

Nasal High Flow Oxygen

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Introduction

Nasal High Flow Oxygen can be delivered safely and easily in the ward environment via an “Airvo”

The Airvo™ is a humidifier with integrated flow generator that delivers warmed and humidified respiratory gases to spontaneously breathing patients through a variety of patient interfaces.

Nasal High Flow (NHF) via the Airvo™ 1 & 2 circuit is able to deliver a user set fixed fraction of inspired oxygen at high flow rates.

- FiO₂ : 21% - 90%. 21 – 50% recommendation for ward based care
- Flow rates: 15lpm – 50lpm. 30lpm flow recommended for ward based care
- Humidification: 31°C - 37°C

Benefits of NHF

- High flow enables maintenance of FiO₂ despite increase in work of breathing and inspiratory demand
- Flushes anatomical dead space to reduce re-breathing of CO₂ and improves oxygenation of each breath

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- Humidified oxygen delivered through nasal cannula improves adherence/compliance to humidified oxygen therapy

Purpose

To ensure the appropriate and safe use of Nasal High Flow oxygen via Airvo 2™

Scope

Physicians, Nursing Staff and physiotherapists within the CDHB Christchurch hospital campus

Associated documents

CDHB Oxygen policy.

<http://www.cdhb.govt.nz/cdhbpolicies/documents/vol12/4730-oxygen-therapy.pdf>

CDHB Early warning score (EWS) policy.

<http://inraweb.cdhb.local/corp-quality/documents/PolicyEarlyWarningScore.pdf>

Clinical skills unit Adult oxygen therapy self-learning package.

<http://healthlearn.ac.nz>

Clinical Skills unit, Airvo, Instructional guide

<http://healthlearn.ac.nz>

Cleaning and disinfection of Fisher and Paykel AIRVO™ 1&2 and MYAIRVO™ humidifiers

Humidification Guideline for Oncology Inpatient Use.

G:\Division\ONC\Common\NEW ONC WEB\NURSING\Nursing Policy_Procedures_Guidelines\Humidification Use Inpatient Guideline.pdf

Relevant training

All staff should be competent with standard oxygen therapy prior to using Nasal High Flow Oxygen

Training will be given in your area as needed, please contact your relevant Clinical Nurse Specialist or Nurse Educator.

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Procedure

Nasal High flow **must** be prescribed on the back of the QMR4: This prescription will include

- flow rate
- FiO₂ range
- Target Saturations

Each patient must have a definite pathway of care documented within the clinical record.

ICU outreach must be contacted as per EWS score or if requiring a FiO₂ \geq 0.5 (50%) **unless** the patient has been documented as not for escalation of care to ICU.

Every patient will require increased nursing vigilance whilst transitioning to NHF. Observations will be taken as per the EWS management pathway.

Every patient will require assessment for Physio referral

Precautions remain the same as conventional O₂ therapy i.e. CO₂ retention, hypoxia despite therapy.

Please note that mask and tracheostomy interfaces provide humidification and oxygen but do not provide the inspiratory flow.

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Cleaning and disinfection of Fisher and Paykel AIRVO™ 1&2 and MYAIRVO™ humidifiers

Policy:

Airvos™ will be cleaned efficiently and effectively to reduce the risk from environmental contamination and/or potential cross infection of pathogenic organisms between patient use.

Each Airvo™ will be cleaned **following use for each patient.**

Purpose:

Deposits of dust and microbes have been implicated in the transmission of infection; therefore a regular cleaning and maintenance schedule is necessary to reduce the risk to patients.

Scope:

Applies to all staff involved in management and/or cleaning of Airvos™ **within the CDHB.**

Associated Documents:

CDHB Infection Prevention & Control Manual Volume 10

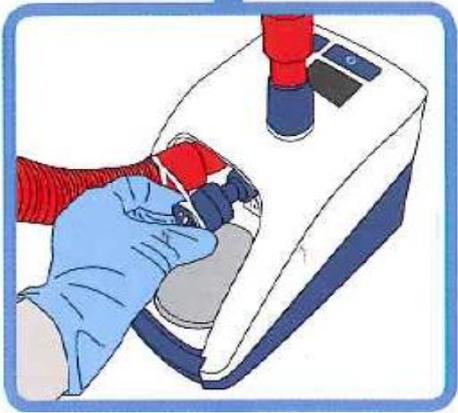
Fisher and Paykel cleaning Disinfection Kit Manual, 900PT600 Airvo Series: and Airvo 2

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Procedure

Step	Action
1	<p>Disconnect machine from patient, oxygen and mains supply.</p> <p>Wear PPE as per CDHB guidelines</p>
2	<p>Dispose of patient interface, tubing, water bag and humidification chamber into medical waste bag.</p>
3	<p>For reusable humidification chamber (MYAIRVO™): empty water rinse and place in plastic bag and seal. Label with return location and send to TSSU for reprocessing (Place in blue sterile services bin for collection).</p>
4	<p>Use detergent and water or a detergent wipe to thoroughly clean the outside surface of the unit. Allow to dry. (Where disinfection is required, ensure unit is cleaned first as above followed by an alcohol based surface wipe).</p>
5	<p>Using a sponge stick or detergent wipe, thoroughly clean the outlet elbow (right chamber port) of the machine from both ends, ensuring removal of any bio burden. Repeat as necessary using a clean stick/wipe. Dispose after use. Allow to dry.</p> 
6	<p>Connect the Airvo™ to a power supply and start the High-level disinfection process using the red disinfection hose. Ensure the cycle is complete before disconnecting.</p>

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7	<p>When the disinfection cycle is complete, unplug the Airvo™ from the power supply. Cover the Airvo™ with a clear plastic bag and seal and label with date of disinfection and signature.</p>
8	<p>Store in dry area until next use.</p>
9	<p>Air filters for the airvo should be changed every 3 months and labelled to show date changed and date for next change</p>

Procedure Owner	Clinical Nurse Specialist, Acute Medical Assessment Unit
Procedure Authoriser	Clinical Director ICU
Date of Authorisation	August 2014

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