HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Respiratory Care Services		
Document:	Multidisciplinary Policy and Procedure		
Title:	Nitric Oxide Therapy		
Applies To:	Respiratory Therapy Staff and Physicians in NICU & PICU		
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1. PURPOSE:

1.1 To establish guidelines and sel responsibility in the administration of nitric oxide therapy among neonates.

2. DEFINITONS:

2.1 Inhaled Nitric Oxide (IN0) — is selective pulmonary vasodilation used to treat newboms who require mechanical ventilation for hypoxic respiratory failure. IN0 improves oxygenation. The introduction of IN0 therapy for neonates has mainly been to treat babies with pulmonary hypertension. In addition, it is a colorless, odorless gas that is also a potent pulmonary vasodilator. When given via the inhaled route it is a selective pulmonary vasodilator.

2.2 Neonatal Hypoxic Respiratory Failure — may be caused by persistent pulmonary hypertension of the newborn (PPHN) and other diseases that contribute to pulmonary arterial hypertension. These diseases included respiratory distress syndrome, meconium aspiration syndrome, pneumonia, sepsis, congenital diaphragmatic hernia, and some congenital cardiac anomalies.

3. POLICY:

3.1 It is the role of the respiratory therapist to operate, maintain and wean the patient from the administration of nitric oxide when directly ordered by a responsible physician or specific protocol.
3.2 The recommended IN0 dose is 20 parts per million (PPM) with an optimal response achieved when lung inflation is maximized.
3.3 Must be done carefully to prevent a rebound effect.
3.4 Hyper oxygenate the patient before withdrawing the nitric oxide.
3.5 Before the procedure, the respiratory therapist makes sure to check the machine properly functioning and ensure all the necessary supplies are assembled properly.
3.6 The nitric oxide level should be decreased to the lowest possible dose, usually Sppm or less.
3.7 The patient should be able to maintain an acceptable oxygenation level on an FIO2 of 0.4 or less.
3.8 Check the gas pressure and assure it is a full tank and more than 150psi before use.
3.9 IN0 is used with invasive ventilation only.
3.10 Connect the sample line in the inspiratory limb at the Y piece.
3.11 Connect appropriate size close suction catheter.
3.12 Starting dose usually starts at 20ppm or less.

4. PROCEDURE:

4.1 Verify physician orders refer to the physician's order sheet.
4.2 Assess the need for nitric oxide therapy administration.
4.3 Check the patient's file for details of the physician's order protocol
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4.5 Check patient identification four names for Saudi/ complete name for the Non — Saudi and medical record number)
4.6 Wash hands rigidly with gerrnicidal soap or solution.
4.7 Gather equipment and assemble.
4.7.1 Nitric oxide cylinder with 1200psi concentration attached with regulators
4.7.2 Nitric oxide machine.
4.7.3 INO, NO› and 02 analyzer.
4.8 Hose system to connect to manual ventilation no greater than 15cm proximal tube.
4.9 Attach a 15cm proximal tube to the inspiratory limb of the ventilator circuit.
4.10 Turn on the nitric oxide to the desired ppm dosage.
4.11 Check oxygen saturation of the patient upon initiation of nitric oxide therapy
4.12 Evaluate the patient's tolerance of the treatment please refer to the respiratory progress sheet.
4.13 Wash hands

5. MATERIALS AND EQUIPMENT:

5.1 N/A

6. RESPONSIBILITIES:

6.1 Physicians in NICU & PICU
6.2 Respiratory Therapist

7. APPENDICES:

7.1 Flow Chart. Procedure for hooking inhaled nitric oxide to the patient
7.2 Flow Chart: Weaning IN0 from the patient when the following parameters are reached
7.3 Flow Chart: Stopping IN0 delivery

8. REFERENCES:

8.1 Oakes, D. (7 June 2015).Neonatal/ Pediatric Ventilation. Retrieved from http://www.respiratoryupdate.com/members/department77.cfm
8.2 King Abdullah bin Abdulaziz University Hospital, 2018.

9. APPROVALS:

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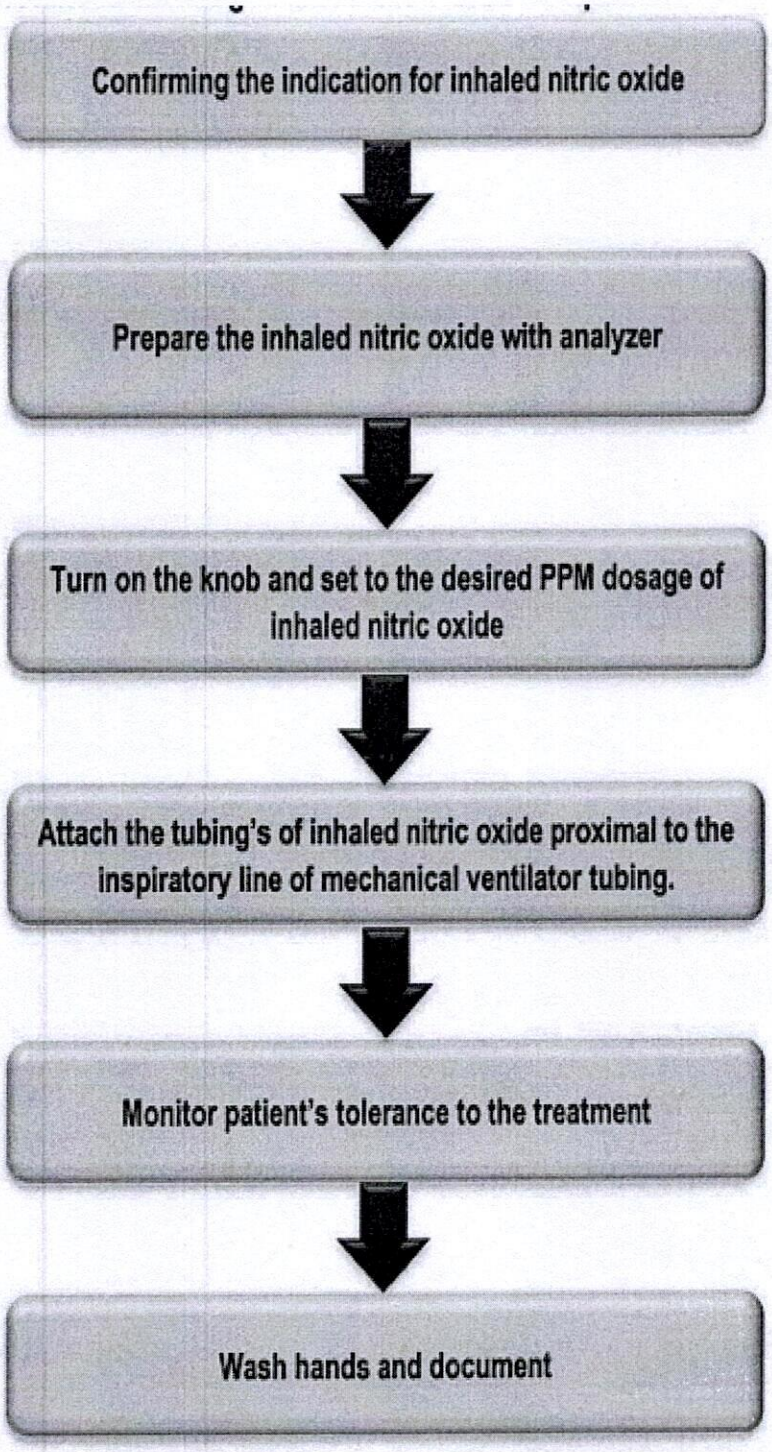
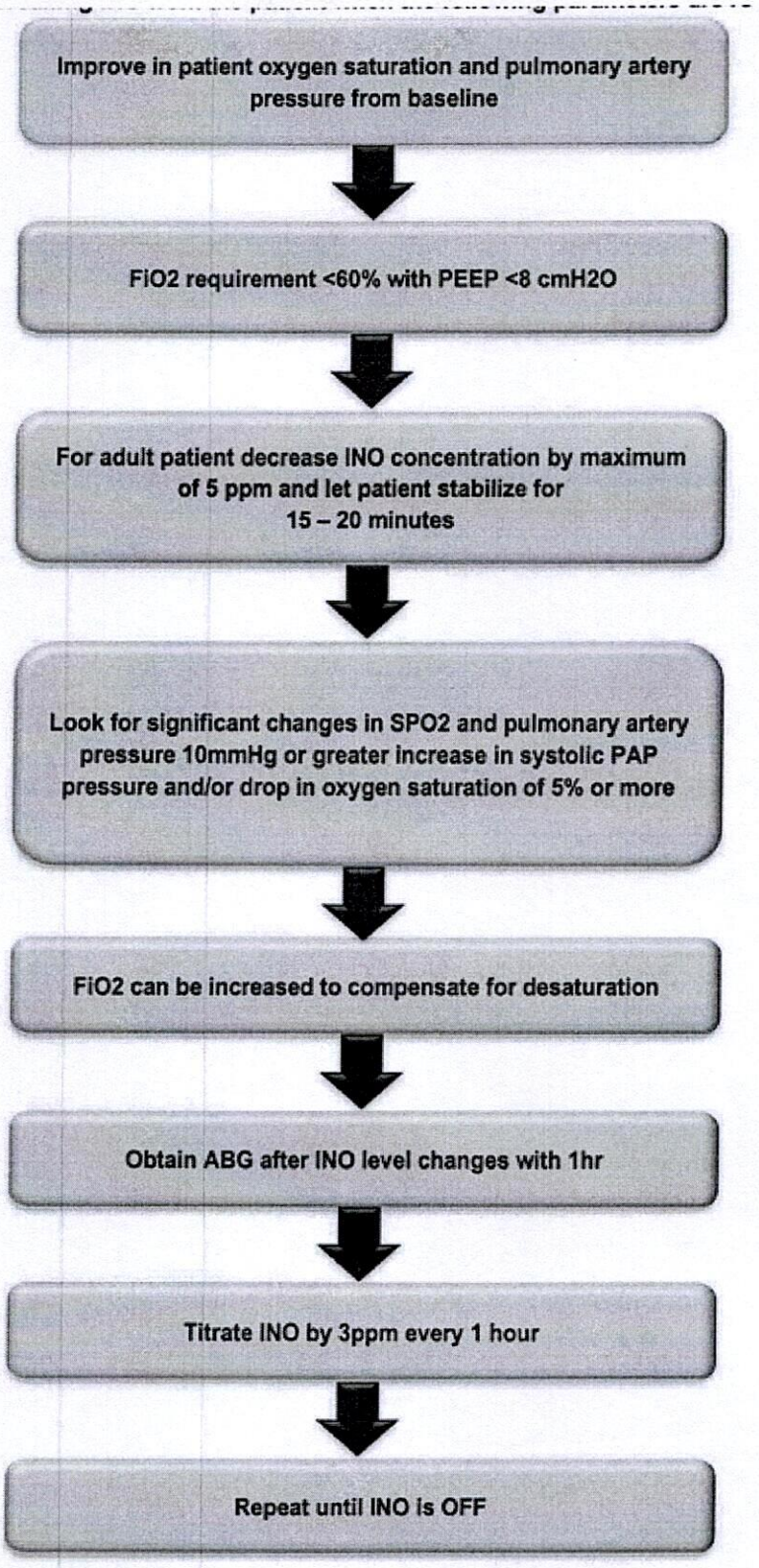
Appendix 7.1 Flow Chart: Procedure for hooking inhaled nitric oxide to the patient



Appendix 7.2 Flow Chart : Weaning INO from the patient when the following parameters are reached.



Appendix 7.3 Flow Chart: stopping INO delivery