

## Department Specific Procedure

Entonox Administration Procedure	
Applicable to: Te Whatu Ora Whanganui	Authorised by: Associate Director of Nursing, Hospital Services
	Contact person: Clinical Nurse Manager, Emergency Department

*This policy is overarched by Te Whatu Ora Whanganui's commitment to honouring our obligations under Te Tiriti o Waitangi and the five Tiriti principles: Tino rangatiratanga; Equity; Active protection; Options; and Partnership, as articulated in Te Tiriti o Waitangi Policy. In seeking to fulfil these obligations, the organisation is guided by the values and strategy outlined in He Hāpori Ora Thriving Communities.*

### 1. Purpose

To ensure the safe and effective administration of Nitrous Oxide (Entonox) within the Te Whatu Ora Whanganui Emergency Department.

### 2. Scope

This procedure applies to all Te Whatu Ora Whanganui registered nurses within the Emergency Department (permanent, temporary, and casual), who provide Entonox as a form of analgesia.

### 3. Prerequisites

- Entonox cylinder with flexible tubing with a one-way demand valve
- Entonox delivery mouthpiece with built-in filter
- Te Whatu Ora Whanganui Medication Chart or Te Whatu Ora Whanganui Emergency Department Medication Card

### 4. Definitions

**Entonox:** a colourless, odourless gas consisting of 50% oxygen and 50% nitrous oxide which when inhaled provides fast acting, short lasting analgesia (Peate & Lancaster 2000).

### 5. Procedure

#### Health and safety/infection control

Ensure room is well ventilated (Entonox is excreted unaltered via the patient's breath and therefore could be inhaled by others in the room).

Prior to use ensure a clean mouthpiece has been placed on the flexible tubing.

The cylinder must be stored at 10 degrees centigrade or above to ensure the two gases remain mixed within the cylinder, if unsure that this has happened the cylinder will need to be tilted from vertical to horizontal several times to ensure thorough mixing (Peate & Lancaster 2000).

Ensure no lubrication or combustible material is or has been in contact with the cylinder or patient.

### **Patient assessment and education**

Registered nurses will undertake an assessment of patients requiring Entonox to establish if contraindications exist. Contraindications will be discussed with the doctor prescribing the Entonox with a record of the assessments being noted in the patient's progress notes.

Assess patient's pain level prior to administration; provide appropriate analgesia in advance of Entonox administration so as to provide longer lasting analgesic effects.

Discuss expected outcomes with patient and/or family/whānau.

### **Contraindications**

Entonox should not be utilised if the patient has a pneumothorax, chronic obstructive respiratory disease, bowel obstruction, distended abdomen, suspected air embolus, decompression sickness or maxillofacial injuries. Entonox will cause expansion where air is trapped in the body resulting in increased pressure. (Peate & Lancaster 2000).

### **Administration**

Nurses may administer Entonox by standing order. The prescription must be countersigned by a doctor within 24 hours.

Check the amount of gas available in the cylinder to ensure adequate supply available for the procedure being undertaken/expected duration necessary.

Educate the patient as to use of the mouthpiece and expected outcomes of therapy including side effects.

Patient to hold mouthpiece between teeth sealing around it with the lips, and breath normally. Encourage the patient to breathe the Entonox for at least two minutes prior to commencing a procedure.

The patient must hold the mouthpiece (if there is a momentary loss of consciousness the mouthpiece will fall away, and the gas will quickly wear off). If the patient is unable to hold the mouthpiece due to injuries/procedures being undertaken resulting in not being able to utilise their arms the registered nurse will administer the Entonox.

Turn cylinder on utilising key attached on top of cylinder.

Ensure patient breathes slow and long to draw in gas from cylinder.

### **Documentation**

Document the effectiveness of Entonox, time period utilised, outcomes of treatment and any adverse events.

## **6. Roles and responsibilities**

Registered nurses are responsible for ensuring the safe and effective administration of Entonox within the Emergency Department.

Registered nurses are responsible for ensuring documentation related to administration of Entonox.

Registered nurses are responsible for education of the patient and/or family/whānau regarding the use of Entonox as an analgesia including expected outcomes/side effects.

Registered nurses utilising this procedure as a basis for care of patients requiring Entonox as analgesia will be meeting Nursing Council Competencies (NCNZ 2011) Domain One: 1.4, Domain Two: 2.1, 2.2, 2.3, 2.4, 2.6, Domain Four: 4.1.

## **7. References**

Nursing Council New Zealand, (2011). Competencies for Registered Nurses. Retrieved 11<sup>th</sup> March 2012 from: <http://www.nursingcouncil.org.nz>

Peate, I & Lancaster, J. (2000). Safe use of medical gases in the clinical setting: practical tips. British Journal of Nursing, 9, (4): 231-236.

## **8. Bibliography**

Sealy, L. Nurse Administration of Entonox to manage pain in ward setting. Nursing Times, 98, (46), 28-29.

## **9. Key words**

Entonox