

Safety Action Notice

Reference **SAN(SC)20/05**

Issued **07 April 2020**

Review Date **07 April 2021**

Protection of hospital oxygen pipeline systems through managed distribution of oxygen-dependent patients (COVID-19)

Source: This notice is based on the English Estates and Facilities Alert NHSE/I – 2020/002 issued by NHS Improvement.

Summary

The performance of hospital oxygen pipeline systems will be compromised if the demand from oxygen-dependent patients exceeds their design limits. Clinicians, managers and engineers should collaborate on the safe distribution of patients across healthcare facilities.

Action

- Approved guidance must be followed to achieve maximum sustainable flow from existing installations. Unapproved procedures may cause permanent damage, and there may be no spares available to repair.
- All oxygen alarms should be followed up without delay.
- Ensure that there are suitable arrangements to maintain piped oxygen supply in the case of an emergency, e.g. back up tanks, provision of a mobile unit, etc.
- Plan for emergencies, including the potential for relocating patients to another facility if your system is nearing capacity.
- Clinicians and managers must engage with their engineers in order to safely look after their patients and plan their surge capacity. Health boards will have an Approved Person and Authorising Engineer for Medical Gasses.
- Area and regional leads must collaborate with individual hospitals to manage the location of patients that require oxygen and ensure this is considered when planning mutual aid, i.e. transfers between hospitals to increase capacity for patient care. This will help to ensure that critical oxygen systems are not damaged, compromising patient safety and the whole hospital.

Action by

- Chief Executives, Medical Directors and Directors of Estates and Facilities

Deadlines for action

Actions underway: Immediate

Problem / background

Every patient requiring O₂ on wards draws on the oxygen storage tank. With hospitals now treating a large proportion of their inpatients for COVID-19 infection, the draw is exceptionally high. The result is that some hospitals are drawing more oxygen from their tanks than the maximum flow for which they were designed.

This carries the risk of icing that could cause flow to drop unexpectedly, compromising supply to patients and/or permanent damage to the system.

Distribution

Ambulance Services

Capital Planning &

Design

Critical care

Emergency Department

Estates and Facilities

Health & Safety

Hospices

Intensive Therapy Units

Medical

Medical Physics

Nursing

Operating Departments

Pharmacy

Respiratory Medicine

Risk Management

Supplies/Procurement

Resources

1. BOC - Management of Bulk Medical Oxygen Systems
[Advice on Pipework pressure and vaporisation.pptx](#)
2. Air Products - Increased Demand on Medical Oxygen Supply Systems MANAGING ICE BUILD UP
[Increased Demand on Medical Oxygen Systems March 2020 FINAL 2.1.pdf](#)

Enquiries

Enquiries (and adverse incident reports) in Scotland should be addressed to:

Incident Reporting & Investigation Centre (IRIC)

NHS National Services Scotland

Gyle Square, 1 South Gyle Crescent, Edinburgh EH12 9EB

Tel: 0131 275 7575 Email: nss.irc@nhs.scot

Report options are available on the HFS website: [How to report an Adverse Incident](#)

Further information about reporting incidents can be found in [CEL 43 \(2009\)](#) or by contacting IRIC at the above address.

NHS National Services Scotland is the common name for the Common Services Agency for the Scottish Health Service.
www.nss.nhs.scot

© Crown Copyright 2020

Addressees may take copies for distribution within their own organisations