

## **Clinical Policy: Carbidopa/Levodopa ER Capsules (Rytary), Enteral Suspension (Duopa), IR Tablets (Dhivy)**

Reference Number: CP.PMN.238

Effective Date: 09.01.20

Last Review Date: 02.22

Line of Business: Commercial, HIM, Medicaid

[Revision Log](#)

See [Important Reminder](#) at the end of this policy for important regulatory and legal information.

### **Description**

Carbidopa/levodopa extended-release capsules (Rytary<sup>®</sup>), enteral suspension (Duopa<sup>®</sup>) and immediate-release tablets (Dhivy<sup>®</sup>) are combinations of carbidopa (an aromatic amino acid decarboxylation inhibitor) and levodopa (an aromatic amino acid).

### **FDA Approved Indication(s)**

Rytary and Dhivy are indicated for the treatment of Parkinson's disease (PD), post-encephalitic parkinsonism, and parkinsonism that may follow carbon monoxide intoxication or manganese intoxication.

Duopa is indicated for the treatment of motor fluctuations in patients with advanced PD.

### **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<sup>®</sup> that Rytary, Duopa and Dhivy are **medically necessary** when the following criteria are met:

#### **I. Initial Approval Criteria**

##### **A. Request for Rytary (must meet all):**

1. Diagnosis of PD or parkinsonism;
2. Request is for Rytary;
3. Age  $\geq$  18 years;
4. Documented intolerance or contraindication\* to carbidopa-levodopa sustained release tablets (Sinemet<sup>®</sup> CR) that would not apply to Rytary;  
*\*Examples of acceptable intolerance or contraindications include inability to swallow pills or intolerance or contraindications to excipients in carbidopa-levodopa sustained released tablets. Note: Failure of carbidopa-levodopa sustained released tablets is NOT an acceptable rationale for use of Rytary over Sinemet CR.*
5. Dose does not exceed carbidopa 612.5 mg/levodopa 2,450 mg per day.

##### **Approval duration:**

**Medicaid/HIM** – 12 months

**Commercial** – 12 months or duration of request, whichever is less

##### **B. Request for Duopa (must meet all):**

1. Diagnosis of PD;

2. Request is for Duopa;
3. Prescribed by or in consultation with neurologist;
4. Age  $\geq$  18 years;
5. Demonstrated a clear responsiveness to treatment with levodopa;
6. Member is experiencing motor fluctuations for 3 hours or more of "off" time per waking day (*see Appendix D*);
7. Failure of at least two anti-Parkinson agents from different therapeutic classes, unless clinically significant adverse effects are experienced or all are contraindicated: \*
  - a. MAO-B inhibitor: rasagiline;
  - b. COMT inhibitor: entacapone (Comtan<sup>®</sup>/Stalevo<sup>®</sup>), tolcapone;
  - c. Dopamine agonist: ropinirole/ropinirole ER, pramipexole/pramipexole ER;*\*Prior authorization may be required for the above agents*
8. Placement of a procedurally-placed tube has been completed or is planned;
9. Dose does not exceed 2,000 mg of the levodopa component (one cassette) per day.

**Approval duration:**

**Medicaid/HIM** – 12 months

**Commercial** – 12 months or duration of request, whichever is less

**C. Request for Dhivy (must meet all):**

1. Diagnosis of PD or parkinsonism;
2. Request is for Dhivy;
3. Age  $\geq$  18 years;
4. Member must use generic carbidopa-levodopa, unless contraindicated or clinically significant adverse effects are experienced;
5. Dose does not exceed carbidopa 200 mg/levodopa 800 mg per day.

**Approval duration:**

**Medicaid/HIM** – 12 months

**Commercial** – 12 months or duration of request, whichever is less

**D. 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): CP.CPA.09 for commercial, HIM.PA.154 for health insurance marketplace, and CP.PMN.53 for Medicaid.

**II. Continued Therapy**

**A. Request for Rytary (must meet all):**

1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
2. Request is for Rytary;
3. Member is responding positively to therapy;
4. If request is for a dose increase, new dose does not exceed carbidopa 612.5 mg/levodopa 2,450 mg per day.

**Approval duration:**

**Medicaid/HIM** – 12 months

**Commercial** – 12 months or duration of request, whichever is less

**B. Request for Duopa (must meet all):**

1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
2. Request is for Duopa;
3. Member is responding positively to therapy;
4. If request is for a dose increase, new dose does not exceed 2,000 mg of the levodopa component (one cassette) per day.

**Approval duration:**

**Medicaid/HIM** – 12 months

**Commercial** – 12 months or duration of request, whichever is less

**C. Request for Dhivy (must meet all):**

1. Currently receiving medication via Centene benefit or member has previously met initial approval criteria;
2. Request is for Dhivy;
3. Member is responding positively to therapy;
4. If request is for a dose increase, new dose does not exceed carbidopa 200 mg/levodopa 800 mg per day.

**Approval duration:**

**Medicaid/HIM** – 12 months

**Commercial** – 12 months or duration of request, whichever is less

**D. 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): CP.CPA.09 for commercial, HIM.PA.154 for health insurance marketplace, and CP.PMN.53 for Medicaid.

**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 – CP.CPA.09 for commercial, HIM.PA.154 for health insurance marketplace, and CP.PMN.53 for Medicaid.

**IV. Appendices/General Information**

*Appendix A: Abbreviation/Acronym Key*

FDA: Food and Drug Administration

COMT: catechol-O-methyl transferase

MAO: monoamine oxidase

PD: Parkinson's disease

*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.*

Drug Name	Dosing Regimen	Dose Limit/ Maximum Dose
Carbidopa-levodopa sustained released tablets (Sinemet <sup>®</sup> CR)	<p>Patients not currently receiving levodopa: Initial: carbidopa 50 mg/levodopa 200 mg PO BID.</p> <p>Patients currently receiving levodopa: <i>Note: Levodopa must be discontinued at least 12 hours before starting carbidopa/levodopa therapy.</i> Initial: Sinemet CR should be substituted at a dosage that will provide approximately 25% of the previous levodopa dosage; usual initial dose in mild to moderate disease is carbidopa 50 mg/levodopa 200 mg BID.</p> <p>Patients converting from immediate-release (IR) formulation to controlled release: Initial: Dosage should be substituted at an amount that provides ~10% more of levodopa/day, depending on clinical response, dosage may need to be increased to provide up to 30% more levodopa/day. Total calculated dosage is administered in divided doses at intervals ranging from 4 to 8 hours during waking hours. An interval of at least 3 days between dosage adjustments is recommended.</p>	Most patients are adequately controlled on doses that provide up to 1,600 mg/day of levodopa.
<b>COMT Inhibitors</b>		
carbidopa/levodopa/entacapone (Stalevo <sup>®</sup> )	PO: Dose should be individualized based on therapeutic response; doses may be adjusted by changing strength or adjusting interval. Fractionated doses are not recommended and only 1 tablet should be given at each dosing interval.	1,200 mg/day (divided doses)
entacapone (Comtan <sup>®</sup> )	PO: 200 mg with each dose of levodopa/carbidopa	1,600 mg/day (divided doses)
tolcapone (Tasmar <sup>®</sup> )	PO: 100 mg 3 times daily, as adjunct to levodopa/carbidopa	300 mg/day
<b>MAO-B Inhibitors</b>		
rasagiline (Azilect <sup>®</sup> )	PO: Monotherapy or adjunctive therapy (not including levodopa): 1 mg once daily. Adjunctive therapy with levodopa: Initial: 0.5 mg once daily; may increase to 1 mg once daily based on response and tolerability.	1 mg/day

Drug Name	Dosing Regimen	Dose Limit/ Maximum Dose
<b>Dopamine Agonists</b>		
pramipexole (Mirapex <sup>®</sup> )	PO: Initial dose: 0.125 mg 3 times daily, increase gradually every 5 to 7 days; maintenance (usual): 0.5 to 1.5 mg 3 times daily	4.5 mg/day (divided doses)
pramipexole ER (Mirapex <sup>®</sup> ER)	PO: Initial dose: 0.375 mg once daily; increase gradually not more frequently than every 5 to 7 days to 0.75 mg once daily and then, if necessary, by 0.75 mg per dose	4.5 mg/day
ropinirole (Requip <sup>®</sup> )	PO: Recommended starting dose: 0.25 mg 3 times/day. Based on individual patient response, the dosage should be titrated with weekly increments: Week 1: 0.25 mg 3 times/day; total daily dose: 0.75 mg; week 2: 0.5 mg 3 times/day; total daily dose: 1.5 mg; week 3: 0.75 mg 3 times/day; total daily dose: 2.25 mg; week 4: 1 mg 3 times/day; total daily dose: 3 mg. After week 4, if necessary, daily dosage may be increased by 1.5 mg/day on a weekly basis up to a dose of 9 mg/day, and then by up to 3 mg/day weekly to a total of 24 mg/day.	24 mg/day (divided doses)
ropinirole ER (Requip <sup>®</sup> ER)	PO: Initial dose: 2 mg once daily for 1 to 2 weeks, followed by increases of 2 mg/day at weekly or longer intervals based on therapeutic response and tolerability	24 mg/day

*Therapeutic alternatives are listed as Brand name<sup>®</sup> (generic) when the drug is available by brand name only and generic (Brand name<sup>®</sup>) when the drug is available by both brand and generic.*

#### Appendix C: Contraindications/Boxed Warnings

- Contraindication(s):
  - Concomitant use of nonselective monoamine oxidase (MAO) inhibitor (e.g., phenelzine, tranylcypromine) or have recently (within 2 weeks) taken a nonselective MAO inhibitor
  - Known hypersensitivity to any component of the requested product
- Boxed warning(s): none reported

#### Appendix D: General Information

- Off time/episodes represent a return of Parkinson's disease symptoms (bradykinesia, rest tremor or rigidity) when the L-dopa treatment effect wears off after each dosing interval.
- Parkinson's disease symptoms, resulting from too little levodopa (L-dopa), are in contrast with dyskinesia which typically results from too much L-dopa. The alterations between "on" time (the time when Parkinson's disease symptoms are successfully suppressed by L-dopa) and "off" time is known as "motor fluctuations".
- The addition of carbidopa to L-dopa prevents conversion of L-dopa to dopamine in the systemic circulation and liver.

- Duopa is infused over 16 hours daily into the jejunum through a percutaneous endoscopic gastrostomy with jejunal tube (PEG-J) with the CADD<sup>®</sup>-Legacy 1400 portable infusion pump. For short term use, Duopa may be administered through naso-jejunal tube prior to PEG-J tube placement with observation of the patient’s clinical response.

**V. Dosage and Administration**

Drug Name	Indication	Dosing Regimen	Maximum Dose
Rytary	PD; parkinsonism	Levodopa-naïve patients: Starting dose is 23.75 mg/95 mg PO TID; may increase to 36.25 mg/145 mg TID on the fourth day of treatment; may increase dose up to carbidopa 97.5 mg/levodopa 390 mg TID; frequency of dosing may be increased to a maximum of 5 times daily if needed and tolerated.	Carbidopa 612.5 mg /levodopa 2,450 mg per day
Duopa	Motor fluctuations in patients with advanced PD	<p>Duopa is administered over a 16-hour infusion period. The daily dose is determined by individualized patient titration and composed of:</p> <ul style="list-style-type: none"> <li>• A morning dose</li> <li>• A continuous dose</li> <li>• Extra doses</li> </ul> <p>Maximum recommended daily dose of Duopa is 2,000 mg of the levodopa component (i.e., one cassette per day) administered over 16 hours. At the end of the daily 16-hour infusion, patients will disconnect the pump from the PEG-J and take their night-time dose of <i>oral</i> immediate-release carbidopa-levodopa tablets.</p> <p>Duopa is initiated in 3 steps:</p> <ol style="list-style-type: none"> <li>1. Conversion of patients to oral immediate-release carbidopa-levodopa tablets in preparation for Duopa treatment.</li> <li>2. Calculation and administration of the Duopa starting dose (morning dose and continuous dose) for Day 1.</li> <li>3. Titration of the dose as needed based on individual clinical response and tolerability.</li> </ol> <p>Duopa has an extra dose function that can be used to manage acute “off” symptoms that are not controlled by the morning dose and the continuous dose administered over 16 hours. The extra dose function should be set at 1 mL (20 mg of levodopa) when starting Duopa. If the amount</p>	2,000 mg of levodopa component / day

Drug Name	Indication	Dosing Regimen	Maximum Dose
		of the extra dose needs to be adjusted, it is typically done in 0.2 mL increments. The extra dose frequency should be limited to one extra dose every 2 hours. Administration of frequent extra doses may cause or worsen dyskinesias.	
Dhivy	PD; parkinsonism	Levodopa-naïve patients: Starting dose is 25 mg/100 mg PO TID; may increase by 1 tablet daily or every other day as needed	Carbidopa 200 mg/levodopa 800 mg per day

#### VI. Product Availability

Drug Name	Product Availability
Rytary (carbidopa/levodopa)	ER capsules: carbidopa/levodopa 23.75 mg/95 mg, 36.25 mg/145 mg, 48.75 mg/195 mg, 61.25 mg/245 mg
Duopa (carbidopa/levodopa)	Enteral suspension: 4.63 mg carbidopa and 20 mg levodopa per mL; each cassette contains approximately 100 mL of suspension; carton of 7 Duopa cassettes
Dhivy (carbidopa/levodopa)	IR tablets: carbidopa/levodopa 25 mg/100 mg

#### VII. References

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Reviews, Revisions, and Approvals	Date	P&T Approval Date
Policy created: adapted from previously approved policy CP.CPA.148; retire CP.CPA.148; added HIM and Medicaid lines of business; no significant changes from previously approved policy; references reviewed and updated.	04.27.20	08.20
3Q 2021 annual review: no significant changes; references revised from HIM.PHAR.21 to HIM.PA.154; references reviewed and updated.	03.23.21	08.21
Added Duopa.	08.17.21	11.21
Revised approval duration for Commercial line of business from length of benefit to 12 months or duration of request, whichever is less; RT4: added newly FDA approved product, Dhivy.	12.14.21	02.22

**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.

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