

# Estates and Facilities Notice

**Reference:** EFN2302  
**Issued:** 23 Nov 2023

## Oxygen Regulator fitted to Medical Air Cylinder

### Summary

A bullnose regulator marked for oxygen administration was attached to a medical air cylinder in error and placed on a transfer trolley. The cylinder colour coding and label indicated medical air. A portable ventilator was connected to the oxygen regulator on the medical air cylinder in preparation for a patient requiring oxygen while being transferred. The ventilator's 'low oxygen' alarm sounded to alert staff and the medical air cylinder was replaced with an oxygen cylinder. (Note: some ventilators may not have a 'low oxygen' alarm.)

Within the UK and Ireland, the same type of bullnose connector is used on cylinders of several different medical gas products and lets a regulator marked for administration of a particular medical gas be connected to a cylinder containing a different gas.

### Action

1. Review operational procedures / protocols and ensure they require staff to check the medical gas cylinder labelling and colour coding, to confirm that the correct medical gas has been selected, before connecting an appropriate regulator with matching labelling / colour coding, for administration of the selected medical gas.
2. Review training records and ensure that all staff involved in the management and use of medical gas cylinders have received adequate training on operational procedures / protocols relevant to their role.
3. Liaise with your medical gas supplier regarding their programme for changes to cylinder colour coding and valve connectors and develop an action plan to manage the change process within your organisation, which includes staff refresher training incorporating the changes.

### Deadlines for action

Actions underway: 01 January 2024

Actions complete: 01 May 2024

### Equipment details

Oxygen and Medical Air cylinders with 5/8" BSP bullnose connection (BS 341 Part 3).

## Background

BS 341 Part 3 specifies a 5/8" BSP bullnose connection for transportable cylinders of medical oxygen, medical air, medical carbon dioxide mixtures, medical helium, medical helium/oxygen mixtures and medical oxygen/carbon dioxide mixtures.

<sup>1</sup> To address this issue and improve safety, an agreement has been reached between the British Compressed Gas Association (BCGA) and the Medicines and Healthcare products Regulatory Agency (MHRA) that the 5/8" BSP bullnose connector is retained for medical oxygen cylinders, as these are the most numerous, and that connectors on cylinders of other medical gas products currently using this connector are changed to a product-specific connector. This transition is planned to be completed by the end of 2027.

<sup>2</sup> It should be noted that revisions to colour coding of medical gas cylinders is scheduled to take place over the same period.

Your supplier of medical gases should liaise with you on upcoming changes that may require you to carry out checks on your equipment to ensure ongoing compatibility.

## Manufacturer contact details

Applies to medical gases from multiple suppliers.

## Suggested onward distribution

Heads of Estates

Approved Person – Medical Gases

Heads of Pharmacy

Heads of Portering Services

All staff that change regulators on medical gas cylinders (including theatres, ED, portering. etc.)

Medical gas committees / groups and medical gas cylinder groups

## References

<sup>1</sup> British Compressed Gas Association (BCGA) – Technical Information Sheet 21. Medical Gases. BCGA Policy on Valve Outlets.

<https://bcga.co.uk/wp-content/uploads/2023/06/BCGA-TIS-21-Revision-3-29-06-2023.pdf>

<sup>2</sup> British Compressed Gas Association (BCGA) – Technical Information Sheet 20. Medical Gases. BCGA Policy on Colour Coding.

<https://bcga.co.uk/wp-content/uploads/2023/06/BCGA-TIS-20-Revision-3-28-05-2023.pdf>

## Enquiries

This notice has been compiled under a partnership arrangement by the organisations below and it has been distributed across the UK. Enquiries should be directed to the appropriate Regional Office quoting the alert reference number **EFN2302**.

**Accessibility:** Please contact us using the above details if you are blind or have a sight impairment and would like to request this alert in a more suitable format.

**England:**

Enquires should be emailed to [nhsi.mb-defectsandfailures@nhs.net](mailto:nhsi.mb-defectsandfailures@nhs.net) or call 07850 913 690.  
Defects or failures should be reported on this system: <https://efm.digital.nhs.uk/>

The web-based D&F reporting system is managed by NHS Digital on behalf of NHS Improvement. For further information on this system, including obtaining login details, please contact the efm-information Helpdesk. Tel 0300 123 2106.

**Northern Ireland:**

Enquiries and adverse incident reports in Northern Ireland should be addressed to:

Northern Ireland Adverse Incident Centre, CMO Group,  
Department of Health  
Tel: 028 9052 3868 Email: [niaic@health-ni.gov.uk](mailto:niaic@health-ni.gov.uk)  
<http://www.health-ni.gov.uk/niaic>

Please report adverse events in Northern Ireland to NIAIC using the [forms on our website](#).

**Scotland**

Enquiries and adverse incident reports in Scotland should be addressed to:  
Incident Reporting and Investigation Centre (IRIC)  
Health Facilities Scotland, NHS National Services Scotland  
Tel: 0131 275 7575 or E-mail: [nss.iric@nhs.scot](mailto:nss.iric@nhs.scot)

Please report adverse incidents in Scotland to IRIC here: [how to report an adverse incident](#)

NHS National Services Scotland is the common name for the Common Services Agency for the Scottish Health Service <https://www.nss.nhs.scot/>

**Wales**

Enquiries and adverse incident reports in Wales should be addressed to:

NHS Wales Shared Services Partnership – Specialist Estates Services  
4<sup>th</sup> Floor, Companies House, Crown Way, Cardiff CF14 3UB  
Tel: 029 2090 4118 or E-mail: [efa.ses@wales.nhs.uk](mailto:efa.ses@wales.nhs.uk)

# Appendix

Images of a typical cylinder, bullnose valve and bullnose regulator assembly  
[503365-Healthcare Bullnose Cylinder Instruction Guide leaflet\\_07.indd \(boconline.co.uk\)](#)

Bullnose valve on cylinder



Bullnose regulator connected to bullnose valve

