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An Roinn Sláinte
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Interruption of high flow nasal oxygen during transfer

For Action:

Chief Executives HSC Trusts
Chief Executive HSCB/PHA
Local Covid 19 Leads

Related documents:

Implementation: Immediate

SUMMARY

NHS Improvement has issued the Patient Safety Alert **NatPSA/2020/002/NHSPS (TAB A)**

Specialised equipment is used to deliver high flow nasal oxygen (HFNO) to babies, children and adults in acute respiratory failure without hypercapnia. Current national guidance states that HFNO is not advocated in COVID-19 patients based on lack of efficacy, oxygen use and infection spread; if used temporarily, or for other patients, it must be included as part of the daily count of the number of high flow ventilatory systems in use.

Some HFNO delivery devices have a transport mode, but most require mains power and will not deliver oxygen during transfer* unless attached to a compatible uninterruptible power supply (UPS) device. NHSI identified four deaths in a recent two-year period from interrupted HFNO during patient transfer; further reports described hypoxia, cyanosis, collapse and respiratory arrest.

ACTION

Chief Executives of HSC Trusts are asked to:

1. Appoint a nominated lead to oversee the actions required in this alert.

2. Identify all devices used to provide HFNO that do not have an in-built transport mode.

3. Add clear and visible labels to these HFNO delivery devices stating:

    a. even brief interruptions to mains power supply will lead to interruption of oxygen therapy and subsequent respiratory or cardiac arrest.

b. do not start HFNO in any emergency department or short stay unit without a plan for how to transfer the patient onwards.

4. If your organisation has already purchased UPS device/s to use with HFNO:

   a. identify a storage place for your UPS that can be accessed 24/7.

   b. label all HFNO devices with the location of a compatible UPS.

   c. allocate responsibility for ensuring the UPS is returned, charged and prepared for next use.

5. Please ensure that actions 1-4 are implemented within 1 week.

Chief Executive, HSCB and PHA should:

- Disseminate this circular to all relevant HSCB/PHA staff.

BACKGROUND

The review of these incidents suggests:

- some staff may assume devices have an internal battery
- staff do not realise how rapidly the patient is likely to deteriorate with even brief interruption of HFNO
- a misconception is that less intensive methods of oxygen delivery (eg reservoir masks with an oxygen cylinder on full flow) are an adequate substitute during transfer; however, most patients requiring HFNO need more intensive intervention such as intubation if HFNO is interrupted
- staff have no obvious visual cue to the criticality of HFNO and may confuse it with low-flow nasal oxygen
- emergency departments starting a patient on HFNO then find they have no access to a supplementary battery source or transport mode to move the patient safely out of the department.

In the longer term, purchasing additional equipment supported by the manufacturer of your HFNO device, and redesigning patient pathways, protocols and staff training could address the underlying causes, but the actions in this alert help reduce the immediate risk.

Enquiries:

Any enquiries about the content of this circular should be addressed to:

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Yours sincerely

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