

HSP 22 Use of oxygen

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Briefings

Having read this procedure all key points must be communicated to all staff that handle oxygen. This must take the form of a briefing based around the RAG28 (Risk assessment on working with oxygen) which should be recorded with signatures of attendee's.

If you require any further assistance in the development of the team talk please contact your Safety, Health, Environment & Quality Manager.

1. Introduction

The use of medical oxygen as oxygen therapy is common practice within Elizabeth Finn homes. This involves the use of a portable oxygen cylinder and associated tube / face mask or ventilator.

2. The problem

Oxygen is colourless, odourless and cannot be detected by the senses. Oxygen behaves differently to air, in pure oxygen materials such as textiles, rubber and metals can spontaneously combust and burn. Pure oxygen will also react violently with oils and grease. A leaking valve or hose from an oxygen cylinder in a poorly ventilated room can increase the oxygen concentration to a dangerous level.

The main causes of fire and explosion when using oxygen are:

- Oxygen enrichment from leaking equipment
- Use of materials not compatible (oil & grease).
- Incorrect operation of equipment.

3. What the Regulations require

A careful examination of the risks from storing, transporting and using oxygen is required. Storage of oxygen cylinders should be in a designated labelled room.

Cylinders and associated equipment requires examination every 5 years, this is carried out by the cylinder supplier.

4. Assessing the risk

The main risks associated with the use of oxygen are:

- Increased fire hazard (Oxygen supports combustion of materials).
- Oxygen enrichment of room.
- Manual handling of cylinders for staff.

To adequately manage the risk of fire it is important that the oxygen equipment is not used anywhere near where there is an open flame (this includes candles on birthday cakes).

Oxygen enrichment can be minimised by following the following precautions: -

- Never place oxygen equipment near curtains or cover with clothing.
- Never put cannula or mask on bed or chair whilst oxygen supply switched on.
- Never use oxygen cylinder under clothing.

5. General advice on controls

Cleanliness – The following precautions should be followed:

- Keep equipment clean (only use clean damp cloth with warm water).
- Alcohol gel – All traces of alcohol gel must be allowed to evaporate before handling any oxygen cylinder or equipment. Your hands should be completely dry.

- Never use oil based creams and moisturisers when handling the equipment (includes oil based moisturisers, vaseline, baby lotion, sun creams).
- Ensure clothing is free from oils, grease and easily combustible materials.

Handling of cylinders – Storage of cylinders where possible should facilitate reduced manual handling. Trolleys with cylinders strapped on should be used for transportation of large size cylinders where possible. Where not possible safety shoes (with toe protection) should be worn if transporting large size cylinders.

Operation of equipment – Always open valves slowly. Rapid opening can cause frictional heat and result in a fire. Ensure that the cylinder valves are closed when not in use.

Signage

Example signage to display is available in Appendix HSP 22A Oxygen signage



Resident room signage



Clinical room signage

6. Storage areas

Two types of storage areas are used within EFHL: -

1. Local storage (ready to use rooms holding small number of cylinders).
2. Dedicated cylinder store.

Local Storage

Where it is essential to hold a number of cylinders for immediate use a suitable lockable room should be selected. Storage areas should be well ventilated, kept clean and away from any heat sources. The room should not have any flammable materials (paints, oils or grease) and quantities of combustible materials (paper, cardboard) should be minimised.

The room should be marked “Oxygen” and not be adjacent to a fire exit.

Dedicated cylinder store

Cylinder stores should be located at ground level (not underground) and located near to delivery point. The location of these should be marked on the site emergency plan as fire officers will need to be informed of their presence. Stores should not be located in close proximity to any other installation that may present a fire risk (eg kitchen, laundry or boiler room). All stores should have adequate ventilation and be free from naked flames and ignition sources.

The store or area should be signed "Oxygen storage area – smoking, welding and naked lights prohibited". Fire extinguishers should be available and store should be kept locked.

Adequate means of securing large cylinders should be provided to prevent falling, (eg racks and chains). Empty and full cylinders should be separated

7. Additional precautions

When using oxygen on your premises, the following additional precautions should be in place:

- Accurate record of number and location of cylinders (to be available for Fire Officers).
- Check ventilation in room is adequate.
- Check fire extinguishers are available and ready to use.
- Check escape routes are clear.
- Ensure appropriate signage on door.

8. Training

Staff handling oxygen should have training in manual handling techniques and cylinder changing procedures.

9. Associated documents

- HSP 22A Oxygen signage
- RAG 28 Working with Oxygen

10. A Summary of the main points

Check that:

- Staff have been briefed on main hazards associated with handling of oxygen (RAG28)
- Storage arrangements are adequate.
- Additional fire precautions have been undertaken.

11. Document history

Author	Steve Andrews (Health & Safety Manager)
Date of Implementation	01/08/2015
Date of next full review	01/01/2027

Issue	Date	Author	Reason
1.0	01/08/2015	Steve Andrews	New document.
2.0	15/01/2018	Steve Andrews	Full review – minor corrections.
3.0	13/01/2021	Steve Andrews	Full document review - additional information provided on signage.
4.0	30/01/2024	Steve Andrews	Full document review – Section 9 added – Associated documents
4.0	24/02/2024	Steve Andrews	Banner updated, no other changes, issue number kept same.