

Medical Gas System Training For Designated Nursing Officers

Target audience

All senior Nursing personnel with responsibility for signing Permits to allow engineering work on medical gas systems, especially those with responsibility for training other personnel.

What will be covered?

Potential candidates / course purchasers should note that **Sessions 1 and 2** and parts of **Session 3** that deal with specific medical equipment e.g. flowmeters will be delivered only as **very** short revision sessions. Therefore, if familiarity with these topics is required, additional time should be allowed to cover the more detailed training needed.

For a more in depth treatment of more specialist aspects of MGPS management, discrete short modules are also available: these are also detailed below.

For the one-day course stress will be placed on the following operational aspects:

- Reasons for using a MGPS Permit to Work System and the role of the Nursing staff in both authorising work on a medical gas system and accepting system back into use following engineering work.
- Emergency isolation of a ward / department in the event of a serious leak of a medical gas or a fire in the area.
- Protocols for responding to medical gas alarms, both routine and emergency.
- Liaising with the Authorised Person (MGPS) to ensure effective MGPS operation and maintenance

A case study involving completion of a Permit to Work Form will be presented as a class exercise.

Course content

1). *Medical Gas Cylinder Safety*

- a). The role of medical gases as medicines
- b). The dangers of medical gases and precautions to ensure patient and staff safety during their use.
- c). How to identify medical gases supplied in cylinders by cylinder size, valve type and colour coding.
- d). Safe handling, storage and transport of medical gas cylinders.
- e). Connection and disconnection of medical equipment to/from cylinders.

2). *Medical Gas Pipeline Systems Safety*

- a). Medical gases supplied from pipeline systems.
- b). Hazards of pipeline systems.
- c). Medical gas pipeline terminal units and flexible, colour-coded hoses.
- d). Pipeline alarm systems and what they mean and how to react to alarms.

3). *General medical gas system management and good practice*

a). Gas conservation – the role of good practice

- Cylinder contents gauges and gas wastage
- Flowmeters and gas wastage
- CPAP machines and system resilience

b). Preventing system and equipment pollution / cross connection

- Preventing cross connection – Blenders and anaesthetic machines
- Correct use of suction controllers – filter and pollution control mechanisms
- Correct use of medical air systems and flowmeters
- Maintaining system cleanliness

c). Managing work on the medical gas pipeline system (MGPS). Use of the MGPS Permit to Work System and the role of the Designated Nursing Officer

- Reasons for using the Permit system for MGPS
- Nominated personnel and their responsibilities
- The roles of Matron and DNO
- Liaising effectively with the MGPS Authorised Person
- The MGPS Permit Form
- Filling out a Permit Form correctly (Practical exercises)
- Carrying out correct actions on completion of the work
- Problems that may arise during MGPS work and how these may be resolved.

d). Coping with medical gas system emergencies

- Distinguishing between “normal” and “fault” medical gas alarm indications.
- Coping with damage to terminal units and serious gas leaks.
- Using an AVSU for emergency isolation of a medical gas supply
- Reacting correctly in the event of fire.
- Reacting correctly in the event of total electricity supply failure.
- Reacting correctly in the event of total or partial gas supply failure.
- Identifying a contaminated gas supply.