Clinical Policy: Dipeptidyl Peptidase-4 (DPP-4) Inhibitors
Reference Number: CP.PST.18
Effective Date: 03.01.18
Last Review Date: 02.18
Line of Business: Medicaid

See Important Reminder at the end of this policy for important regulatory and legal information.

Description
The following are dipeptidyl peptidase-4 (DPP-4) inhibitors requiring step therapy: alogliptin (Nesina®), alogliptin/metformin (Kazano®), alogliptin/pioglitazone (Oseni®), linagliptin (Tradjenta®), linagliptin/empagliflozin (Glyxambi®), linagliptin/metformin (Jentadueto®, Jentadueto® XR), saxagliptin (Onglyza®), saxagliptin/metformin (Kombiglyze® XR), sitagliptin (Januvia®), and sitagliptin/metformin (Janumet®, Janumet® XR).

FDA Approved Indication(s)
DPP-4 inhibitors are indicated as adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus.

Limitation(s) of use:
- DPP-4 inhibitors should not be used in patients with type 1 diabetes or for the treatment of diabetic ketoacidosis.
- DPP-4 inhibitors have not been studied in patients with a history of pancreatitis.

Policy/Criteria
Provider must submit documentation (including such as office chart notes, lab results or other clinical information) supporting that member has met all approval criteria.

It is the policy of health plans affiliated with Centene Corporation® that DPP-4 inhibitors are medically necessary when the following criteria are met:

I. Initial Approval Criteria
A. Step Therapy for DPP-4 Inhibitors (must meet all):
1. Age ≥ 18 years;
2. Member meets one of the following (a or b):
   a. Previous use of ≥ 3 consecutive months of metformin, unless contraindicated or clinically significant adverse effects are experienced;
   b. HbA1c drawn within the past 3 months is ≥ 9%, and concurrent use of metformin unless contraindicated or clinically significant adverse effects are experienced;
3. If request is for a non-preferred DPP-4 inhibitor, member meets one of the following (a or b):
   a. For Glyxambi: Previous use of ≥ 3 consecutive months of a preferred DPP-4 inhibitor OR a preferred sodium-glucose co-transporter 2 (SGLT2) inhibitor, unless all are contraindicated or clinically significant adverse effects are experienced;
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b. For all other non-preferred DPP-4 inhibitors: Previous use of ≥ 3 consecutive months of a preferred DPP-4 inhibitor, unless contraindicated or clinically significant adverse effects are experienced;

4. Dose does not exceed the FDA approved maximum recommended dose.

Approval duration: 12 months

B. Other diagnoses/indications: Not applicable

II. Continued Therapy
A. Step Therapy for DPP-4 Inhibitors (must meet all):
   1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
   2. If request is for a dose increase, new dose does not exceed the FDA approved maximum recommended dose.

Approval duration: 12 months

B. Other diagnoses/indications: Not applicable

III. Diagnoses/Indications for which coverage is NOT authorized: Not applicable

IV. Appendices/General Information

Appendix A: Abbreviation/Acronym Key
AACE: American Association of Clinical Endocrinologists
ACE: American College of Endocrinology
ADA: American Diabetes Association
DPP-4: dipeptidyl peptidase-4
FDA: Food and Drug Administration
GLP-1: glucagon-like peptide-1
HbA1c: glycated hemoglobin
SGLT2: sodium-glucose co-transporter 2

Appendix B: Therapeutic Alternatives
This table provides a listing of preferred alternative therapy recommended in the approval criteria. The drugs listed here may not be a formulary agent for all relevant lines of business and may require prior authorization.

<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Dosing Regimen</th>
<th>Dose Limit/ Maximum Dose</th>
</tr>
</thead>
</table>
| metformin (Fortamet®, Glucophage®, Glucophage® XR, Glumetza®) | Regular-release (Glucophage): 500 mg PO BID or 850 mg PO QD; increase as needed in increments of 500 mg/week or 850 mg every 2 weeks  
  Extended-release:  
  • Fortamet, Glumetza: 1000 mg PO QD; increase as needed in increments of 500 mg/week  
  • Glucophage XR: 500 mg PO QD; increase as needed in increments of 500 mg/week | Regular-release: 2550 mg/day  
  Extended-release  
  • Fortamet: 2500 mg/day  
  • Glucophage XR, Glumetza: 2000 mg/day |
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Therapeutic alternatives are listed as Brand name® (generic) when the drug is available by brand name only and generic (Brand name®) when the drug is available by both brand and generic.

Appendix C: General Information

- A double-blind, placebo-controlled dose-response trial by Garber et al. found the maximal efficacy of metformin to occur at doses of 2000 mg. However, the difference in adjusted mean change in HbA1c between the 1500 and 2000 mg doses was 0.3%, suggesting that the improvement in glycemic control provided by the additional 500 mg may be insufficient when HbA1c is > 7%.

- Per the 2018 American Diabetes Association (ADA) and American Association of Clinical Endocrinologists and 2017 American College of Endocrinology (AACE/ACE) guidelines:
  - Metformin is recommended for all patients with type 2 diabetes. Monotherapy is recommended for most patients; however:
    - Starting with dual therapy (i.e., metformin plus another agent, such as a sulfonylurea, thiazolidinedione, DPP-4 inhibitor, SGLT2 inhibitor, glucagon-like peptide 1 [GLP-1] receptor agonist, or basal insulin) may be considered for patients with baseline HbA1c ≥ 9% per the ADA (≥ 7.5% per the AACE/ACE).
    - Starting with combination injectable therapy (i.e., with GLP-1 receptor agonist or insulin) may be considered for patients with baseline HbA1c ≥ 10% per the ADA (≥ 9% if symptoms are present per the AACE/ACE).
  - If the target HbA1c is not achieved after approximately 3 months of monotherapy, dual therapy should be initiated. If dual therapy is inadequate after 3 months, triple therapy should be initiated. Finally, if triple therapy fails to bring a patient to goal, combination injectable therapy should be initiated. Each non-insulin agent added to initial therapy can lower HbA1c by 0.9-1.1%.

V. Dosage and Administration

<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Dosing Regimen</th>
<th>Maximum Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glyxambi (linagliptin/empagliflozin)</td>
<td>5/10 mg PO once daily</td>
<td>5/25 mg/day</td>
</tr>
<tr>
<td>Janumet (sitagliptin/metformin)</td>
<td>Individualized dose PO twice daily</td>
<td>100/2000 mg/day</td>
</tr>
<tr>
<td>Janumet XR (sitagliptin/metformin)</td>
<td>Individualized dose PO once daily</td>
<td>100/2000 mg/day</td>
</tr>
<tr>
<td>Januvia (sitagliptin)</td>
<td>100 mg PO once daily</td>
<td>100 mg/day</td>
</tr>
<tr>
<td>Jentadueto (linagliptin/metformin)</td>
<td>Individualized dose PO twice daily</td>
<td>5/2000 mg/day</td>
</tr>
<tr>
<td>Jentadueto XR (linagliptin/metformin)</td>
<td>Individualized dose PO once daily</td>
<td>5/2000 mg/day</td>
</tr>
<tr>
<td>Kazano (alogliptin/metformin)</td>
<td>Individualized dose PO twice daily</td>
<td>25/2000 mg/day</td>
</tr>
<tr>
<td>Kombiglyze XR (saxagliptin/metformin)</td>
<td>Individualized dose PO once daily</td>
<td>5/2000 mg/day</td>
</tr>
<tr>
<td>Nesina (alogliptin)</td>
<td>25 mg PO once daily</td>
<td>25 mg/day</td>
</tr>
<tr>
<td>Onglyza (saxagliptin)</td>
<td>2.5 or 5 mg PO once daily</td>
<td>5 mg/day</td>
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</table>
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<thead>
<tr>
<th>Drug Name</th>
<th>Dosing Regimen</th>
<th>Maximum Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oseni (alogliptin/pioglitazone)</td>
<td>Individualized dose PO once daily</td>
<td>25/45 mg/day</td>
</tr>
<tr>
<td>Tradjenta (linagliptin)</td>
<td>5 mg PO once daily</td>
<td>5 mg/day</td>
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### VI. Product Availability

<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Availability</th>
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<tbody>
<tr>
<td>Glyxambi (linagliptin/empagliflozin)</td>
<td>Tablets: 5/10 mg, 5/25 mg</td>
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<tr>
<td>Janumet (sitagliptin/metformin)</td>
<td>Tablets: 50/500 mg, 50/1000 mg</td>
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<tr>
<td>Janumet XR (sitagliptin/metformin)</td>
<td>Tablets: 100/1000 mg, 50/500 mg, 50/1000 mg</td>
</tr>
<tr>
<td>Januvia (sitagliptin)</td>
<td>Tablets: 25 mg, 50 mg, 100 mg</td>
</tr>
<tr>
<td>Jentadueto (linagliptin/metformin)</td>
<td>Tablets: 2.5/500 mg, 2.5/850 mg, 2.5/1000 mg</td>
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<tr>
<td>Jentadueto XR (linagliptin/metformin)</td>
<td>Tablets: 5/1000 mg, 2.5/1000 mg</td>
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<tr>
<td>Kazano (alogliptin/metformin)</td>
<td>Tablets: 12.5/500 mg, 12.5/1000 mg</td>
</tr>
<tr>
<td>Kombiglyze XR (saxagliptin/metformin)</td>
<td>Tablets: 5/500 mg, 5/1000 mg, 2.5/1000 mg</td>
</tr>
<tr>
<td>Nesina (alogliptin)</td>
<td>Tablets: 6.25 mg, 12.5 mg, 25 mg</td>
</tr>
<tr>
<td>Onglyza (saxagliptin)</td>
<td>Tablets: 2.5 mg, 5 mg</td>
</tr>
<tr>
<td>Oseni (alogliptin/pioglitazone)</td>
<td>Tablets: 12.5/15 mg, 12.5/30 mg, 12.5/45 mg, 25/15 mg, 25/30 mg, 25/45 mg</td>
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<tr>
<td>Tradjenta (linagliptin)</td>
<td>Tablets: 5 mg</td>
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### VII. References

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**Reviews, Revisions, and Approvals**

<table>
<thead>
<tr>
<th>Reviews, Revisions, and Approvals</th>
<th>Date</th>
<th>P&amp;T Approval Date</th>
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<tr>
<td>Policy created.</td>
<td>11.07.17</td>
<td>02.18</td>
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</table>

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**Important Reminder**

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. The Health Plan makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved. “Health Plan” means a health plan that has adopted this clinical policy and that is operated or administered, in whole or in part, by Centene Management Company, LLC, or any of such health plan’s affiliates, as applicable.

The purpose of this clinical policy is to provide a guide to medical necessity, which is a component of the guidelines used to assist in making coverage decisions and administering benefits. It does not constitute a contract or guarantee regarding payment or results. Coverage decisions and the administration of benefits are subject to all terms, conditions, exclusions and limitations of the coverage documents (e.g., evidence of coverage, certificate of coverage, policy, contract of insurance, etc.), as well as to state and federal requirements and applicable Health Plan-level administrative policies and procedures.

This clinical policy is effective as of the date determined by the Health Plan. The date of posting may not be the effective date of this clinical policy. This clinical policy may be subject to applicable legal and regulatory requirements relating to provider notification. If there is a
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This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members. This clinical policy is not intended to recommend treatment for members. Members should consult with their treating physician in connection with diagnosis and treatment decisions.

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