

AH0500 MEDICAL AIR VALVES (MAV) & MEDICAL AIR FLOWMETERS, USE OF

1.0 PURPOSE

The most common use of Medical Air is to power small volume nebulizers (SVN) ie; for bronchodilator treatments, in acute care settings. Current Thorpe tube style, Medical Air flowmeters have an almost identical configuration & outlet fittings to Oxygen flowmeters, and can be mistaken for one another – especially during resuscitation events.^{1,2,3,5,6,7}

This policy will reduce the risk of Adverse Events (AE) and improve the safety and quality of patient care involving use of Medical Air in all acute care facilities within Interior Health (IH)

2.0 DEFINITIONS

SVN	Small Volume Nebulizer for delivery of medical gas powered Aerosol Medications
MAV	Medical Air Valve with preset flow of 7-8 Lpm

3.0 POLICY

3.1 Medical Air Valve (MAV) is the standard flow device used to power a SVN



3.1.1 When Medical air is used to power a SVN, (eg; Ventolin / Combivent treatments) the clinician will use the MAV, which has a preset flow of 7-8 Lpm .



3.1.2 Medical Air Valves may be retained in the wall outlet beside Oxygen flowmeters.

CAUTIONS :

Inadvertent errors in Air-Oxygen selection are less likely but are still possible.

The MAV protrudes horizontally ~ 5" (8cm) from the wall outlet, but not more than a suction regulator does. Exercise caution especially if the MAV is obscured by a curtain.

Policy Sponsor: Vice President, Medicine and Quality	1 of 2
Policy Steward: Director, Critical Care Network & Network Clinical Nurse Specialist Services	
Date Approved: May 2006	Date(s) Reviewed(r)/Revised(R): January 2012 (R); December 2015 (r)

3.2 Thorpe tube Medical Air flowmeters



Thorpe tube Medical Air flowmeters and Oxygen flowmeters are visibly similar and have common outlet thread patterns which makes inadvertent errors in Air-Oxygen selection possible ^{1,2,3,5,6,7}

The use of Thorpe tube Medical Air flowmeters is prohibited.

General Care : The Respiratory Therapy Leadership council and the IH Medical Director of Critical Care prohibit the use of air flow meters from our IH sites. For patients who require high humidification but do not necessarily have an indication for supplemental oxygen, source a humidifier with low FiO₂ options i.e. 0.24 -0.28. There would be no harm in providing humidity with low percentage oxygen to patients with an indication for humidification that do not have indication for supplemental oxygen.

Neonatal Care : The IH Neonatal Clinical Working Group and IH Medical Director of Perinatal Care prohibits air flow meters from our IH neonatal care sites. Blended gases (Air :Oxygen blender) must be available in the delivery room, nursery and during transports at every IH facility providing perinatal care. O₂ saturation monitoring is mandatory within 2 min of commencing resuscitation or oxygen therapy in a neonate. See: i) current Neonatal Resuscitation standards, ii) Oxygen Therapy in Neonates – Clinical Practice Standard – Neonatal Care Interior Health 2011

3.3 Purchasing Restriction

Attempts to order Thorpe tube Medical Air flowmeters will result in an automatic cross reference to Medical Air Valve (MAV), order numbers are 134340 -134344. Exceptions to this policy must be requested to IHA - Quality & Patient Safety.

4.0 REFERENCES

1. Oxygen Therapy in Neonates–Clinical Practice Standard–Neonatal Care Interior Health 2011
2. Guidelines for the use of air flowmeters to power small volume nebulizers (SVN) Patient Care Practice Guideline 9.3.1.1 April 2005, Capital Health , Edmonton, Alberta
3. Oxygen Therapy and Respiratory Care Resource Manual
<http://inet.interiorhealth.ca/infoResources/clinresources/Pages/RespCareOxyTherapy.aspx>
Respiratory Therapy Patient Safety Task Group 2005, Interior Health, British Columbia
Adverse event summary – Quality & Patient Safety – Wrae Hill , Interior Health , 2005
4. Patient Safety Advisory Veterans Health Administration Warning System , March 5, 2002
5. Air-Oxygen Flowmeter Confusion. *Anaesthesia*. 2003,Vol.58
6. **Thin Air** - Spotlight Case on a patient being erroneously given medical air rather than oxygen. David M. Gaba, MD Agency for Healthcare Research & Quality – October 2004
www.ahrq.gov/casearchives

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