



# SmartPA Criteria Proposal

<b>Drug/Drug Class:</b>	Enzyme Deficiency, Select Agents Clinical Edit
<b>First Implementation Date:</b>	TBD
<b>Proposed Date:</b>	June 16, 2022
<b>Prepared for:</b>	MO HealthNet
<b>Prepared by:</b>	MO HealthNet/Conduent
<b>Criteria Status:</b>	<input type="checkbox"/> Existing Criteria <input type="checkbox"/> Revision of Existing Criteria <input checked="" type="checkbox"/> New Criteria

## Executive Summary

**Purpose:** Ensure appropriate utilization and control of Enzyme Deficiency, Select Agents.

**Why Issue Selected:** Enzymes play an important role in the human body by carrying out various chemical functions such as digesting food, healing wounds, and breaking down toxins. Certain disease states result in deficiencies in enzymes and potentially lead to life-changing or life-threatening symptoms. Agents used to treat these disease states are sometimes classified as enzyme replacement therapies, which supplement the deficient enzyme, or have other mechanisms of action that result in increased enzyme levels in the body. By increasing levels of the deficient enzyme, these therapies treat the symptoms of the disease.

Due to the high cost and specific approved indications, MO HealthNet will impose clinical criteria to ensure appropriate utilization of Enzyme Deficiency, Select Agents.

## Program-Specific Information:

Date Range FFS 1/1/21 to 12/31/21			
Drug	Claims	Spend	Avg Spend per Claim
ALDURAZYME 2.9 MG/5 ML VIAL	52	\$1,447,582.52	\$27,838.13
BRINUERA 150 MG/5 ML VIAL	0	-	-
BUPHENYL PWD FOR ORAL SOL	1	\$15.20	\$15.20
BUPHENYL 500 MG TAB	0	-	-
CERDELGA 84 MG CAP	0	-	-
CEREZYME 400 UNIT VIAL	9	\$154,272.68	\$17,141.41
ELAPRASE 6 MG/3 ML VIAL	151	\$2,061,662.45	\$13,653.39
ELELYSO 200 UNIT VIAL	1	\$45.50	\$45.50
KANUMA 20 MG/10 ML VIAL	0	-	-
KUVAN 100 MG PWD PACKET	117	\$381,554.01	\$3,261.15
KUVAN 500 MG PWD PACKET	77	\$705,461.98	\$9,161.84
KUVAN 100 MG TAB	23	\$244,602.95	\$10,634.91
MEPSEVII 10 MG/5 ML VIAL	0	-	-
MIGLUSTAT 100 MG CAPS	0	-	-
NAGLAZYME 1 MG/ML VIAL	0	-	-
NITISINONE 2 MG CAP	0	-	-
NITISINONE 5 MG CAP	0	-	-
NITISINONE 10 MG CAP	0	-	-

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NITYR 2 MG TAB	0	-	-
NITYR 5 MG TAB	0	-	-
NITYR 10 MG TAB	0	-	-
ORFADIN 2 MG CAP	0	-	-
ORFADIN 5 MG CAP	0	-	-
ORFADIN 10 MG CAP	6	\$818,831.50	\$136,471.92
ORFADIN 20 MG CAP	0	-	-
ORFADIN 4 MG/ML SUSP	0	-	-
PYRUKYND 5 MG 28-DAY PACK	0	-	-
PYRUKYND 20 MG 28-DAY PACK	0	-	-
PYRUKYND 50 MG 28-DAY PACK	0	-	-
PRYUKYND 5 MG TAPER PACK	0	-	-
PYRUKYND 20/5 MG TAPER PACK	0	-	-
PYRUKYND 50/20 MG TAPER PACK	0	-	-
RAVICTI 1.1 G/ML ORAL SOL	27	\$620,031.19	\$22,964.12
REVCovi 2.4 MG/1.5 ML VIAL	0	-	-
RYPLAZIM 68.8 MG PWD FOR INJ	0	-	-
SAPROPTERIN 100 MG PWD PACKET	81	\$206,066.30	\$2,544.03
SAPROPTERIN 500 MG PWD PACK	73	\$704,896.19	\$9,656.11
SAPROPTERIN 100 MG TAB	15	\$223,279.45	\$14,885.30
STRENSIQ 18 MG/0.45 ML VIAL	16	\$358,897.57	\$22,431.10
STRENSIQ 28 MG/0.7 ML VIAL	22	\$606,793.95	\$27,581.54
STRENSIQ 40 MG/ML VIAL	16	\$866,705.30	\$54,169.08
STRENSIQ 80 MG/0.8 ML VIAL	30	\$3,674,555.45	\$122,485.18
SODIUM PHENYLBUTYRATE PWD FOR ORAL SOL	8	\$20,761.29	\$2,595.16
SODIUM PHENYLBUTYRATE 500 MG TABS	0	-	-
VIMIZIM 1 MG/ML VIAL	0	-	-
VPRIV 400 UNIT VIAL	26	\$360,376.83	\$13,860.65
ZAVESCA 100 MG CAP	2	\$31,322.10	\$15,661.05

**Type of Criteria:**  Increased risk of ADE  Appropriate Indications  Preferred Drug List  Clinical Edit

**Data Sources:**  Only Administrative Databases  Databases + Prescriber-Supplied

## Setting & Population

- Drug class for review: Enzyme Deficiency, Select Agents
- Age range: All appropriate MO HealthNet participants

## Approval Criteria

### Initial Therapy:

- Prescribed by or in consultation with an appropriate specialist in the treated disease state **AND**
- Documented diagnosis of adenosine deaminase severe combined immune deficiency (ADA-SCID):
  - Claim is for Revcov **AND**

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- Initial approval for 6 months
- Documented diagnosis of Gaucher disease:
  - Claim is for Cerdelga, Cerezyme, Elelyso, Vpriv, or Zavesca **AND**
  - For Cerdelga and Zavesca: participant is aged at least 18 years
  - For generic Zavesca: documentation of reason why participant cannot utilize brand Zavesca
  - Initial approval for 6 months
- Documented diagnosis of hereditary tyrosinemia type 1:
  - Claim is for Orfadin or Nityr **AND**
  - Initial approval for 12 months
  - For Orfadin 20 mg capsule: documentation of reason why participant cannot utilize lower strength capsules
  - For Nityr: documentation of reason why participant cannot utilize Orfadin
- Documented diagnosis of perinatal/infantile- and juvenile-onset hypophosphatasia (HPP):
  - Diagnosis confirmed by:
    - Presence of a known pathogenic variant in the *ALPL* gene as detected by *ALPL* molecular genetic testing **OR**
    - Diagnosis supported by all of the following:
      - Radiographic imaging demonstrating skeletal abnormalities **AND**
      - Serum alkaline phosphatase (ALP) level below the gender- and age-specific reference range **AND**
      - Elevated tissue-nonspecific alkaline phosphatase substrate level **AND**
  - Disease onset prior to age 18 years **AND**
  - Participant has clinical manifestations of hypophosphatasia (i.e. skeletal abnormalities, respiratory problems, failure to thrive, rickets, etc.) **AND**
  - Claim is for Strensiq **AND**
  - Initial approval for 6 months
- Documented diagnosis of late-infantile neuronal ceroid lipofuscinosis type 2 (CLN2), tripeptidyl peptidase 1 (TPP1) deficiency:
  - Diagnosis confirmed by:
    - Deficient TPP1 enzyme activity in leukocytes, fibroblasts, or dried blood spots **OR**
    - Genetic testing confirming two pathogenic variants in the *TPP1* or *CLN2* genes **AND**
  - Claim is for Brineura **AND**
  - Participant has mild to moderate disease documented by a two-domain score of 3 to 6 on motor and language domains in the Hamburg CLN2 Clinical Rating Scale, with a score of at least 1 in each of these two domains **AND**
  - Participant is aged at least 3 years **AND**
  - Participant is ambulatory **AND**
  - Documentation of baseline Hamburg CLN2 Clinical Rating Scale score
  - Initial approval for 12 months
- Documented diagnosis of lysosomal acid lipase deficiency:
  - Claim is for Kanuma **AND**
  - Initial approval for 12 months
- Documented diagnosis of mucopolysaccharidosis I (MPS I):
  - Claim is for Aldurazyme **AND**
  - Initial approval for 12 months
- Documented diagnosis of mucopolysaccharidosis II (MPS II):
  - Claim is for Elaprase **AND**
  - Initial approval for 12 months
- Documented diagnosis of mucopolysaccharidosis IVA (MPS IVA):
  - Claim is for Vimzim **AND**
  - Participant is aged at least 5 years **AND**
  - Initial approval for 12 months
- Documented diagnosis of mucopolysaccharidosis VI (MPS VI):
  - Claim is for Naglazyme **AND**

- Participant is aged at least 5 years **AND**
  - Initial approval for 12 months
- Documented diagnosis of mucopolysaccharidosis VII (MPS VII):
  - Claim is for Mepsevii **AND**
  - Initial approval for 12 months
- Documented diagnosis of phenylketonuria:
  - Claim is for Kuvan **AND**
  - Initial approval for 12 months
- Documented diagnosis of plasminogen deficiency type 1:
  - Diagnosis confirmed by:
    - Baseline plasminogen activity level  $\leq$  45% **AND**
    - Documented history of lesions (external and/or internal) and symptoms consistent with a diagnosis of plasminogen deficiency type 1 **AND**
    - Genetic testing confirming pathogenic variant in *PLG* gene **AND**
  - Claim is for Ryplazim **AND**
  - Initial approval for 3 months
- Documented diagnosis of symptomatic pyruvate kinase deficiency:
  - Diagnosis confirmed by:
    - Documentation of genetic testing confirming presence of at least 2 variant alleles in the *PKLR* gene, of which at least 1 is a missense variant **AND**
  - Documentation of previous red blood cell transfusions for hemolytic anemia in the past year **AND**
  - Baseline hemoglobin level of  $\leq$  10 g/dL **AND**
  - Claim is for Pyrukynd **AND**
  - Initial approval for 3 months
- Documented diagnosis of urea cycle disorder:
  - Diagnosis confirmed by enzymatic, biochemical, or genetic testing **AND**
  - Claim is for Buphenyl or Ravicti **AND**
  - Documentation of trial and failure of dietary protein restriction and/or amino acid supplementation **AND**
  - Initial approval for 3 months
  - For Ravicti:
    - Failure to achieve therapeutic response after minimum of 90 days of therapy with Buphenyl **OR**
    - Documented ADE/ADR to Buphenyl

Continuation of Therapy:

- Compliance to prescribed drug therapy **AND**
- For Brineura:
  - Documentation of benefit of therapy demonstrated by stabilization or lack of decline in motor function based on the Motor domain of the Hamburg CLN2 Clinical Rating Scale (decline is defined as having an unreversed (sustained) 2-category decline or an unreversed score of 0 in the Motor domain of the CLN2 Clinical Rating Scale)
  - Continued approval for 12 months
- For Pyrukynd:
  - Documentation of increase in hemoglobin of at least 1.5 g/dL from baseline **OR**
  - Documentation of reduction in transfusion burden from baseline
  - Continued approval for 12 months
- For Strensiq:
  - Documented benefit from therapy including one of the following:
    - Improved respiratory status
    - Improved growth from baseline
    - Improvement of skeletal manifestations from baseline
    - Lack of evidence of disease progression
  - Continued approval for 12 months

## Denial Criteria

- Therapy will be denied if all approval criteria are not met
- For Brineura:
  - Participant has acute intraventricular access device-related complication
  - Participant has ventriculoperitoneal shunts
- For Buphenyl/Ravicti: medication is being used for the treatment of acute hyperammonemia
- For Pyruknyd:
  - Participant is currently pregnant
  - Documentation of moderate to severe hepatic disease
  - Claim exceeds 2 tablets per day
- For Ravicti: documentation of N-acetylglutamate synthase (NAGS) deficiency
- For Ryplazim: participant is currently pregnant

## Required Documentation

Laboratory Results:  
MedWatch Form:

Progress Notes:  
Other:

## Disposition of Edit

Denial: Exception code "0682" (Clinical Edit)

Rule Type: CE

## Default Approval Period

1 year

## References

- Aldurazyme® (laronidase) [package insert]. Novato, CA: BioMarin Pharmaceutical Inc.; December, 2019.
- Brineura® (cerliponase alfa) [package insert]. Novato, CA: BioMarin Pharmaceutical Inc.; March, 2020.
- Buphenyl® (sodium phenylbutyrate) [package insert]. Scottsdale, AZ: Ucyclyd Pharma, Inc.; March, 2009.
- Cerdelga® (eliglustat) [package insert]. Waterford, Ireland: Genzyme Corporation; September, 2018.
- Cerezyme® (imiglucerase) [package insert]. Cambridge, MA: Genzyme Corporation; December, 2021.
- Elaprase® (idursulfase) [package insert]. Lexington, MA: Shire Human Genetic Therapies, Inc.; November, 2018.
- Elelyso® (taliglucerase alfa) [package insert]. New York, New York: Pfizer, Inc.; November, 2020.
- Kanuma® (sebelipase alfa) [package insert]. Boston, MA: Alexion Pharmaceutical, Inc.; November, 2021.
- Kuvan® (sapropterin dihydrochloride) [package insert]. Novato, CA: BioMarin Pharmaceutical Inc.; March, 2020.
- Mepsevii® (vestronidase alfa-vjbk) [package insert]. Novato, CA: Ultragenyx Pharmaceutical Inc.; December, 2020.
- Naglazyme® (galsulfase) [package insert]. Novato, CA: BioMarin Pharmaceutical Inc.; December, 2019.
- Nityr® (nitosinone) [package insert]. Manno, Switzerland: Rivopharm SA; September, 2020.
- Orfadin® (nitisinone) [package insert]. Waltham, MA: Sobi, Inc.; May, 2019.
- Pyruknyd® (mitapivat) [package insert]. Cambridge, MA: Agios Pharmaceuticals, Inc.; February, 2022.
- Ravicti® (glycerol phenylbutyrate) [package insert]. Lake Forest, IL: Horizon Therapeutics USA, Inc.; September, 2021.
- Revcovii® (elapegademase-lvlr) [package insert]. Indianapolis, IN: Chiesi USA, Inc.; December, 2020.
- Ryplazim® (plasminogen, human-tvmh) [package insert]. Laval, Canada: Prometic Bioproduction Inc.; June, 2021.
- Strensiq® (asfotase alfa) [package insert]. Boston, MA: Alexion Pharmaceuticals, Inc.; June, 2020.

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- Vimizim® (elosulfase alfa) [package insert]. Novato, CA: BioMarin Pharmaceuticals, Inc.; December, 2019.
- Vpriv® (velaglucerase alfa) [package insert]. Lexington, MA: Takeda Pharmaceuticals U.S.A., Inc.; September, 2021.
- Zavesca® (miglustat) [package insert]. San Francisco, CA: Actelion Pharmaceuticals US, Inc.; December, 2020.
- Whyte, M. Hypophosphatasia — aetiology, nosology, pathogenesis, diagnosis and treatment. *Nat Rev Endocrinol* 12, 233–246 (2016). <https://doi.org/10.1038/nrendo.2016.14>
- Linglart, A., Biosse-Duplan, M. Hypophosphatasia. *Curr Osteoporos Rep* 14, 95–105 (2016). <https://doi.org/10.1007/s11914-016-0309-0>
- Mole S, Anderson G, Band H, et al. Clinical challenges and future therapeutic approaches for neuronal ceroid lipofuscinosis. *The Lancet – Neurology* 18, 107-116 (2019). [Clinical challenges and future therapeutic approaches for neuronal ceroid lipofuscinosis - The Lancet Neurology](#)
- Shapiro AD, Nakar C, Parker JM, et al. Plasminogen replacement therapy for the treatment of children and adults with congenital plasminogen deficiency. *Blood*. 2018 Mar 22;131(12):1301-1310. doi: 10.1182/blood-2017-09-806729. Epub 2018 Jan 10.
- Schuster V, Hugle B, Tefs K. Plasminogen Deficiency. *Journal of Thrombosis and Haemostasis*. <https://doi.org/10.1111/j.1538-7836.2007.02776.x>. September 2007.
- Prchal, J. Pyruvate kinase deficiency. UpToDate. Last updated March 3, 2022. [Pyruvate kinase deficiency - UpToDate](#). Accessed March 18, 2022.
- Al-Samkari H, van Beers EJ. Mitapivat, a novel pyruvate kinase activator, for the treatment of hereditary hemolytic anemias. *Ther Adv Hematol*. 2021;12:20406207211066070. Published 2021 Dec 21. doi:10.1177/20406207211066070
- Grace RF, Mark Layton D, Barcellini W. How we manage patients with pyruvate kinase deficiency [published correction appears in Br J Haematol. 2019 May;185(4):807]. *Br J Haematol*. 2019;184(5):721-734. doi:10.1111/bjh.15758
- Lee B. Urea cycles disorder: management. UpToDate. Last updated August 6, 2021. [Urea cycle disorders: Management - UpToDate](#). Accessed April 27, 2022.
- Matsumoto, S., Häberle, J., Kido, J. et al. Urea cycle disorders—update. *J Hum Genet* 64, 833–847 (2019). <https://doi.org/10.1038/s10038-019-0614-4>