

Restricting Medical Air Access for Safety by Controlling Air Flowmeters

What is this about?

The possibility of tubing connections being inadvertently mixed up between wall outlets for medical air and oxygen has been a long-standing patient safety issue around the world and in Alberta. Evidence supported the use of a multifaceted approach to properly address this complex issue, so a provincial team developed and assessed a combined strategy of adding AirGuards (see below) and controlling the inventory of air flowmeters as an effective way to reduce the risk of misconnections and keep patients safe.

Beginning in March 2016; AHS and Covenant Health sites adopted this permanent combined strategy across the province:

- Remove all air flowmeters from wall outlets and **retain only a very small number** of air flowmeters;
- Add **AirGuard safety covers** (or caps) to all retained air flowmeters;
- Implement an appropriate **inventory control** process for all retained air flowmeters that have been converted with AirGuards;
- Prescribe or interchange metered-dose inhalers with spacers when possible, rather than delivery of respiratory medicines using nebulizers.

This strategy applies to all disciplines, to all care settings, and to all staff and physicians.

What are the results?

Periodic audits indicate adherence to this strategy and the incidence of logged safety events has dropped to almost nil. It's become difficult to acquire AirGuards, so ongoing education and careful inventory control of air flowmeters is essential. Health Canada continues to encourage the industry to develop technologies that are evolved in such a way to account for this issue.

This work was a joint effort between the Respiratory Health Section, Medicine Strategic Clinical Network (SCN) and Health Professions Strategy & Practice (HPSP).

For AHS & CH staff, please visit Insite HPSP → Resources to access the full toolkit.

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