Do Not Use Pre-filled Water Bottles for Humidification of Oxygen

What is this about?

Increasing evidence from around the world shows that pre-filled water bottle humidification of oxygen therapy is not effective. As a result of inadvertent misconnections that result in a disruption of oxygen flow, the "Do not use Pre-filled Water Bottles for Humidification of Oxygen" Professional Practice Notice was implemented province-wide (with an associated toolkit).

Reports like the one below (from the province-wide system for patient safety reporting system) prompted action on this issue:

"After being placed on oxygen, the patient continued to experience shortness of breath and low oxygen saturations. The patient's son pointed out a strange noise that appeared to be coming from the oxygen flowmeter. On investigation, it was discovered that the pre-filled water bottle was not correctly connected, and oxygen was not flowing to the patient. The bottle was removed, proper connection was established, and patient condition improved."

As a result of the project, AHS has adopted the following provincial direction:

- Use of pre-filled water bottles to humidify supplemental oxygen therapy provides no benefit to the patient and the risk of misconnection is high.
- Eliminating the use of these pre-filled water bottles reduces the risk of misconnection and improves patient safety.
- AHS no longer uses pre-filled water bottles for humidification of oxygen therapy.

What are the results?

Since the first phase of this practice change in early 2016, safety reports related to this issue have ceased and no operational or patient concerns have been raised. Audits confirm that pre-filled water bottles are no longer being purchased or used.

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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