Clinical Policy: Deferoxamine (Desferal)
Reference Number: ERX.SPA.91
Effective Date: 10.01.16
Last Review Date: 08.17
Line of Business: Commercial [Prescription Drug Plan] Revision Log

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

Description
Deferoxamine (Desferal®) is an iron-chelating agent.

FDA approved indication
Desferal is indicated:
- For the treatment of acute iron intoxication
  - Desferal is an adjunct to, and not a substitute for, standard measures used in treating acute iron intoxication, which may include the following: induction of emesis with syrup of ipecac; gastric lavage; suction and maintenance of a clear airway; control of shock with intravenous fluids, blood, oxygen, and vasopressors; and correction of acidosis.
- For the treatment of chronic iron overload due to transfusion-dependent anemias
  - Desferal can promote iron excretion in patients with secondary iron overload from multiple transfusions (as may occur in the treatment of some chronic anemias, including thalassemia).
  - Long-term therapy with Desferal slows accumulation of hepatic iron and retards or eliminates progression of hepatic fibrosis.
  - Iron mobilization with Desferal is relatively poor in patients under the age of 3 years with relatively little iron overload. The drug should ordinarily not be given to such patients unless significant iron mobilization (e.g., 1 mg or more of iron per day) can be demonstrated.

Limitations of use: Desferal is not indicated for the treatment of primary hemochromatosis, since phlebotomy is the method of choice for removing excess iron in this disorder.

Policy/Criteria
Provider must submit documentation (which may include office chart notes and lab results) supporting that member has met all approval criteria

It is the policy of health plans affiliated with Envolve Pharmacy Solutions™ that Desferal is **medically necessary** when the following criteria are met:

I. Initial Approval Criteria

A. Chronic Iron Overload Due To Transfusion-Dependent Anemias (must meet all)**:**
1. Diagnosis of chronic iron overload due to transfusion-dependent anemias;
2. Age ≥ 3 years;
3. Transfusion history of ≥ 100 mL/kg of packed red blood cells (e.g., ≥ 20 units of packed red blood cells for a 40 kg person or more in individuals weighing more than 40 kg) and a serum ferritin level > 1,000 mcg/L;
4. Member does not have primary hemochromatosis;
5. Dose does not exceed the following:
   a. Subcutaneous (SC): 2000 mg/day;
   b. Intravenous (IV): 40 mg/kg/day for children; 60 mg/kg/day for adults;
   c. Intramuscular (IM): 1000 mg/day.

Approval duration: 3 months

B. Acute Iron Intoxication (must meet all)**:**
1. Diagnosis of acute iron intoxication;

2. Desferal will be used as an adjunct to standard measures used in treating acute iron intoxication (e.g., induction of emesis with syrup of ipecac; gastric lavage; suction and maintenance of a clear airway; control of shock with intravenous fluids, blood, oxygen, vasopressors; correction of acidosis);
3. Dose does not exceed 6000 mg in 24 hours.

Approval duration: 1 month

C. Other diagnoses/indications

1. Refer to ERX.PA.01 if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized).

II. Continued Therapy

A. Chronic Iron Overload Due To Transfusion-Dependent Anemias (must meet all)**:**

1. Currently receiving medication via a health plan affiliated with Envolve Pharmacy Solutions or member has previously met initial approval criteria;
2. Current documentation (within the last 30 days) shows serum ferritin level ≥ 500 mcg/L.
3. If request is for a dose increase, new dose does not exceed the following:
   a. SC: 2000 mg/day;
   b. IV: 40 mg/kg/day for children; 60 mg/kg/day for adults;
   c. IM: 1000 mg/day.

Approval duration: 6 months

B. Acute Iron Intoxication (must meet all)**:**

1. Continuation of therapy will not be granted. New cases of acute iron intoxication must be evaluated against the initial approval criteria.

Approval duration: N/A

C. Other diagnoses/indications (must meet 1 or 2)**:**

1. Currently receiving medication via a health plan affiliated with Envolve Pharmacy Solutions and documentation supports positive response to therapy.
   Approval duration: Duration of request or 6 months (whichever is less); or
2. Refer to ERX.PA.01 if diagnosis is NOT specifically listed under section III (Diagnoses/Indications for which coverage is NOT authorized).

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 policy – ERX.PA.01 or evidence of coverage documents;

B. Primary hemochromatosis.

IV. Appendices/General Information

Appendix A: Abbreviation/Acronym Key

FDA: Food and Drug Administration
IM: intramuscular
IV: intravenous
SC: subcutaneous

Appendix B: Therapeutic Alternatives

N/A

V. Dosage and Administration

Indication	Dosing Regimen	Maximum Dose
Acute iron intoxication	IM administration: A dose of 1000 mg should be administered initially. This may be followed by 500 mg every 4 hours for two doses. Depending upon the clinical response, subsequent doses of 500 mg may be administered every 4-12 hours. The total amount	6000 mg in 24 hours

	administered should not exceed 6000 mg in 24 hours. [This route is preferred and should be used for all patients not in shock.]	
	IV administration: An initial dose of 1000 mg should be administered at a rate not to exceed 15 mg/kg/hr. This may be followed by 500 mg over 4 hours for two doses. Depending upon the clinical response, subsequent doses of 500 mg may be administered over 4-12 hours. The total amount administered should not exceed 6000 mg in 24 hours. [This route should be used only for patients in a state of cardiovascular collapse and then only by slow infusion.]	
Chronic iron overload	SC administration: A daily dose of 1000-2000 mg (20-40 mg/kg/day) should be administered over 8-24 hours.	See dosing regimen
	IV administration: The standard dose is 20-40 mg/kg/day for children and 40-50 mg/kg/day over 8-12 hours in adults for 5-7 days per week. The intravenous infusion rate should not exceed 15 mg/kg/hour.	Children: average doses should not exceed 40 mg/kg/day until growth has ceased Adults: average doses should not exceed 60 mg/kg/day
	IM administration: A daily dose of 500-1000 mg may be administered intramuscularly. The total daily dose should not exceed 1000 mg.	1000 mg/day

VI. Product Availability

Powder for injection: 500 mg/vial, 2 g/vial

VII. References

1. Desferal Prescribing Information. East Hanover, NJ: Novartis Pharmaceuticals Corporation; December 2011. Available at: https://dailymed.nlm.nih.gov/dailymed/. Accessed July 19, 2017.
2. Deferoxamine Drug Monograph. Clinical Pharmacology. Accessed July 19, 2017. http://www.clinicalpharmacology-ip.com.
3. Musallam KM, Angastiniotis M, Eleftheriou A, Porter JB. Cross-talk between available guidelines for the management of patients with beta-thalassemia major. Acta Haematol. 2013; 130: 64-73. DOI: 10.1159/000345734.
4. Hoffbrand AV, Taher A, Cappellini MD. How I treat tranfusional iron overload. Blood. November 1, 2012; 120(18): 3657-3669.

Reviews, Revisions, and Approvals	Date	P&T Approval Date
Policy split from USS.CP.PHAR.104 Iron Overload Treatment and converted to new template. Added age restriction and transfusion history requirements to initial approval criteria and efficacy requirements for continued approval criteria.	07/16	09/16
Converted to new template. Chronic iron overload: added requirement that member does not have primary hemochromatosis per PI; added max dose per mode of administration; re-auth: added “current documentation” defined as “within the last 30 days” for follow-up serum ferritin levels. Added criteria set for acute iron intoxication indication.	07/17	08/17

Reviews, Revisions, and Approvals	Date	P&T Approval Date
Added exclusion of primary hemochromatosis to section III per PI.		

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.

This Clinical Policy is not intended to dictate to providers how to practice medicine, nor does it constitute a contract or guarantee regarding payment or results. 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.