for ER/IR or 250 mg for those with GI intolerance history). Consider using liquid formulations or single-ingredient products for easier titration.
Dosage Increase	Gradually up titrate dosage every one to two weeks. Decrease back to the last tolerated dose if GI symptoms occur, and then try to increase more slowly.
Dosage Titration (Adults)	Dosage may be increased by 500 mg at weekly intervals until desired response or a maximum dosage is reached (2.55 g daily for immediate-release, 2.5 g for certain extended-release tablets, and 2 g for others).
Dosage Titration (Children 10–16 years)	Dosage may be increased by 500 mg at weekly intervals until desired response or a maximum dosage of 2 g daily in 2 divided doses is reached.
Maximizing Tolerance	Advise patients to take metformin during or immediately after meals. Consider dividing doses if tolerability is an issue.
Addressing Complaints	Manage common complaints such as diarrhea and nausea by temporary dose reduction. If odor of the drug is a problem, consider switching brands or generics.
GI Tolerance Issues	If GI symptoms persist, consider using 5-HT ₃ -antagonists like ondansetron or treating underlying <i>Helicobacter pylori</i> infection.
Insufficient Dose Tolerance	Even lower doses can improve glucose control. Consider combining metformin with another agent if necessary.
Interrupted Therapy	If therapy is interrupted, consider a full titration when restarting. Lower the dose and increase slowly if adverse effects occur upon restarting.

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