وزارة الصحة

سياسات واجراءات

اسم السياسة: Noninvasive Positive Pressure Ventilation	رمز السياسة: MOH POL HOS RT 07
عدد الصفحات6 صفحات	الطبعة: الأولى

الوحدة التنظيمية: مديرية التطوير المؤسسي وضبط الجودة		
الجهة المعنية بتنفيذ السياسة:شعبة المعالجة التنفسية		
الاعداد: لجنة تطوير واستحداث وحدات المعالجة التنفسية في مستشفيات وزارة الصحة	التوقيع: التوقيع: التوقيع: التوقيع: التوقيع: التوقيع: التوقيع:	تاريخ الاعداد: ٢٠٢٣/ ٨/ ٢٨
المراجعة:قسم إدارة الجودة/ شعبة سلامة المرضى	التوقيع:	تاريخ الاعداد: ٢٠٢٣/ ٨/ ٢٨
التدقيق من ناحية ضبط الجودة: مدير مديرية التطوير المؤسسي وضبط الجودة	التوقيع:	تاريخ تدقيق ضبط الجودة: ٢٠٢٣/ ١١/ ١٠
الاعتماد: عطوفة الأمين العام للشؤون الإدارية والفنية	التوقيع:	تاريخ الاعتماد: ٢٠٢٣ / ١١ / ٢٧

وزارة الصحة
مديرية التطوير المؤسسي و ضبط الجودة
السياسات و الإجراءات
Policies & Procedures
ختم الاعتماد
٢٧ تشرين الثاني ٢٠٢٣

معتمدة
Approved

تتم مراجعة السياسة كل سنتين على الأقل من تاريخ اعتماد آخر طبعة:

رقم الطبعة	تاريخ الاعتماد	مبررات مراجعة السياسة

ختم النسخة الاصلية

MASTER COPY

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1- Policy:

1.1 Noninvasive Positive Pressure Ventilation (NPPV) should be ordered by the ICU physician or Pulmonologist.

1.2 The initial main settings or any change on NPPV settings done by the respiratory therapist should be discussed, approved and documented by the ICU physician or Pulmonologist.

1.3 Changes done by the ICU physician or pulmonologist should be communicated to the respiratory therapist.

1.4 ICU/floor nurse can only adjust FiO2 according to physician order and respiratory therapist should be informed

1.5 NPPV check should be done every 4 hours and when needed.

1.6 Noninvasive Positive Pressure Ventilation (NPPV) should not be prepared for standby purpose.

1.7 Any Noninvasive Positive Pressure Ventilation (NPPV) patient should be attended with respiratory therapist during transfer in or out facility.

2- Purpose:

To identify patients that would benefit from the NPPV, and to provide standards and practical advice to healthcare staff for the optimal delivery of the NPPV for hospitalized patients with acute and chronic respiratory failure , trying to reduce the incidences of patients intubation

3- Scope:

This policy is applicable for respiratory therapy unit, ICU physicians, and Pulmonologist and ICU/Floor nurses.

4- Responsibilities:

It is the responsibility of the respiratory therapist, Pulmonologist and ICU physicians to implement and follow the procedure while apply patient on NPPV.

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5- Definitions:

Noninvasive Positive Pressure Ventilation (NPPV): refers to positive pressure ventilation delivered through a noninvasive interface (nasal mask, facemask, or nasal plugs), rather than an invasive interface (endotracheal tube, tracheostomy).

6- Guideline:

6.1 Indications:

6.1.1Hypersonic respiratory failure.
6.1.2COPD exacerbation.
6.1.3Facilitation of extubation.
6.1.4Acute cardiogenic pulmonary edema.
6.1.5Respiratory failure in immune compromised patients.
6.1.6End-of-life care and DNR orders.
6.1.7Postoperative respiratory failure.
6.1.8Prevention of re intubation in high-risk patients.
6.1.9Post extubation respiratory failure.
6.1.10 Nocturnal hypoventilation (central and obstructive sleep apnea, obesity).
6.1.11 Restrictive thoracic disease (neuromuscular diseases, chest wall deformities, spinal cord injuries,).
6.1.12 Asthma exacerbation.

6.2 Contraindications:

6.2.1Cardiac or respiratory arrest.
6.2.2No respiratory organ failure (Severe encephalopathy, severe upper gastrointestinal bleeding, Hemodynamic instability or unstable cardiac arrhythmia).
6.2.3High aspiration risk of gastric content (upper gastrointestinal surgery or GI bleeding, bowel obstruction and/or vomiting).
6.2.4Facial or neurological surgery, trauma, or deformity.
6.2.5Significant airway obstruction, patients with significant upper airway obstruction (e.g., large laryngeal mass) or significant central lower airway obstruction (e.g., tracheal tumor). The obstruction can be bypassed with an invasive device.

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6.2.6Inability to cooperate/protect airway (reduced level of consciousness GCS less than 8, severe confusion/agitation) g. The need for emergent intubation.

6.2.7Untreated pneumothorax, although non -invasive ventilation is acceptable once a chest tube in place.

6.2.8Upper gastrointestinal bleeding.

6.2.9J. Recent esophageal or gastric anastomosis, generally avoid noninvasive ventilation after upper gastrointestinal surgery (e.g. gastric bypass, Esophagostomy) that involves anastomosis, due to the possibility of gastric distention with leakage of gastric contents caused by pressurized air.

6.3 Potential Complications:

6.3.1Cardiovascular compromise.

6.3.2Skin breaks down and discomfort from mask.

6.3.3Gastric distention.

6.3.4Increased intracranial pressure.

6.3.5Pulmonary barotrauma.

6.3.6Aspiration.

6.3.7Claustrophobic reaction.

6.3.8Eye irritation, ear pain, or sinus congestion.

7- Procedure:

7.1 Evaluate patient for use of NPPV appropriately monitored location, oximetry, respiratory impedance, vital signs as clinically indicated. Once a patient has been selected to receive a trial of NIV, it should be initiated as soon as possible.

7.2 Explain NPPV benefits and machine operation to patient.

7.3 Elevate the head of bed at a 30 degree angle or greater.

7.4 Select the appropriate machine.

7.5 Select and fit interface (appropriate size and type).

7.6 Apply headgear; avoid excessive strap tension (one or two fingers under strap).

7.7 Connect interface to ventilator tubing and turn on the ventilator.

7.8 Start with low pressure in spontaneously triggered mode with backup rate; pressure limited: 8 to 12 cmH2O inspiratory pressure; 3 to 5 cmH2O expiratory pressure

7.9 Gradually increase inspiratory pressure as tolerated to achieve alleviation of dyspnea, decreased respiratory rate, increased tidal volume (if being monitored), and good patient– ventilator synchrony, and adjust PEEP/EPAP and/or FiO2 according to patient's need.

7.10 Check for air leaks, readjust straps as needed

7.11 Add humidifier as indicated

7.12 Consider mild sedation in agitated patients

7.13 Perform NPPV check every 4 hours and when needed.

7.14 Monitor occasional blood gases (within 1 to 2 hours) and then as needed

7.15 Weaning from NIV may be accomplished by progressively decreasing the amount of positive airway pressure, permitting the patient to be disconnected from the NIV for progressively longer durations, or a combination of both.

8-Forms and Document:

None

9-References:

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