

MEDICAL POLICY STATEMENT
Indiana Medicaid

Policy Name &me &me &

The MEDICAL Policy Statement detailed above has received due consideration as defined in the MEDICAL Policy Statement Policy and

Inhaled Nitric Oxide-



insufficient evidence to support iNO in any category of critically ill patients with ARDS. Inhaled nitric oxide resulted in a transient improvement in oxygenation but did not reduce mortality and may be harmful, as it seemed to increase renal impairment.

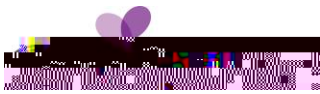
Studies have shown that treatment Malaria with iNO was associated with reduced risk of fine motor impairment. However, these results need to be validated in a larger study.

iNO has been proposed to be of benefit in the intraoperative management of patients in the setting of right ventricular dysfunction after LVAD insertion. However, data supporting favorable clinical outcomes are lacking. Acute pulmonary embolism is typically a complication secondary to migration of a deep venous clot or thrombi to the



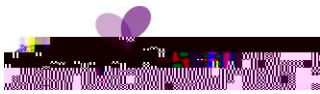
- B. Absence of ductal dependent congenital heart disease.
 - C. Evidence of PPHN, such as echocardiographic findings, results of a right heart catheterization or abnormal oxygen index/arterial blood gases that are NOT related to another medical condition.
- II. CareSource considers the use of iNO therapy medically appropriate for ANY of the following clinical conditions:
- A. Post-R SHUD WLYH PDQDJHP 30 Weeks to 60 Gestational age after repair of congenital heart disease with evidence of pulmonary hypertension.
 - B. Postoperative management following pediatric heart or lung surgery with evidence of pulmonary hypertension.
 - C. Management of pulmonary hypertension during a heart catheterization to determine pulmonary vasoreactivity.
- III. iNO therapy is subject to medical necessity review with medical record documentation to support initial and continued use.
- IV. CareSource considers the use of iNO not medically necessary for the following indications:
- A. congenital diaphragmatic hernia
 - B. acute bronchiolitis
 - C. broncht 0 g 0 G [()] TJ ET Q q 0.00000912 0 612 792 re W* n BT /F1 11.04 P

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12. Bhat T, Neuman A, Tantary M, et al. Inhaled nitric oxide in acute pulmonary embolism: a systematic review. *Rev Cardiovasc Med.* 2015;16(1):1-8. doi:10.3909/ricm0718
13. Bizzarro M, Gross I, Barbosa FT. Inhaled nitric oxide for the postoperative management of pulmonary hypertension in infants and children with congenital heart disease. *Cochrane Database Syst Rev.* 2014;(7):CD005055. doi:10.1002/14651858.CD005055.pub3
14. British Cardiac Society Guidelines and Medical Practice Committee; British Thoracic Society; British Society of Rheumatology. Recommendations on the management of pulmonary hypertension in clinical practice. *Heart.* 2001;86(Suppl 1):i1-i13. Accessed January 18, 2024. www.ncbi.nlm.nih.gov
15. Brunner N, de Jesus Perez VA, Richter A, et al. Perioperative pharmacological management of pulmonary hypertensive crisis during congenital heart surgery. *Pulm Circ.* 2014;4(1):10-24. doi:10.1086/674885
16. Canadian Congenital Diaphragmatic Hernia Collaborative; Puligandla PS, Skarsgard ED, Offringa M, et al. Diagnosis and management of congenital diaphragmatic hernia: a clinical practice guideline. *CMAJ.* 2018;190(4):E103-E112. doi:10.1503/cmaj.170206
17. Carey WA, Weaver AL, Mara KC, Clark RH. Inhaled nitric oxide in extremely premature neonates with respiratory distress syndrome. *Pediatrics.* 2018;141(3):e20173108. doi:10.1542/peds.2017-3108
18. Clark RH, Kueser TJ, Walker MW, et al; Clinical Inhaled Nitric Oxide Research Group. Low-dose nitric oxide therapy for persistent pulmonary hypertension of the newborn. *N Engl J Med.* 2000;342(7):469-474. doi:10.1056/NEJM200002173420704
19. Cole FS, Alleyne C, Barks JD, et al. NIH Consensus Development Conference statement: inhaled nitric-oxide therapy for premature infants. *Pediatrics.* 2011;127(2):363-369. doi:10.1542/peds.2010-350721
20. Corrected age for preemies. American Academy of Pediatrics. Updated December 10, 2018. Accessed February 19, 2024. www.healthychildren.org
21. Dani C, Corsini I, Cangemi J, Vangi V, Pratesi S. Nitric oxide for the treatment of preterm infants with severe RDS and pulmonary hypertension. *Pediatr Pulmonol.* 2017;52(11):1461-1468. doi:10.1002/ppul.23843
22. Dzierba AL, Abel EE, Buckley MS, Lat I. A review of inhaled nitric oxide and aerosolized epoprostenol in acute lung injury or acute respiratory distress syndrome. *Pharmacotherapy.* 2014;34(3):279-290. doi:10.1002/phar.1365
23. Gildea TR, Arroliga AC, Minai OA. Treatment and strategies to optimize the comprehensive management of patients with pulmonary arterial hypertension. *Cleve Clin J Med.* 2003;70(Suppl 1):S18-S27. doi:10.3949/ccjm.70.suppl_1.s18
24. Gladwin MT, Kato GJ, Weiner D, et al; DeNOVO Investigators. Nitric oxide for inhalation in the acute treatment of sickle cell pain crisis: a randomized controlled trial. *JAMA.* 2011;305(9):893-902. doi:10.1001/jama.2011.235
25. Gorenflo M, Gu H, Xu Z. Peri-operative pulmonary hypertension in paediatric patients: current strategies in children with congenital heart disease. *Cardiology.* 2010;116(1):10-17. doi:10.1159/000313864

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41. Tal A, Greenberg D, Av-Gay Y, et al. Nitric oxide inhalations in bronchiolitis: a pilot, randomized, double-blinded, controlled trial. *Pediatr Pulmonol.* 2018;53(1):95-102. doi:10.1002/ppul.23905
42. Van Meurs KP, Wright LL, Ehrenkranz RA, et al; Preemie Inhaled Nitric Oxide Study. Inhaled nitric oxide for premature infants with severe respiratory failure. *N Engl J Med.* 2005;353(1):13-22. doi:10.1056/NEJMoa043927

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