## Title

**Inhaled Nitric Oxide as a Treatment of Hypoxic Respiratory Failure in Neonates**

## Description

Inhaled nitric oxide (iNO) is an effective treatment in the near-term to full-term neonate diagnosed with persistent pulmonary hypertension (PPHN) as an isolated condition or as an associated condition resulting from any of the following: respiratory distress syndrome (hyaline membrane disease), meconium aspiration syndrome, pneumonia, sepsis, congenital diaphragmatic hernia and lung hypoplasia.

Nitric oxide in its natural form is a product of cell metabolism that acts as a blood vessel relaxant (vasodilator) which increases blood flow to the tissues; it also regulates the binding and releasing of oxygen to hemoglobin. When used as an inhalant to treat PPHN nitric oxide produces selective pulmonary vasodilatation and redistributes pulmonary blood flow from areas of the lung with low gas exchange capability (decrease ventilation capacity) to the healthier lung tissue with better gas exchange capability, thus improving oxygenation.

The effect of iNO and ventilator support on improved oxygenation also reduces the need for the use of a more surgically invasive lung oxygenation treatment known as extracorporeal membrane oxygenation (ECMO).

## When services are covered for all Products (including Medicare HMOB, Medicare PPO Blue and Blue Medicare PFFS PlusRx Products)

We cover **inhaled nitric oxide** when it is administered as a component of treatment of hypoxic respiratory failure in neonates born at 34 or more weeks of gestation.

## When services are not covered for all Products (including Medicare HMOB, Medicare PPO Blue and Blue Medicare PFFS PlusRx Products)

We do not cover indications for **inhaled nitric oxide**, including, but not limited to the following since it is considered investigational[1] and does not meet the BCBSMA Medical Technology Assessment Guidelines, #350:

- For adults with respiratory distress (ARDS) *or*
- For premature neonates.

## Individual consideration

All our medical policies are written for the majority of people with a given condition. Each policy is based on medical science. For many of our medical policies, each individual's unique clinical circumstances may be considered in light of current scientific literature. For consideration of an individual patient, physicians may send relevant clinical information to:

| For services already billed | Prior to performance of service |
|---|---|
| Blue Cross Blue Shield of Massachusetts<br>Provider Appeals<br>P. O. Box 986065<br>Boston, MA 02298 | Blue Cross Blue Shield of Massachusetts,<br>Case Creation/Medical Policy<br>One Enterprise Drive<br>Quincy, MA 02171<br>Tel: 1-800-327-6716<br>Fax: 1-888-641-5330 |

## Managed care guidelines

- Medicare HMO Blue members: referrals are not required.
- Any specialist visit requires a referral for Medicare HMO Blue.
- For all other Managed Care plans, any specialist visit requires a referral.
- Authorization for inpatient admission is required.

## Indemnity and PPO guidelines

All authorization requirements are determined by the individual's subscriber certificate, however:

- Authorizations are required for all inpatient services.
- Authorizations are not required for most outpatient services as determined by the individual's subscriber certificate.
- Referrals to a specialist are not required.

## Coding information

*Procedure codes are from current CPT, HCPCS Level II, Revenue Code, and/or ICD-9-CM manuals, as recommended by the American Medical Association, Centers for Medicare and Medicaid Services and American Hospital Associations. Blue Cross Blue Shield Association national codes may be developed when appropriate.*

*The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.*

**Facility**

ICD-9-CM procedure code 00.12, administration of inhaled nitric oxide

## Other information

- For our Medical Technology Assessment Guidelines, see document # 350.

## Policy update history

New Policy, effective 6/2009.

## Footnotes

[1] Based upon BCBSA national policy, *Inhaled Nitric Oxide as a Treatment of Hypoxic Respiratory Failure,* 8.01.37.

## References

**References for Footnote 1**

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