Clinical Policy: Sodium-Glucose Co-Transporter 2 (SGLT2) Inhibitors

Reference Number: HIM.PA.91
Effective Date: 01.01.15
Last Review Date: 02.20
Line of Business: HIM

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

Description
The following agents contain a sodium-glucose co-transporter 2 (SGLT2) inhibitor and require prior authorization: canagliflozin (Invokana®), canagliflozin/metformin (Invokamet®), dapagliflozin (Farxiga®), dapagliflozin/metformin (Xigduo® XR), empagliflozin (Jardiance®), empagliflozin/linagliptin (Glyxambi®), empagliflozin/linagliptin/metformin (Trijardy™ XR), and empagliflozin/metformin (Synjardy®).

FDA Approved Indication(s)
SGLT2 inhibitors are indicated as adjunct to diet and exercise to improve glycemic control in adults with type 2 diabetes mellitus.

Dapagliflozin-, canagliflozin-, and empagliflozin-containing products are also indicated in adult patients with type 2 diabetes mellitus and established cardiovascular disease (or multiple cardiovascular risk factors [dapagliflozin only]) to:
- Reduce the risk of hospitalization for heart failure (HF) (dapagliflozin)
- Reduce the risk of major adverse cardiovascular events: cardiovascular death, nonfatal myocardial infarction, and nonfatal stroke (canagliflozin)
- Reduce the risk of cardiovascular death (empagliflozin)

Canagliflozin-containing products are additionally indicated to reduce the risk of end-stage kidney disease, doubling of serum creatinine, cardiovascular death, and hospitalization for HF in adults with type 2 diabetes mellitus and diabetic nephropathy with albuminuria > 300 mg/day.

Limitation(s) of use: SGLT2 inhibitors should not be used in patients with type 1 diabetes or for the treatment of diabetic ketoacidosis.

Policy/Criteria
Provider must submit documentation (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 SGLT2 inhibitors are medically necessary when the following criteria are met:

I. Initial Approval Criteria
   A. Type 2 Diabetes Mellitus (must meet all):
      1. Diagnosis of type 2 diabetes mellitus;
      2. Age ≥ 18 years;
3. Member meets one of the following (a or b):
   a. Failure of $\geq 3$ consecutive months of metformin, unless contraindicated or clinically significant adverse effects are experienced;
   b. HbA1c drawn within the past 3 months is $\geq 8.5\%$, and concurrent use of metformin unless contraindicated or clinically significant adverse effects are experienced;
4. Request meets one of the following (a, b, or c):
   a. Failure of $\geq 3$ consecutive months of Steglatro or Segluromet, unless both are contraindicated or clinically significant adverse effects are experienced;
   b. Member has established cardiovascular disease (e.g., ASCVD or HF) or diabetic nephropathy, and request is for Jardiance, Farxiga, or Invokana, unless contraindicated or clinically significant adverse effects are experienced;
   c. Member has multiple risk factors for cardiovascular disease (see Appendix D), and request is for Farxiga or Invokana, unless contraindicated or clinically significant adverse effects are experienced;
5. Dose does not exceed the FDA-approved maximum recommended dose (see Section V).

**Approval duration: 12 months**

**B. Other diagnoses/indications**
1. Refer to the off-label use policy for the relevant line of business if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): HIM.PHAR.21 for health insurance marketplace.

**II. Continued Therapy**

**A. Type 2 Diabetes Mellitus (must meet all):**
1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
2. Member is responding positively to therapy;
3. If request is for a dose increase, new dose does not exceed the FDA-approved maximum recommended dose (see Section V).

**Approval duration: 12 months**

**B. Other diagnoses/indications (must meet 1 or 2):**
1. Currently receiving medication via Centene benefit and documentation supports positive response to therapy.

**Approval duration: Duration of request or 12 months (whichever is less); or**
2. Refer to the off-label use policy for the relevant line of business if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized): HIM.PHAR.21 for health insurance marketplace.

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

**A. Non-FDA approved indications, which are not addressed in this policy, unless there is sufficient documentation of efficacy and safety according to the off label use policies – HIM.PHAR.21 for health insurance marketplace or evidence of coverage documents.**
IV. Appendices/General Information

Appendix A: Abbreviation/Acronym Key

AACE: American Association of Clinical Endocrinologists
ACE: American College of Endocrinology
ADA: American Diabetes Association
ASCVD: atherosclerotic cardiovascular disease
DPP-4: dipeptidyl peptidase-4
ER: extended-release
FDA: Food and Drug Administration
GLP-1: glucagon-like peptide-1
HbA1c: glycated hemoglobin
HF: heart failure
IR: immediate-release
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>
<tbody>
<tr>
<td>metformin (Fortamet®, Glucophage®, Glucophage® XR, Glumetza®)</td>
<td>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: 1,000 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</td>
<td>Regular-release: 2550 mg/day Extended-release: 2,000 mg/day</td>
</tr>
<tr>
<td>Steglatro™ (ertugliflozin)</td>
<td>5 mg PO QD</td>
<td>15 mg/day</td>
</tr>
<tr>
<td>Segluromet™ (ertugliflozin/metformin)</td>
<td>Individualized dose PO BID</td>
<td>15/2,000 mg/day</td>
</tr>
</tbody>
</table>

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: Contraindications/Boxed Warnings

- Contraindication(s):
  - History of serious hypersensitivity reaction to the requested drug product
  - Moderate to severe renal impairment*, end-stage renal disease, or dialysis
    *Minimum degree of renal impairment varies per agent; refer to individual prescribing information
  - Metabolic acidosis, including diabetic ketoacidosis (metformin-containing products only)
- Boxed warning(s): lactic acidosis (metformin-containing products only), lower limb amputation (Invokana only)
Appendix D: 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 2,000 mg. However, the difference in adjusted mean change in HbA1c between the 1,500 and 2,000 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 2019 American Diabetes Association (ADA) and 2019 American Association of Clinical Endocrinologists and 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, dipeptidyl peptidase-4 [DPP-4] inhibitor, SGLT2 inhibitor, glucagon-like peptide 1 [GLP-1] receptor agonist, or basal insulin) may be considered for patients with baseline HbA1c ≥ 1.5% above their target per the ADA (≥ 7.5% per the AACE/ACE). According to the ADA, a reasonable HbA1c target for many non-pregnant adults is ≤ 7% (≤ 6.5% 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% or ≥ 2% above their target 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 0.7-1%.

- Although Invokana is currently the only SGLT2 inhibitor with a labeled indication for diabetic nephropathy, Farxiga and Jardiance have also demonstrated renal protective effects. The 2019 ADA guidelines recommend SGLT2 inhibitors be considered when treating type 2 diabetic patients with renal concerns, noting that Farxiga, Jardiance, and Invokana all confer renal benefit, with no preference for one over the other
  - Farxiga DECLARE-TIMI 58: The cardiorenal secondary composite outcome (sustained decline of at least 40% in eGFR to less than 60 mL/min/1.73 m2, end stage renal disease (ESRD), or death from renal or cardiovascular causes) was significantly reduced with Farxiga compared to placebo (HR 0.76, 95% CI 0.67-0.87; p < 0.0001); excluding death from cardiovascular causes, the HR for the renal-specific outcome was 0.53 (95% CI 0.43-0.66; p < 0.0001). There was a 46% reduction in sustained decline in eGFR by at least 40% to less than 60 mL/min/1.73 m2 (120 [1.4% vs 221 [2.6%]]; HR 0.54 [95% CI 0.43-0.67]; p < 0.0001). The risk of ESRD or renal death was also lower in the Farxiga group than in the placebo group (11 [0.1%] vs 27 [0.3%]; HR 0.41 [95% CI 0.20-0.82]; p = 0.012).
  - Jardiance EMPA-REG: Analysis of secondary outcomes yielded a reduction of risk for incident of or worsening nephropathy (HR 0.61 [95% CI 0.53-0.70]), progression to urine albumin to creatinine ratio (UACR) > 300 mg/g (HR 0.62 [95% CI 0.54-0.72]), composite consisting doubling of serum creatinine, initiation of renal replacement therapy, and death from ESRD (HR 0.54 [95% CI 0.40-0.75]).
Examples of cardiovascular risk factors may include but are not limited to: dyslipidemia, hypertension, obesity/overweight, a family history of premature coronary disease, and smoking.

According to the ADA, ASCVD includes coronary heart disease, cerebrovascular disease, or peripheral arterial disease presumed to be of atherosclerotic origin.

Although Farxiga and Invokana are the only SGLT2 inhibitors with labeled indications for reducing the risk of HHF, Jardiance has also been shown to reduce the risk of HHF. The 2019 ADA guidelines acknowledge Farxiga along with Jardiance and Invokana as agents which reduce the risk of HHF, without a preference for one agent over the other. Any of the three can be used in T2DM patients with established HF; however, the guidelines recommend only Jardiance or Invokana for patients with established ASCVD.

- Jardiance EMPA-REG Outcome, patients with established ASCVD: The primary outcome (composite of death from CV causes, nonfatal MI, or non-fatal stroke) was reduced with Jardiance compared to placebo (HR 0.86, 95% CI 0.74 – 0.99; p = 0.04). Analysis of secondary outcomes yielded a reduction in hospitalization for heart failure when treated with Jardiance compared to placebo (HR 0.65, 95% CI 0.50 – 0.85; p = 0.002).

- Invokana CANVAS Program, patients with established ASCVD or multiple ASCVD risk factors: The primary outcome (composite of death from CV causes, nonfatal MI or nonfatal stroke) was reduced with Invokana compared to placebo (HR 0.86, 95% CI 0.75 – 0.97; p = 0.02). Analysis of secondary outcomes yielded a reduction in hospitalization for heart failure when treated with Invokana compared to placebo (HR 0.67, 95% CI 0.52 – 0.87).

### V. Dosage and Administration

<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Dosing Regimen</th>
<th>Maximum Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farxiga (dapagliflozin)</td>
<td>5 mg PO QD</td>
<td>10 mg/day</td>
</tr>
<tr>
<td>Glyxambi (empagliflozin/linagliptin)</td>
<td>One 10/5 mg tablet PO QD</td>
<td>25/5 mg/day</td>
</tr>
<tr>
<td>Invokamet (canagliflozin/metformin)</td>
<td>One 50/500 mg tablet PO BID</td>
<td>300/2,000 mg/day</td>
</tr>
<tr>
<td>Invokana (canagliflozin)</td>
<td>100 mg PO QD</td>
<td>300 mg/day</td>
</tr>
<tr>
<td>Jardiance (empagliflozin)</td>
<td>10 mg PO QD</td>
<td>25 mg/day</td>
</tr>
<tr>
<td>Synjardy (empagliflozin/metformin)</td>
<td>Individualized dose PO BID</td>
<td>25/2,000 mg/day</td>
</tr>
<tr>
<td>Trijardy XR (empagliflozin/linagliptin/metformin)</td>
<td>Individualized dose PO QD</td>
<td>25/5/2,000 mg/day</td>
</tr>
<tr>
<td>Xigduo XR (dapagliflozin/metformin)</td>
<td>Individualized dose PO QD</td>
<td>10/2,000 mg/day</td>
</tr>
</tbody>
</table>

### VI. Product Availability
### Drug Name | Availability
--- | ---
Farxiga (dapagliflozin) | Tablets: 5 mg, 10 mg
Glyxambi (empagliflozin/linagliptin) | Tablets: 10/5 mg, 25/5 mg
Invokamet (canagliflozin/metformin) | Tablets: 50/500 mg, 50/1,000 mg, 150/500 mg, 150/1,000 mg
Invokana (canagliflozin) | Tablets: 100 mg, 300 mg
Jardiance (empagliflozin) | Tablets: 10 mg, 25 mg
Synjardy (empagliflozin/metformin) | Tablets: 5/500 mg, 5/1,000 mg, 12.5/500 mg, 12.5/1,000 mg
Trijardy XR (empagliflozin/linagliptin/metformin) | Tablets: 5/2.5/1,000 mg, 10/5/1,000 mg, 12.5/2.5/1,000 mg, 25/5/1,000 mg
Xigduo XR (dapagliflozin/metformin) | Tablets: 2.5/1,000 mg, 5/500 mg, 5/1,000 mg, 10/500 mg, 10/1,000 mg

### VII. References


<table>
<thead>
<tr>
<th>Reviews, Revisions, and Approvals</th>
<th>Date</th>
<th>P&amp;T Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changed guidelines to new format. Changed wording from requiring trial and failure of 2,000mg of metformin to maximum tolerated dose.</td>
<td>02.16</td>
<td>02.16</td>
</tr>
<tr>
<td>Renamed criteria from Invokana to SGLT2 inhibitors to reflect the added variety of products on the formulary and slight reformatting of the template. Clinical changes made to criteria: - Added FDA max dose criteria for each product. - For initial, modified trial of metformin to require doses at least 2,000 mg/day for 3 months (rather than 6 weeks) per ADA guidelines and adjusted approval duration to 6 months to allow for efficacy assessment. - For re-auth, added specific efficacy criteria; removed requirement for adherence.</td>
<td>12.16</td>
<td>02.17</td>
</tr>
<tr>
<td>Added age restriction as safety and efficacy have not been established in pediatric populations.</td>
<td>08.18.17</td>
<td>11.17</td>
</tr>
<tr>
<td>Removed requirement for diagnosis Removed requirement for A1C submission Changed requirement for Metformin trial to be for 3 months without mandating a specific dose Allow first line use for members with A1C &gt;= 9% References reviewed and updated</td>
<td>11.07.17</td>
<td>02.18</td>
</tr>
<tr>
<td>No significant changes: added requirement for the trial of Tradjenta for Glyxambi to align criteria with the requirement in the DPP-4 policy</td>
<td>07.09.18</td>
<td></td>
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<tr>
<td>Per SDC: modified to reflect that all SGLT2 inhibitors now require PA (instead of ST); added diagnosis; removed re-direction to Tradjenta for Glyxambi; added re-direction to Steglatro/Segluromet for all agents (with exception for members with ASCVD requesting Jardiance).</td>
<td>09.19.18</td>
<td></td>
</tr>
<tr>
<td>1Q 2019 annual review: removed Steglatro since it requires ST rather than PA; added exception for members with ASCVD requesting Invokana per updated FDA indication; modified minimum A1c</td>
<td>10.29.18</td>
<td>02.19</td>
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</table>
## Reviews, Revisions, and Approvals

<table>
<thead>
<tr>
<th>Date</th>
<th>P&amp;T Approval Date</th>
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<tbody>
<tr>
<td>10.23.19</td>
<td></td>
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<tr>
<td>12.03.19</td>
<td>02.20</td>
</tr>
</tbody>
</table>

- related for concurrent use of metformin from 9% to 8.5% based on 2019 ADA guidelines; references reviewed and updated.
- Per SDC, removed Segluromet as PA is no longer required.
- 1Q 2020 annual review: criteria added for Invokana’s new FDA indication: diabetic nephropathy; criteria added for Farxiga’s new FDA indication: reduction in risk of hospitalization due to HF in patients with established cardiovascular disease or with multiple cardiovascular risk factors; criteria added for Farxiga/Jardiance for diabetic nephropathy and Invokana/Jardiance for HF as supported by ADA guidelines and published data; criteria added for Invokana for multiple cardiovascular risk factors as supported by CANVAS Program trials; clarified that established cardiovascular disease can mean ASCVD or HF; added Trijardy XR with re-direction to Steglotaro or Segluromet per SDC; references reviewed and updated.

### 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.

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