**Policy Title:** Medical Gas Operational Policy

**Executive Summary:** This policy covers the provision and management of Medical Gas Pipeline Systems (MGPS) and Medical Gas Cylinders within the East Cheshire NHS Trust.

It is the Trust’s policy to provide a safe, secure and reliable medical gas service to both patients and staff using guidance and references as described in Health Technical Memorandum HTM 02-01(2006)

**Supersedes:** Medical Gas Pipeline Systems (MGPS) Management Policy

**Description of Amendment(s):**

**This policy will impact on:**
This policy will be applicable to all departments within the Trust associated with the supply and use of Medical Gases.

**Financial Implications:**
No additional financial implications

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**APPROVAL RECORD**

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| Consultation | October 2013 |

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| Approved by Director | |
| Approved by A.D | May 2014 |
| Approved by HEO | May 2014 |
| Approved by Chief | |
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Preface

This document “Medical Gas Operational Policy” is to be read in conjunction with “Medical Gas Procedural Document”. These documents have been compiled for and are maintained by the East Cheshire NHS Trust (the Trust) to provide policy and procedures for the management and use of medical gases within the Trust as a whole.
1. General Policy Statement

1.1 Policy Statement

Medical Gas Pipeline Systems (MGPS) follows the convention used in the Department of Health Document Health Technical Memorandum 02-01 (HTM02) and is defined as central pipeline systems and cylinders supplies, by which means The East Cheshire NHS Trust (the Trust) provides a safe, convenient and cost-effective supply of medical gases to points where these gases can be used by clinical and nursing staff for patient care.

- The Trust recognises its responsibility to implement in full, the safe management of the Medical Gases in accordance with the statutory requirements, current guidelines and best practice.
- The Trust accepts that safe management of Medical Gases requires a high level of commitment, professional competence and adequate resources.
- The Trust recognises that it is mandatory for key personnel to receive appropriate training relevant to their particular roles and activities.
- The Trust’s Chief Executive is responsible for the management of the MGPS. In practice, this responsibility is delegated to other individuals, as detailed herein and in subsequent sections.
- Day to day management of the MGPS at the Trust is delegated to the site’s Coordinating Authorised Person for Medical Gas Pipeline Systems (AP (MGPS))
- The provision of MGPS within the Trust is the responsibility of the Estates Department
- Before ANY work on a medical gas pipeline system can commence a Permit to Work form MUST be issued, fully completed and signed by the relevant:
  - Designated Nursing Officer (DNO) and /or Designated Medical Officer (DMO),
  - AP (MGPS) and
  - Competent Person (MGPS).

Permit to work procedures are detailed in the Trust’s “Medical Gas Procedural Document”.

1.2 Statutory Requirements

It is the Trust’s policy to fully comply with all statutory requirements with respect to Health and Safety. The Trust considers mandatory all specific guidance by DOH Estates & Facilities directorate, European or International Standards Organisations in particular with regard to MGPS or associated services.

The main guidance relevant to this Policy is listed in Appendix D of this document

1.3 Scope

This Policy along with the trust document “Medical Gas Procedural Document” are designed for use by all staff involved with MGPS and related equipment as defined in Health Technical Memorandum 02-01: 2006. It applies throughout the Trust to all fixed medical gas pipeline and manifold systems, liquid oxygen storage plant, medical compressed air and vacuum systems and anaesthetic gas scavenging systems as well as to individual medical gas cylinders; their storage, transportation and setting to work.

Any compressed gas and vacuum supplies to general engineering workshops and pathology department equipment are separate from the general MGPS and are NOT included in this policy, although the general principles of safety embodied here should be applied to all compressed gas and vacuum systems.
The designated boundary at the user end of these systems lies at the medical gas outlets i.e. the wall or pendant mounted terminal unit, and at the cylinder outlet. The operation of the medical and surgical equipment, connected to these points are NOT covered by this policy. The Trust is responsible for the specification, purchase, maintenance and mode of use of any equipment connected to the MGPS. Separate Trust policies cover such equipment and usage. (Please refer to East Cheshire NHS policies)

Medical gases must not be used for non-medical purposes, other than as a test gas for medical equipment. Wherever possible, medical air must be used as the power source for medical equipment such as ventilators; oxygen should not be used as a driving gas.

1.4 Relationships to other policies
This Policy should not be read in isolation, the following policies shall also be taken into consideration.

- Control of Contractors
- COSHH
- Emergency planning
- Fire
- Health and Safety
- Infection control
- Manual Handling
- The Medicine Policy
- Medical Devices
2. Responsibilities

2.1 Chief Executive (Executive Manager)
Ultimate management responsibility for MGPS, including the allocation of resources and the appointment of personnel lies with the Trust’s Chief Executive. Responsibility for the day to day management and control of the MGPS is delegated to the trust’s Coordinating Authorised Person (MGPS) and Authorised Persons (MGPS) respectively.

Duties and responsibilities:
- To ensure that the Trust has a formal agreement with a suitably recognised Authorised Engineer.
- To formally appoint all Authorised Person(s) after they have been assessed and recommended by a suitably qualified and experienced Authorising Engineer. (See Appendix C1).
- The Trust has a formal agreement with a suitably recognised Q.A.
- To ensure that through the Trust’s management structure procedures are in place for all staff responsible for MGPS to receive training in safe use of medical gases, see section 3.
- To ensure that the Trust’s management structure is adequate to permit the implementation of this policy with the following recognised roles:
  - Coordinating Authorised Person(s)
  - Authorised Person(s) -AP
  - Chief Pharmacist
  - Designated Nursing/Medical Officer – DNO/DMO
  - Competent Person(s) –CP

The Contact, names, and role detail of the staff responsible of medical gas systems are listed in appendix A.

2.2 Director of Finance / Estates (Designated Person)
The Director of Finance / Estates has the overall responsibility to provide assurance to the East Cheshire NHS Trust board at board level

2.3 The Associate Director of Estates (Deputy Designated Person)
The Associate Director of Estates has the overall responsibility for the Estates Department and should monitor the implementation of this policy.

2.4 The Head of Estates for Operations (Nominated Person)
Once delegated in writing. The Head of Estates for Operations has the delegated responsibility to monitor the operation of this policy and responsibility for the Authorised Persons (MGPS).

2.5 Authorising Engineer (AE (MGPS)) BOC
The Authorising Engineer (MGPS) is an appropriately qualified engineer with a minimum qualification of I.Eng. and with at least 5 years relevant professional experience. In addition the AE (MGPS) will have attended accredited Authorised Person (MGPS) and Authorising Engineer courses within the last 3 years. This person will have specialist knowledge of MGPS, in particular the MGPS for which the Authorised Person(s) (MGPS) will assume responsibility on appointment. He/she acts, and is employed, independently of the Trust. Contact details can be found in appendix A4.

Duties and responsibilities:
- To ensure that their knowledge of the Trust’s MGPS remains current.
- To advise the trust on the number of APs (MGPS) required to effectively manage the systems.
- To assess the suitability of prospective AP(s), for appointment within the Trust.
• Recommending after satisfactory evaluation to the Chief Executive or his / her nominated representative, those persons deemed suitable to be appointed as Authorised Persons (MGPS).
• Reviewing the management systems of the MGPS, including the permit to work system annually.
• To hold summary details of plant pipeline and site records for the Trust.
• Monitoring the implementation of the Operational policy and procedures.
• To provide advice to the Trust and the APs (MGPS) on all matters relating to the design and management of it’s MGPS.

2.6 Coordinating Authorised Person (MGPS) (Estates Engineering Manager)

In addition to the role of the Authorised Person (MGPS) below, the Coordinating Authorised Person (MGPS) shall have specific line management responsibility for:

The management of procedures and systems enabling the safe discharge of the role of AP (MGPS), including:
• To maintain up to date copies of all relevant standards and guidance, together with items defined by HTM02
• To assess the suitability of prospective contractors and personnel, and maintain a register of Competent Persons (MGPS) and specialist contractors.
• To annually review each Contractor and Persons continued inclusion in the register. (The register is to be appended in the trusts ‘Medical Gas Pipeline Systems – Medical Gas Procedural Document in appendix E).
• To assess the suitability of Trust based Competent Persons (MGPS) and maintain a register of their inclusion. The register is to be appended in the trusts ‘Medical Gas Pipeline Systems – Medical Gas Procedural Document in appendix E4).
• To appoint after adequate training and due examination, Trust based Competent Persons (MGPS).
• To ensure that the Trust’s MGPS maintenance specification and schedule of equipment (including all plant, manifolds, pipework, valves, terminal units and alarm systems) are kept up to date. “Medical Gas Procedural Document” in Appendix K
• To organise such training of Estates staff (and other staff if requested) and / or transfer of MGPS information, as required.
• To maintain up-to-date and accurate “as fitted” record drawings (including valve/key numbers/TU identification).
• To prepare or commission compliance surveys of the MGPS and associated risk assessments.
• To propose remedial actions arising from such surveys and assessments.
• To table a summary of outstanding non-compliances and risks at the Medical Gas Committee Meetings.
• To ensure that appropriate safety warning signs are prominently displayed in accordance with current requirements, guidelines and best practice and to ensure these include emergency contact numbers appropriate to the area and MGPS installation.

2.7 Authorised Person (AP) (MGPS) (Operations / Decontamination Estates Officer)

An AP (MGPS) is an appropriately qualified Estates & Facilities engineer with a minimum of a HNC level or equivalent in an engineering discipline and at least 3 years relevant professional experience. He/she will also have successfully completed an accredited Authorised Person (MGPS) training course, been assessed as suitable by the Authorising Engineer every 3 years and appointed / re-appointed in writing by the Chief Executive.
Each Authorised Person (MGPS) must have sufficient site knowledge and experience, together with adequate resources (as-fitted drawings, key registers, key safe, permit to work system (MGPS), etc.) to manage the systems safely.

**Duties and responsibilities:**
The AP (MGPS) is the primary lead in all matters relating to the MGPS, specifically his duties and responsibilities will include:

- The safe and efficient day-to-day management of the MGPS system, in accordance with Trust policy & procedures all statutory requirements, current guidelines and best practice.
- To ensure that the Trust’s MGPS are managed and maintained in accordance with HTM 02-01, and the Trust’s maintenance specification. (“Medical Gas Procedural Document” in appendix K)
- To be responsible for the permit to work system (MGPS), including the issue of permits to Competent Persons (MGPS) for all servicing, repair, alteration and extension work carried out on the existing MGPS.
- To be responsible for the supervision of work carried out by Competent Persons (MGPS), for the standard of that work and the documentation provided.
- To ensure that appropriate safety warning signs are prominently displayed in accordance with current requirements, guidelines, best practice and to ensure these include emergency contact numbers appropriate to the area and MGPS installation.
- To organise such training of Estates staff (and other staff if requested) and / or transfer of MGPS information, as required.
- To liaise closely with Designated Medical/Nursing Officers, Pharmacist and the Quality Controller (MGPS) and others, who need to be informed of any interruption or testing of the MGPS
- To provide technical advice to those responsible for the purchase of any medical equipment which will be connected to the MGPS, in order to avoid any problem with flow rate or capacity
- In accordance with the Trust’s policy on provision of services, to provide advice on the provision and / or replacement of MGPS central plant and associated systems (The Estates Department holds overall responsibility for the provision and maintenance of MGPS services within the Trust)
- To follow incident and accident reporting procedures as defined by any relevant NHS, MHRRA and / or statutory guidance (RIDDOR, Device Alerts, Hazard Notices etc).  
- To ensure that all valves and Area Valved Service Units (AVSUs) and MGPS alarms are correctly labelled and that any changes to departmental names, functions or details are recorded as soon as changes have taken place both on the valve / AVSU label and the corresponding as fitted drawings/valve charts and alarm schedules.
- In times of major incident the AP (MGPS) will advise the Senior On-Call Manager on the system(s) capacity / capability.
- To prepare or commission compliance surveys of the MGPS and associated risk assessments. To propose remedial actions arising from such surveys and assessments. To monitor compliance and risks and repeat surveys and assessments as necessary. A summary of outstanding non-compliances are to be tabled at the Medical Gas Committee Meetings.
- To ensure that a formal agreement is in place for all medical air equipment to be quality control tested by the Trust’s appointed QC Pharmacist.

**In addition all work carried out under a permit to work, the AP (MGPS) will:**

- Liaise with all other departments in sufficient time prior to work commencement, to establish temporary supply requirements and contingencies.
- Liaise with the Trust’s QC to attend as required.
- Assess the level of hazard and prepare a suitable permit.
- Obtain permission from DNO/DMO for any interruption to supplies/ work on system.
• Explain the detail of work to the Competent Person (MGPS)
• Affix “Do Not Use” or other prohibition notices/devices to affected terminal units.
• Supervise the isolation of the system or part of the system on which work is to be carried out.
• Decide on the appropriate engineering validation and verification tests required on completion of works and to supervise / witness these tests.
• Supervise the final connection and purging with working gas
• Witnessing the QC testing / carry out identity tests
• Removal of “Do Not Use” or prohibition notices/devices.
• Obtain acceptance for system re-instatement / completion of work
• Handover of reconnected system to DNO/DMO for normal use.

2.8 Competent Person (CP) (MGPS) (Craft Persons)

All Competent Persons (MGPS) are Craft Persons, either directly employed by the Trust, or registered and employed by specialist contractors.

All Competent Persons (MGPS) shall have satisfactorily completed an appropriate training course and be sufficiently experienced and familiar with the MGPS before being appointed by the Authorised Person. Training and appointment should be refreshed every 3 years. The Coordinating AP (MGPS) will record the training records of Trust CP (MGPS) on the trusts training matrix.

In addition, all specialist contractors shall be evaluated and selected by the Trust’s Coordinating AP (MGPS). The AP should ensure that they are registered to BS EN ISO 9000:2001, BS EN ISO 13485 with clearly defined registration criteria relevant to the services provided.

All personnel responsible for managing a specialist contractor’s Competent Persons shall have completed the same training and evaluation as Authorised Persons (MGPS).

Copies of contractor information, as detailed in the trusts ‘Medical Gas Procedural Document in appendix E, and shall be kept and maintained by the Coordinating AP (MGPS).

Duties and responsibilities:
• To report to the Authorised Person (MGPS) prior to commencement of work on the MGPS each day.
• To carry out work on the MGPS in accordance with the Trust’s installation and maintenance specifications.
• To carry out repair, alteration or extension work, as directed by the Authorised Person (MGPS) in accordance with the permit to work system and HTM 02-01.
• To perform engineering tests appropriate to all work carried out and prove to the Authorised Person (MGPS) all test results.
• To carry out all work in accordance with the Trust’s policies and procedures health & safety policy, and all other relevant statutory requirements.
• To notify at the first opportunity the Trust’s AP should any deviations arise during work. Seek confirmation of suitability of the proposed amendments from the Trust AP before continuation/completion of works.
• To ensure that all work/activity is completed in accordance with HTM 02-01 recommendations.

In addition to the above all work carried out under a permit to work, the CP (MGPS) will:
• Accept instruction from the AP and acknowledge responsibility for the work.
• Confirm familiarity with the Trust’s policies and procedures health & safety policy, and all other relevant statutory requirements.
Isolate systems only under direct supervision of the AP.
Confirm that only the intended section(s) of pipework are isolated.
Carry out only such work as detailed on the permit including final connections.
Confirm completion of work and notification to AP.
Carrying out appropriate engineering validation and verification tests under direct supervision of the AP.

Estates staff carrying out routine work on the MGPS e.g. checking oil levels, but NOT registered as Competent Persons (MGPS), shall be suitably trained to perform this work safely and competently, such that the risk of gas supply interruption is minimised.

2.9 Quality Controller (QC) (MGPS)

It is the responsibility of the Chief Executive to formally appoint, one or more Quality Controllers with MGPS responsibilities. See Appendix C2. Only QC’s who have been appointed by the Trust will be permitted/accepted to work on the Trust’s MGPS.

The role of Quality Controller may be held by the Trust’s Head of Pharmacy or may be a nominated contractor.

The QC (MGPS) will be an appropriately qualified and experienced individual and shall be eligible for membership of the Royal Pharmaceutical Society of Great Britain, the Royal Society of Chemistry or Institute of Biology, and be named on the QC(MGPS) register held by the NHS Pharmaceutical Quality Assurance Committee or equivalent.

The QC (MGPS) shall have received specific post graduate training covering the responsibilities and duties required with regard to MGPS, which shall be refreshed every five years. The QC (MGPS) should also attend part, or the entire Authorised Person training course.

The Authorised Person (MGPS) is responsible for informing a QC (MGPS) of any planned or emergency high hazard works and organising attendance as required, together with making arrangements for the routine quarterly testing of the medical compressed air systems.

Duties and responsibilities:
- To assume responsibility for the quality control testing of the medical gases throughout the MGPS as requested.
- To liaise with the Authorised Person (MGPS) in carrying out specific quality and identity tests on the MGPS in accordance with the permit to work system and relevant Pharmacopoeia Standards.
- Carrying out final identity and quality tests on the system, witnessed by the AP.
- Declaring that testing is complete and that satisfactory results have been obtained.
- Advising the Head of Pharmacy that gases under his / her control meet specification.
- To advise the Head of Pharmacy of the results of all tests carried out on the MGPS and any other findings that could affect the integrity or performance of the MGPS.
- To carry out quarterly tests for quality and identity of all medical gases manufactured on site in liaison with the AP (MGPS).

2.10 Chief Pharmacist

If the Chief Pharmacist is responsible for QC activity they will accept the duties and responsibilities identified in the QC section of this policy in addition to the following pharmacy responsibilities.

Duties and responsibilities of the Chief Pharmacist – pharmacy department:
- To be responsible for the safe prescribing of medical gases as drugs.
• Order supplies of cylinders of medical gases and special gas mixtures for the Trust.
• Receive delivery notes for compressed gas cylinders, check against invoices received and pass invoices for payment.
• Maintain a record of cylinder rental charges and pass rental invoices for payment.
• To examine and archive any “Certificates of Analysis” for medical liquid oxygen and unlicensed medical gases as are made available to the Trust by medical gas suppliers.
• To ensure that cylinders and piped medical gases purchased by the Trust are either licensed medicines or are unlicensed medicines prepared under an appropriate MHRA manufacturing licence.
• Ensure that other gases and gas mixtures comply with manufacturers' product licences.
• To assume responsibility for the quality control of medical gases throughout the MGPS.
• To monitor stock levels in wards and departments at 3 monthly intervals against agreed stock levels detailed in “Medical Gas Procedural Document” in Appendix L.
• During planned interruptions, pharmacy will agree jointly with Security and Portering Services Manager and estates any additional cylinders required and order as necessary.
• Emergency ordering of additional supplies of cylinders when advised of requirements by nursing/clinical staff porters or estates department.

2.11 Designated Nursing Officer / Designated Medical Officer (DNO/DMO)
The Head of Nursing (Acute) / Medical Director have nominated Designated Medical / Nursing Officers (DNO/DMO) with whom the Authorised Person (MGPS) liaises on any matters affecting the MGPS. The DNO/DMOs’ are listed in Appendix A3.

The DNO/DMO shall be trained in the operational and safety aspects of the use of the MGPS with detailed training in specific areas such as the permit to work system and emergency procedures.

The Head of Nursing (Acute) / Medical Director shall ensure training is made available prior to staff taking clinical responsibility for the use of the MGPS and that refresher courses are arranged annually. See section 3 for training requirements.

The DNO/DMO will need to liaise with the AP (MGPS), on any matters affecting MGPS within an area of their control and who would give permission for a planned interruption of MGPS.

All planned work on the MGPS is to be carried out under the MGPS permit to work system as arranged by the AP (MGPS) and authorised by the DMO/DNO.

In the event of a planned interruption involving more than one department, e.g. for a major shutdown, the Trusts Head of Nursing, (or a nominated deputy, DMOs) will be the Designated Medical Officer. The person assuming this responsibility will liaise with clinical staff as necessary.

Senior nursing staff on duty that are not acting as DNO/DMO, shall also ensure that clinical staff under their control are aware of any MGPS work that may affect them and shall understand the clinical /service implications.

In the case of an emergency such as a fire or a major escape of gas, the DNO/DMO shall first determine the usage of medical gases and where necessary make alternative arrangements before arranging/ authorising local isolation at the AVSU.

There is no requirement to follow the permit to work procedure to isolate the supply in an emergency, however following such an event, the AP (MGPS) will require the DNO/DMO to accept the system back into use by signing a permit to that effect.

If the system is isolated in an emergency it should never be returned to service without the required tests being carried out by the AP (MGPS) and where required the QC (MGPS).
Duties and responsibilities:
- Emergency isolation of MGPS, detailed in the Trusts ‘Medical Gas Procedural Document’ document
- Ensure they have been trained in responsibilities during planned works under permit to work activity
- Ensure only staff trained and deemed competent in the safe use and dangers involved with medical gases are allowed to administer the products.
- Ensure that staff are familiar with MGPS installation within the ward/department
- Ensure that staff attends medical gases safety training, which is refreshed annually.
- Ensure adequate supplies are held within the department in line with agreed stock levels.
- The DNO will act as a coordinator in the event of more than one ward/department being involved in a planned work
- Familiarise themselves with permit to work system and other person involved – AP, CP, Porters manager etc.

In addition to the above all work carried out under a permit to work, the DNO/DMO will:
- Ensure patients are not put at risk by any interruption to the MGPS, whether planned or in emergency
- The DNO/DMO will give permission via the permit to work form, provided by the AP (MGPS) for any planned works
- The permit to work will be signed by the DNO/DMO, at the start of the work
- As required ensure that sufficient stock of temporary cylinders to cover the period of the permit to work.
- Ensure that affected terminal units are appropriately labelled to prevent use as directed by the AP (MGPS).
- On completion of the work the AP will demonstrate to the DNO/DMO that the system is safe to take back into use and the DNO/DMO will advise other affected clinical areas.
- During a major incident liaise with the AP (MGPS) to ascertain the system capacities / functionality of the MGPS.

2.12 Portering

The Logistics Manager is responsible for the designated porters. They will organise and keep records of the training for the designated porters. They should also undergo the Designated Porter training.

It is essential that Designated Porters are trained and work safely at all times, using the appropriate Personal Protective and Manual Handling Equipment. Such equipment found to be missing, or defective in any way, must be reported immediately to the portering manager or his / her deputy.

Designated Porter

A Designated Porter is a Porter with particular responsibilities that has received specialist training in the identification, safe handling, storage and management of medical gas cylinders. Annual refresher training courses shall be attended.

Designated Porters must be aware of the following limitations to their activity and their training must reflect this requirement;

1. They are not controlled by the MGPS Permit to Work System and must, therefore, never perform uncontrolled isolation of any MGPS.
2. They are not clinically trained to administer drugs to patients and therefore must not select flow rates from either cylinders or wall flow meters whilst patients are attached to delivery equipment.
**Duties and responsibilities:**

- Deliver full gas cylinders from the cylinder stores to wards, theatres and manifold rooms as requested.
- Return empty cylinders to the empty cylinder storage area as part of the same job of delivery.
- Ensure that the delivered cylinders are stored in the correct locations in the cylinder store, as per the store labelling.
- Ensure that the delivered cylinders are stored safely in the store and are properly secured by chains where appropriate.
- Change cylinder regulator / flowmeter combinations on cylinders as required ensuring that only the correct flowmeters are used for the relevant gas.
- Exchange cylinders on designated manifolds as necessary and as indicated by alarm conditions.
- Handover gas delivery notes from the delivery driver to the Pharmacy for payment authorisation.
- Label and remove from service any “faulty” or “incident” cylinders, subsequently follow procedure for dealing with such cylinders. (See trusts ‘Medical Gas Procedural Document’ appendix H)
- Apply stock rotation principles on a first in first out basis to ensure that all cylinders are delivered to users are within the “Use before date” as specified by the gas supplier.
- Ensure that all flowmeters and regulators that are found to be damaged or out of service are returned to the clinical engineering department for repair or replacement.
- Exchange cylinders on designated manifolds as necessary and as indicated by alarm conditions. It is important to ensure that when changing cylinders on J Size medical air manifolds, that all cylinders are of the same type i.e. either 137 bar or 200 bar.
- Ensure cylinder stores and manifold rooms are kept clean and tidy, reporting any inappropriately stored items to the site services manager. Ensure that all removed cylinder seals and other rubbish are promptly taken from the stores and properly disposed of.
- On completion of a change of cylinders on a manifold, record the activity on the log sheets provided.

**The Portering Department at the Trust will:**

- Accept requests from wards and departments for replacement gas cylinders, and arrange for Designated Porters to deliver cylinders to the point of use and at the same time, return the empty cylinders to the appropriate cylinder store.
- Upon notification by alarm or advice from the switchboard, arrange for Designated Porters to attend to and change cylinders as appropriate on primary supply manifolds.
- During planned interruptions, site services manager will agree jointly with pharmacy and estates any additional cylinders required and deploy as necessary.
- Ensure designated manifold rooms are kept clean and tidy, reporting any inappropriately stored items to the AP (MGPS). Ensure that all removed cylinder seals are contained in the waste bin provided. The bin should be emptied and its contents properly disposed of and the floor to be swept monthly.
- Comply with cylinder management arrangements and ensure that full/empty labels are used on all cylinders for wards and departments.

Where it is deemed that excessive cylinder stocks are being held at ward level, the porter should report this to the portering manager who will bring this to the attention of the pharmacy who will in turn, discuss and agree the correct stock levels with the ward manager. The ward manager has ultimate responsibility of ensuring sufficient managed stocks of medical gases.

**Theatre Porter**

Each morning, the theatre porter will check the stock of cylinders in the theatre cylinder store and arrange with the portering department to replenish as necessary.
2.13 Medical Gas Management Relationships within the Trust

- Trust Chief Executive
- Head of Estates Operations
- Designated Nursing Officer
- Authorising Engineer
- Authorised Person
- Competent Person (Contractor)
- Competent Persons Trust
- Coordinating Authorised Person
- Directly Employed by Trust
- Remote Employed by NHS
- Specialist Consultant
- Functional /Advisory
- Direct
- Functional/advisory

Specialist Subcontractor

Quality Control Pharmacist

Head of Pharmacy

Nursing Staff

Trust Chief Executive

Nursing Officer

Head of Estates Operations
2.14 Medical Gases Committee

Purpose
The Medical Gas Group (MGC) reports to the Medicines Management Sub-committee and in turn they report to Safety Quality and Standards Committee. Working to an agreed terms of reference (see appendix A2) The purposes of the MGC shall be to determine, communicate and monitor the MGPS policy and procedures to enable the effective management of MGPS activities. This will include but not be limited to:

Strategy
- Operational policy development, distribution and review
- Medical gas safety reports
- Review of systems compliance
- Risk register elements arising from compliance reports
- Cylinder management
- Training needs evaluation
- Medical gas training programme
- MGPS upgrade projects (to comply with strategy)
- Review of short term action plans (12 months)
- Review of long term development/control plans (in excess of 12 months)

Operational
- Planned shutdowns
- Equipment selection
- Cylinder management
- Emergency actions

The Medical Gas Committee should meet at least six monthly or as required by circumstance. A meeting can be convened by any committee member, The Chair person will be responsible for writing and distributing the minutes of the meeting, circulated to all policy signatories and attendees. The Chair Person will be appointed by the committee, with other signatories or advisors to this document being invited to join the body as and when appropriate.

The Trust’s Medical Gases Committee, which shall report to the Board via the Medicines Management Sub-committee, and shall consist of: (See appendix A3)
- Authorised Persons (MGPS)
- Clinical/Nursing/Medical representatives
- Clinical Risk Manager
- EBME Manager
- Fire safety Manager
- Head of Pharmacy
- Nominated Statutory & Compliance System Manager
- Portering Manager
- The Health and Safety Officer
- The Coordinating AP (MGPS)
- Clinical Skills/Medical Device Lead

Policy and Procedures Review
Operational Policy content and application shall be reviewed annually by the Medical Gas Committee, or on the issue of renewed guidance, or on major changes to the MGPS.

The Authorised Person (MGPS) will notify immediately all relevant personnel in writing of any changes to the Policy and/or Procedures.
3. Training

Management aims to control work related risks and ensure safe working practices. All training needs will be identified and a programme of training, monitoring and control will be followed as detailed below. The relevant line manager for staff within the areas of responsibility must ensure that all staff have received this training prior to using the MGPS and that refresher courses are arranged in accordance with Table 1 below.

In addition to Table 1 Porters and Nursing staff that require annual training can undertake East Cheshire Trust E-learning package which can be completed and recorded via Electronic Staff Record (ESR).

It is essential that personnel at all levels have a sound general knowledge of the principles, design and functions of MGPS. All staff will be trained in relationship to their particular responsibilities. Individual training records will be held and used to determine future training events and requirements. Training records will be recorded on the staffs training matrix.

If legislation or guidance related to the MGPS is updated or changed, such as HTM 02-01, the changes will be reviewed by the AP (MGPS). The AP (MGPS) will call a Medical Gas Committee meeting, the committee will then decide if extra training for staff is required due to these changes. The changes to the legislation and the committees' recommendations will be recorded in the Medical Gas Committee meeting minutes and sent to the Chief Executive via the Drugs and Therapeutic Committee.

3.1 Training Programme

<table>
<thead>
<tr>
<th>Position</th>
<th>Safe use and application of medical gases</th>
<th>Emergency Procedures and Permit to work system</th>
<th>Management of the MGPS</th>
<th>Installation and maintenance of MGPS</th>
<th>Medical gas quality control and testing</th>
<th>Training carried out by</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorised persons</td>
<td>3 yearly</td>
<td>3 yearly</td>
<td>3 yearly</td>
<td>3 yearly</td>
<td>-</td>
<td>Accredited ACOP Course</td>
</tr>
<tr>
<td>Competent persons</td>
<td>3 yearly</td>
<td>3 yearly</td>
<td>-</td>
<td>3 yearly</td>
<td>-</td>
<td>Accredited ACOP Course</td>
</tr>
<tr>
<td>Designated Medical / Nursing Officers</td>
<td>3 Yearly</td>
<td>3 Yearly</td>
<td>-</td>
<td>3 yearly</td>
<td>-</td>
<td>Air Liquide in House Accredited Trainers.</td>
</tr>
<tr>
<td>Nursing Staff</td>
<td>Annually</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Air Liquide in House Accredited Trainers.</td>
</tr>
<tr>
<td>Designated Porters</td>
<td>Annually</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Training to be linked to ESR</td>
</tr>
<tr>
<td>Quality Controllers (MGPS)</td>
<td>3-5 years</td>
<td>3-5 years</td>
<td>3-5 years</td>
<td>3-5 years</td>
<td>3-5 years</td>
<td>British Oxygen Company (BOC)</td>
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<tr>
<td>Pharmacy Staff with Identified MGPS Responsibilities</td>
<td>-</td>
<td>-</td>
<td>3 yearly</td>
<td>-</td>
<td>-</td>
<td>In House Accredited Trainers.</td>
</tr>
<tr>
<td>ODP / Theatre staff</td>
<td>Annually</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Air Liquide in House Accredited Trainers.</td>
</tr>
</tbody>
</table>

Table 1. Training Needs
3.2 Training Requirements

The training requirements outlined above should cover all, but not be limited to the topics as detailed and comply as a minimum with the course content and training outcomes as detailed in HTM02.

The safe use and application of medical gases

- Properties and hazards of medical gases
- Safe use of equipment
- Cylinder safety, manual handling and management

Emergency procedures and permit to work system

- Emergency supply provision
- Actions in the event of an emergency
- Responsibilities and application of the permit to work system

Management of the MGPS

- Standards and specifications
- Documentation and records
- System components
- Operational responsibilities

Installation and maintenance of the MGPS

- Design and application of MGPS
- Installation practice
- Validation and verification of MGPS
- Maintenance requirements of components

Medical gas quality control and testing

- Requirements of medical gas testing
- Test equipment and protocols for use
- Statutory requirements for medicines management

No person should operate or work on any part of an MGPS unless adequately trained or supervised and with adequate evidence to substantiate training.
4. Documentation

The following documentation is an essential tool for the running of a safe, convenient, and cost effective medical gas system. The Authorised Person (MGPS) is responsible for keeping this documentation up to date. It is the Chief executives responsibility to provide adequate recourses to allow the Authorised Person (MGPS) to do this.

Permit to work (PTW)

Permit to work books should be held in the Estates office and controlled by the Trusts AP’s. The current permit book must be readily available for use with previous books required to be held for the entire life time of the medical gas pipeline system. The procedures for the permit to work system are documented in the trusts ‘Medical Gas Procedural Document’.

As-Fitted Drawings

As fitted drawings are the primary tool of the AP (MGPS) and should be maintained by them at all times. A hard copy is kept in the estates department by the coordinating AP (MGPS).

After all work on the MGPS that involves any modifications, additions or alterations to the system, it is the responsibility of the AP (MGPS) controlling the work to ensure that the as fitted drawings are updated to reflect any change. Requirements for the as-fitted drawings are detailed in the Trust’s – Medical Gas Procedural Document’, Appendix J

Plant log-sheets

Should be completed at every occasion it is necessary to visit plant or manifold installations (e.g. routine maintenance checks or changing cylinders). The completed sheets should be returned to the AP (MGPS) for analysis and stored as a record.

Blank log sheets are provided in the trusts ‘Medical Gas Procedural Document’ appendix F

Installation and Maintenance specifications

Specifications for work to be completed should be derived by the hospital from the needs of the installed equipment. See sample maintenance contract HTM02-01 Part B that should be used as the basis of the Hospital’s maintenance contract. C11 and the remainder of the NHS Model Engineering Specifications (amended by the increased requirements of HTM02-01) should be used as the basis of any installation works.

Compliance report and Risk assessments

Although HTM02-01 is not retrospective in its requirements, it does necessitate a compliance report detailing the whole system and the action plan intended to bring the system up to current standards.

In all areas of non-compliance, there will be a risk, either to patients, staff, public or financially. These risks should be itemised and formulised enabling a prioritised, remedial action and upgrade plan to be compiled.
5. **Policy Audit**

This policy will be audited every year. Audit reports will be provided by the Medical Gas Committee.
6. Policy Review

Operational Policy content and application shall be reviewed **annually** by the Medical Gas Committee, or on the issue of renewed guidance, or on major changes to the MGPS.

The Authorised Person (MGPS) will notify immediately all relevant personnel in writing of any changes to the Policy and/or Procedures.
7. Appendices
<table>
<thead>
<tr>
<th>Title</th>
<th>Name</th>
<th>Medical Gas Role</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Executive</td>
<td>John Wilbraham</td>
<td>Duty Holder</td>
<td>01625 661501</td>
</tr>
<tr>
<td>Medical Director</td>
<td>Robert Stead</td>
<td>*DMO</td>
<td>01625 661102</td>
</tr>
<tr>
<td>Head of Nursing (Acute)</td>
<td>Jeanette Sarker</td>
<td>*DMO</td>
<td>01625 663099</td>
</tr>
<tr>
<td>Simulation / Clinical Skills Lead</td>
<td>Julie Brown</td>
<td>*DMO</td>
<td>01625 663682</td>
</tr>
<tr>
<td>Simulation/ Clinical Skills / Medical Devices Lead</td>
<td>Julie Brown</td>
<td>*DMO</td>
<td>01625 663682</td>
</tr>
<tr>
<td>Clinical Risk Manager</td>
<td>Andy Chambers</td>
<td></td>
<td>01625 661772</td>
</tr>
<tr>
<td>Clinical Director</td>
<td>John Hunter</td>
<td>*DMO</td>
<td></td>
</tr>
<tr>
<td></td>
<td>John Hudson</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Theatre Manager</td>
<td>Gill Bird</td>
<td>*DMO</td>
<td>01625 661955</td>
</tr>
<tr>
<td>Director of Facilities</td>
<td>Mark Brearley</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Associate Director of Facilities</td>
<td>Ian Chadwick</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head of Estates Operational</td>
<td>Robert Few</td>
<td>* Authorised Person (MGPS)</td>
<td>01625 661617</td>
</tr>
<tr>
<td>Engineering Manager</td>
<td>Paul Daniel</td>
<td>* Coordinating Authorised Person (MGPS)</td>
<td>01625 661618</td>
</tr>
<tr>
<td>Estates Officer</td>
<td>David Arnold</td>
<td>* Authorised Person (MGPS)</td>
<td>01625 661607</td>
</tr>
<tr>
<td>Operational Services Manager</td>
<td>Kashif Haque</td>
<td>Chief Pharmacist</td>
<td>01625 661265</td>
</tr>
<tr>
<td>Senior Pharmacy Technician (Purchasing and Distribution)</td>
<td>Michelle Brierley</td>
<td>Pharmacy</td>
<td>01625 661102</td>
</tr>
<tr>
<td>QC Pharmacist</td>
<td>Dept of Q.A &amp; Control Liverpool</td>
<td>* Quality Controller (MGPS)</td>
<td></td>
</tr>
<tr>
<td>Medical Engineering Services Manager</td>
<td>Roger Broadhurst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head of Facilities Soft FM</td>
<td>Tim Ward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portering Manager</td>
<td>Anne Crawley</td>
<td>* Designated Porters (Manager)</td>
<td>01625 661659</td>
</tr>
<tr>
<td>Head of Infection Control</td>
<td>Anita Swain</td>
<td></td>
<td>01625 661769</td>
</tr>
<tr>
<td>Fire Officer</td>
<td>Phil Dodd</td>
<td></td>
<td>01270 376685</td>
</tr>
<tr>
<td></td>
<td>Clive Pickering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health, Safety &amp; Risk Manager</td>
<td></td>
<td></td>
<td>01625 661037</td>
</tr>
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* = Persons nominated under the Permit to Work Scheme
Appendix A2 : Medical Gas Committee MGC (MGPS) Terms of Reference

<table>
<thead>
<tr>
<th>Title .......</th>
<th>Medical Gas Group</th>
<th>East Cheshire NHS Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors Name:</td>
<td>Paul Daniel</td>
<td></td>
</tr>
<tr>
<td>Scope:</td>
<td>Medical gas ordering, supply and transport</td>
<td>Classification: Trust Organisation Structure and Minutes</td>
</tr>
<tr>
<td>Replaces:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To be read in conjunction with the following documents:

- **Unique Identifier:**
  - Review Date: 01/03/2014
  - This document is no longer authorised for use after this date

- **Issue Status:** 1.0
- **Issue No:** 2
- **Issue Date:** 01/03/2012
- **Authorised by:** Kashif Haque
- **Authorisation Date:** 01/03/2014

- **Document for Public Display:** Yes

- **After this document is withdrawn from use it must be kept in an archive for 6 years.**

- **Archive:**
  - Date added to Archive:

- **Officer responsible for archive:**

---

1. **Definition**
   - This group is a multidisciplinary team formed to monitor the supply of medical gases.

2. **Purpose**
   - To ensure the safe and adequate supply of medical gases to all wards and departments within the Trust.
   - To inform, advise and control medical gases management throughout the Trust.
   - Improve safety within the hospital environment.
   - Adhere to health & safety standards.
   - Raise and improve awareness of medical gases.
3. Terms of Reference
   The group will:
   - Manage the supply of medical gas cylinders within the Trust.
   - Perform regular audits to ensure appropriate rental costs and stock levels.
   - Ensure health and safety training has been delivered to all portering and transport staff.
   - Problem solve any supply or transport issues.
   - Report any issues to the relevant business unit and owning committee.
   - Raise awareness within the Trust in the use of Medical Gas Cylinders.

4. Frequency of Meetings
   - Meetings are to be held every three months.

5. Membership - representative from the following areas:
   - Pharmacy
   - Gas cylinder supplier
   - Estates
   - Portering
   - Medical Engineering
   - Training
   - Medical Devices
   - Clinical

6. Chairmanship
   - The group is to be chaired by the Pharmacy representative.

7. Reports to
   - The group reports to the Medicines Management Group.
### Appendix A3: Medical Gases Committee - Membership List November 2012

**Executive:**

<table>
<thead>
<tr>
<th>Role</th>
<th>Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair</td>
<td>Michelle Brierley</td>
</tr>
<tr>
<td>Vice Chair</td>
<td>Paul Daniel</td>
</tr>
<tr>
<td>Secretary</td>
<td>Michelle Brierley</td>
</tr>
</tbody>
</table>

**Members:**

<table>
<thead>
<tr>
<th>Role</th>
<th>Member</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior Pharmacy Technician (Purchasing and Distribution)</td>
<td>Michelle Brierley</td>
</tr>
<tr>
<td>Simulation/Clinical Skills / Medical Device Lead</td>
<td>Karen Lever</td>
</tr>
<tr>
<td>Representatives from clinical and nursing</td>
<td>Gill Bird</td>
</tr>
<tr>
<td>Cardio Respiratory</td>
<td>Martha Scott</td>
</tr>
<tr>
<td>Coordinating AP (MGPS)</td>
<td>Paul Daniel</td>
</tr>
<tr>
<td>AP (MGPS)</td>
<td>Daniel Arnold</td>
</tr>
<tr>
<td>Estates Officer (Statutory &amp; Mandatory)</td>
<td>Greg Acton</td>
</tr>
<tr>
<td>Head of Facilities</td>
<td>Tim Ward</td>
</tr>
<tr>
<td>ISS General Manager</td>
<td>Anne Crawley</td>
</tr>
<tr>
<td>Health, Safety &amp; Risk Manager</td>
<td></td>
</tr>
<tr>
<td>Clinical Risk Manager</td>
<td>Andy Chambers</td>
</tr>
<tr>
<td>Fire Officer</td>
<td>Phil Dodd</td>
</tr>
<tr>
<td>Medical Engineering Services Manager</td>
<td>Roger Broadhurst</td>
</tr>
<tr>
<td>Support Services</td>
<td>Tony Harrington</td>
</tr>
<tr>
<td>QC Advisor **</td>
<td>Liverpool QC</td>
</tr>
<tr>
<td>Authorising Engineer (MGPS) **</td>
<td>Mark Milne</td>
</tr>
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**Denotes consultants with regards to MGPS who are not directly employed by the trust.**
### Appendix A4: Designated Medical Officers / Designated Nursing Officers

#### Designated Medical Officers, DMO -

<table>
<thead>
<tr>
<th>Job Title</th>
<th>Name</th>
<th>Ward or department</th>
<th>Tel./ Contact</th>
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<tbody>
<tr>
<td>Consultant Anaesthetist</td>
<td>Dr Mick Rothwell.</td>
<td>Theatre</td>
<td>01625 661307</td>
</tr>
<tr>
<td>Consultant Anaesthetist</td>
<td>Dr John Hunter</td>
<td>Theatre</td>
<td><a href="mailto:John.hunter4@nhs.net">John.hunter4@nhs.net</a></td>
</tr>
</tbody>
</table>

#### Designated Nursing Officers, DNO -

<table>
<thead>
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<th>Job Title</th>
<th>Name</th>
<th>Ward or department</th>
<th>Tel./ Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ward Manager</td>
<td>Melanie Pearson</td>
<td>Ward 1</td>
<td>01625 661001</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Rachel Pearson</td>
<td>Ward 1 A</td>
<td>01625 661001</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Sharon McCoy / Christine Jones</td>
<td>Ward 2</td>
<td>01625 661002</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Joanne Mountford</td>
<td>Ward 3</td>
<td>01625 661003</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Kate Johnson</td>
<td>Ward 4</td>
<td>01625 661004</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Selena King</td>
<td>Ward 5</td>
<td>01625 663168</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Katy Dunn</td>
<td>Ward 6</td>
<td>01625 661006</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Jane Cannon</td>
<td>Ward 7</td>
<td>01625 661007</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Marie Beckwith</td>
<td>Ward 8</td>
<td>01625 661008</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Michelle Mason</td>
<td>Ward 9</td>
<td>01625 661076</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Michelle Gillespie</td>
<td>Ward 10</td>
<td>01625 661068</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Alison Berry</td>
<td>Ward 11</td>
<td>01625 661011</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Deborah Adams</td>
<td>CCU</td>
<td>01625 661016</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Gill Bird</td>
<td>Theatres</td>
<td>01625 661955</td>
</tr>
<tr>
<td>Ward Manager</td>
<td>Dawn Oldacre</td>
<td>Aston Ward</td>
<td>01260 294838</td>
</tr>
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### Appendix A5: MGPS Contractors

<table>
<thead>
<tr>
<th>Name</th>
<th>Medical Gas Role</th>
<th>Contact Details</th>
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</thead>
<tbody>
<tr>
<td>Medical Gas Contractor - Medaes</td>
<td>Competent Persons (MGPS)</td>
<td>01246-474242 (ext 221)</td>
</tr>
<tr>
<td>Medical Gas Contractor - Medaes</td>
<td>Competent Persons (MGPS)</td>
<td>01246-474242 (ext 221)</td>
</tr>
<tr>
<td>Air Products (VIE)</td>
<td>Medical Gas Supplier</td>
<td>07801 178509</td>
</tr>
<tr>
<td>Air Liquide (Cylinders)</td>
<td>Medical Gas Supplier</td>
<td>07974 201108</td>
</tr>
<tr>
<td>Mark Milne, BOC Healthcare</td>
<td>Authorising Engineer (MGPS)</td>
<td>07770 382498</td>
</tr>
</tbody>
</table>

### Appendix A6: Hospital Based Competent Persons

<table>
<thead>
<tr>
<th>Name</th>
<th>Medical Gas Role</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ian White</td>
<td>Competent Person</td>
<td>01625 661616</td>
</tr>
<tr>
<td>Aron Trevena</td>
<td>Competent Person</td>
<td>Ditto</td>
</tr>
<tr>
<td>Martin Hough</td>
<td>Competent Person</td>
<td>Ditto</td>
</tr>
<tr>
<td>Roy O’Hara</td>
<td>Competent Person</td>
<td>Ditto</td>
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### Appendix A7: Important Telephone Numbers

<table>
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<th>Name</th>
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<tbody>
<tr>
<td>Estates</td>
<td>01625 661616</td>
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<tr>
<td>Portering</td>
<td>01625 661659</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>01625 661266</td>
</tr>
<tr>
<td>Risk Management</td>
<td>01625 661037</td>
</tr>
<tr>
<td>Medical Gas Contractor - Medaes</td>
<td>01246 474242 (ext 221)</td>
</tr>
<tr>
<td>Medical Gas Contractor - Medaes</td>
<td>01246 474242 (ext 221)</td>
</tr>
<tr>
<td>Air Products (VIE)</td>
<td>07801 178509</td>
</tr>
<tr>
<td>Air Liquide (Cylinders)</td>
<td>07974 201108</td>
</tr>
</tbody>
</table>

**Keyholders #**

Estates hold keys for valves, plant and manifold rooms.
Contact: Paul Daniel – Coordinating Authorised Person (MGPS)
Appendix B: Signatories

This policy is accepted by:

Chief Executive
John Wilbraham
Signature
Date:

Director of Estates & Facilities
Neil Cook
Signature
Date:

A D of Estates & Facilities
Ian Chadwick
Signature
Date:

Co-ordinating AP (MGPS)
Paul Daniel
Signature
Date:

Head of Estates Operation
Robert Few
Signature
Date:

Head of Pharmacy
Kashif Haque
Signature
Date:

Medical Director
Robert Stead
Signature
Date:

Medical Device Lead
Karen Lever
Signature
Date:

Clinical Risk Manager
Andy Chambers
Signature
Date:

Health & Safety Manager
John Harrop
Signature
Date:

Portering Manager
Sue Neery
Signature
Date:

Head of Infection Control
Anita Swaine
Signature
Date:

Fire Officer
Phil Dodd
Signature
Date:
Appendix C1: Authorised Persons (MGPS) Letter of Appointment

Insert Appointment letters for all Authorised Persons (MGPS).
Certificate of Appointment
as
Authorised Person (MGPS)

This is to certify that Mr. Paul Daniel is appointed as Authorised Person (MGPS) for the purposes of the duties and responsibilities identified in HTM02-01 for Macclesfield District General Hospital.

Signed John Wilcox
Date 21 March 2012
Print Name: John Wilcox

To be completed by the Authorised Person

- I am familiar with the piped Medical Gases system at the above premises.
- I am familiar with the Health Technical Memorandum 02-01 and the hospital operational policy with access to copies kept on file.
- I have access to record installation drawings kept on file.
- I have received adequate and relevant training to enable me to carry out the duties of the above post as detailed in the group operational policy.

I accept the appointment of Authorised Person (MGPS) for the day-to-day management of the MGPS and operation of the permit to work system for all work carried out.

Signed T. Daniel
Date 22/03/12
Print Name: T. Daniel

This Appointment applies to the personal record detail and the medical gas pipeline systems detailed in part B.

Certificate No: 20120257
Expiry Date: 21 December 2014
Signed on behalf of BOC Healthcare
Certificate of Appointment
as
Authorised Person (MGPS)

This is to certify that Mr Daniel Arnold is appointed as Authorised Person (MGPS) for the purposes of the duties and responsibilities identified in HTM02-01 for Macclesfield District General Hospital.

(Certificate Issuer)
Signed Elia Walker

Print Name: John Walker

To be completed by the Authorised Person:
- I am familiar with the Piped Medical Gases system at the above premises.
- I am familiar with the Health Technical Memorandum 02-01 and the hospital operational policy with access to copies kept on file.
- I have access to record installation drawings kept on file.
- I have received adequate and relevant training to enable me to carry out the duties of the above post as detailed in the group operational policy.

I accept the appointment of Authorised Person (MGPS) for the day-to-day management of the MGPS and operation of the permit to work system for all work carried out.

(Authorised Person)
Signed D. Arnold

Print Name: D. Arnold

This Appointment applies to the personal record detail and the medical gas pipeline systems detailed in part B.

Certificate No: 30002194
Expiry Date: January 2017

Signed on behalf of BOC Healthcare
Appendix C2: Quality Controller (MGPS)

Contact details for all Quality Controllers (MGPS).
Alison Darbyshire  
Quality Assurance Pharmacist  

Quality Control North West  
Pharmacy Practice Unit  
70 Pembroke Place, Liverpool, L69 3GF  

T: 0151 794 8109  
F: 0151 794 8173  
E: alison.darbyshire@qcnw.liverpool.nhs.uk  
W: www.qcnw.nhs.uk  

N.B.  

If any member of the Trust requires a particular Q.C Appointment letter can you please contact Quality Control North West using the contact details above associated with Alison Darbyshire’s e-mail.
Appendix D: Legislation and Guidelines

Although this is not intended to cover all relevant legislation and codes of practice, the following elements should be considered as a minimum when dealing with medical gas systems

Statutory requirements relevant to Medical Gas Pipeline Systems

- Health and Safety at Work etc. Act, 1974
- Management of Health and Safety at Work Regulations
- Work Place (Health, Safety and Welfare) Regulations
- Provision and Use of Work Equipment Regulations
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations
- Control of Substances Hazardous to Health (COSHH) Regulations
- Pressure Equipment Regulations
- Pressure Systems Safety Regulations,
- Highly Flammable Liquid and Liquid Petroleum Gas Regulations,
- Medicines Act
- Manual Handling Operation Regulations,
- Personal Protective Equipment at Work Regulations
- Electromagnetic Compatibility Regulations
- Electricity at Work Regulations

Specific Guidance Relevant to Medical Gas Pipeline Systems

- Health Technical Memorandum (HTM) 02-01 “Medical Gas Pipeline Systems”, Part A, Design, Installation, Validation and Verification
- Part B, Operational Management

- Supplements within Health Technical Memorandum (HTM) 08 “Specialist Services”, No 1 “Dental Compressed Air and Vacuum Systems” 2003
- No 2 “Piped Medical Gases in Ambulance Vehicles” 1997

  - European Pharmacopoeia Standards for medical gases, including medical compressed air.
## Appendix E: Abbreviations

Abbreviations that may be used in this document

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGSS</td>
<td>Anaesthetic gas scavenging system</td>
</tr>
<tr>
<td>AP</td>
<td>Authorised Person</td>
</tr>
<tr>
<td>AVSU</td>
<td>Area valve service unit</td>
</tr>
<tr>
<td>BS 5682</td>
<td>British Standard 5682 : 1984</td>
</tr>
<tr>
<td>C11</td>
<td>Model Engineering Specification C11 – 1999</td>
</tr>
<tr>
<td>DMO</td>
<td>Designated Medical Officer</td>
</tr>
<tr>
<td>DNO</td>
<td>Designated Nursing Officer</td>
</tr>
<tr>
<td>ERM</td>
<td>Emergency reserve manifold</td>
</tr>
<tr>
<td>ESM</td>
<td>Emergency standby manifold</td>
</tr>
<tr>
<td>HCM</td>
<td>Hundred cubic metres</td>
</tr>
<tr>
<td>HTM 02-01</td>
<td>Health Technical Memorandum 02-01</td>
</tr>
<tr>
<td>Kw</td>
<td>Kilowatt</td>
</tr>
<tr>
<td>LLV</td>
<td>Lockable line valve</td>
</tr>
<tr>
<td>MGC</td>
<td>Medical Gas Committee</td>
</tr>
<tr>
<td>MGPS</td>
<td>Medical gas pipeline system</td>
</tr>
<tr>
<td>N₂O</td>
<td>Nitrous Oxide</td>
</tr>
<tr>
<td>NIST</td>
<td>Non interchangeable screw thread</td>
</tr>
<tr>
<td>NWH</td>
<td>Normal working hours</td>
</tr>
<tr>
<td>O₂</td>
<td>Oxygen</td>
</tr>
<tr>
<td>ONWH</td>
<td>Outside normal working hours</td>
</tr>
<tr>
<td>Ph Eur</td>
<td>European Pharmacopeia</td>
</tr>
<tr>
<td>PPE</td>
<td>Personal protective equipment</td>
</tr>
<tr>
<td>PPM</td>
<td>Planned preventative maintenance – could also refer to Parts per million</td>
</tr>
<tr>
<td>QC</td>
<td>Quality control</td>
</tr>
<tr>
<td>RSM</td>
<td>Reserve standby manifold</td>
</tr>
<tr>
<td>VIE</td>
<td>Vacuum insulated evaporator</td>
</tr>
</tbody>
</table>
Equality Analysis (Impact assessment)
Please START this assessment BEFORE writing your policy, procedure, proposal, strategy or service so that you can identify any adverse impacts and include action to mitigate these in your finished policy, procedure, proposal, strategy or service. **Use it to help you develop fair and equal services.**
Eg. If there is an impact on Deaf people, then include in the policy how Deaf people will have equal access.

1. What is being assessed?
Medical Gas Policy

Details of person responsible for completing the assessment:
- **Name:** Paul Daniel
- **Position:** Engineering Manager
- **Team/service:** Estates & Facilities

State main purpose or aim of the policy, procedure, proposal, strategy or service:
*(usually the first paragraph of what you are writing. Also include details of legislation, guidance, regulations etc which have shaped or informed the document)*

This policy covers the provision and management of Medical Gas Pipeline Systems (MGPS) and Medical Gas Cylinders within the East Cheshire NHS Trust.

It is the Trust’s policy to provide a safe, secure and reliable medical gas service to both patients and staff using guidance and references as described in Health Technical Memorandum HTM 02-01(2006)

2. Consideration of Data and Research
To carry out the equality analysis you will need to consider information about the people who use the service and the staff that provide it. **Think about the information below – how does this apply to your policy, procedure, proposal, strategy or service**

2.1 Give details of RELEVANT information available that gives you an understanding of who will be affected by this document

The population of Cheshire as at the 2005 mid year figures (Cohesia Report 2008) is 684,400.

**Age:**
17.8% (30,500) of the population in Cheshire East is over 65 compared with 15.9% nationally. This results in a high "old age" dependency ratio, i.e. low numbers of working-age people supporting a high non-working dependant older population. The
percentage of “older” or “frail” old is also considerably higher, with 2.3% (8,200) persons 85 and over compared to 2.1% nationally.

Cheshire East has the fastest growing older population in the North West. By 2016, the population aged 65+ will increase by 29.0% (8,845) and the population aged 85+ by 41.5% (3,403).

This will have an impact on the number of patients being managed by ECT and the complexity of the health and social care issues that the older person is experiencing. In addition the staffing profile of ECT will change to include an increasing number of staff over 65 in the workforce.

Race:

The 2005 mid year estimate (Cohesia Report 2008) show that the majority of the population in Cheshire (94.6%) is White British, with 5.4% non White British. The Cheshire 2007-10 Local Area Agreement identified that minority ethnic communities account for around 3% of the population. Issues for BME communities include lack of knowledge of services, access to services, access to translation/interpretation, cultural differences, family values. Many people from BME communities experience poverty, poor housing and unemployment which make it difficult for them to lead healthier lives. 4180 migrant workers registered in Cheshire in 2006/07 and comparison to the mid-year population estimates for Cheshire in 2005 strongly suggests that Cheshire’s migrant worker population is larger than every individual BME group other than the White-Other White group.

Gypsies and travellers – at the last count (July 2006) the highest number was recorded in the Borough of Congleton (125). 42% of gypsies and travellers report limiting long term illness compared to 18% of the settled population, with an average life expectancy 10-12 years less than settled population. 18% of gypsy and traveller mothers have experienced the death of a child compared to 1% in the settled population.

Disability:

There are over 10 million disabled people in Britain, of whom 5 million are over state pension age. Nearly 1 in 5 people of working age (7 million, or 18.6%) in Great Britain have a disability.

Hearing loss: 1 in 4 has a hearing problem.

Sight problems: There are 2 million people with sight problems in the UK.

Learning disabilities: There is quite a high proportion of people with learning disabilities in the local area due to there being a number of residential homes/institutions in the area. Problems encountered can be lack of staff awareness, communication issues, information requirements.

Dementia

Approximately six in 100 people aged over 65 develop dementia and this rises to around 20 in 100 people aged 85 or over. Dementia affects 750,000 people in the UK.

Carers

Around 6 million people (11 per cent of the population aged 5+) provided unpaid care in the UK in April 2001. While 45% of carers were aged between 45 and 64, a
number of the very young and very old also provided care. By 2037, it is anticipated that the number of carers will increase to 9 million.

**Gender**
On average in Cheshire, 49% of the population are male and 51% are female

*Transgender:* No local data available, national trends show:
- 1/12,000 males, transgender from male to female
- 1/33,000 females, transgender from female to male

Specific issues around access to services, specific services for men or women, and ‘single sex’ facilities. In terms of the transgender population, GIRES (Gender Identity Research and Education Society) gives an estimate of 600 per 100,000. If these figures were applied to the Cheshire East community based on the 2005 mid year estimates, there may be around 2,100 trans people in the area.

**Religion/Belief**

In the Cheshire East area:

<table>
<thead>
<tr>
<th>Religion/Belief</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christian</td>
<td>- 80%</td>
</tr>
<tr>
<td>Buddhists</td>
<td>- 0.16%</td>
</tr>
<tr>
<td>Hindu</td>
<td>- 0.15%</td>
</tr>
<tr>
<td>Jewish</td>
<td>- 0.12%</td>
</tr>
<tr>
<td>Muslim</td>
<td>- 0.36%</td>
</tr>
<tr>
<td>Sikh</td>
<td>- 0.05%</td>
</tr>
<tr>
<td>Other religion</td>
<td>- 0.15%</td>
</tr>
<tr>
<td>No religion</td>
<td>- 11.84%</td>
</tr>
<tr>
<td>Not stated</td>
<td>- 6.67%</td>
</tr>
</tbody>
</table>

The Muslim population has the highest levels of ill health amongst faith groups – this includes higher smoking rates amongst men and higher rates of coronary heart disease and diabetes.

**Sexual Orientation**

Lesbians, gay men and bi sexual people (LGB) make up to 5-7% of the UK population (Dept of Trade and Industry, 2003). 13% of Gay men and 31% Lesbian women are parents (Morgan and Bell, First Out: Report of the findings of Beyond the Barriers national survey of LGB people).

The experience and health needs of gay men and women will differ. However, both groups are likely to experience discrimination, higher levels of mental ill health and barriers to accessing health care.

National Health Inequalities data shows that lesbian, gay, bisexual and transgender (LGBT) people are more likely to smoke, to have higher levels of alcohol use and to have used a range of recreational drugs than heterosexual people. They are also at greater risk of deliberate self-harm. Although most LGBT people do not experience poor mental health, research suggests that some are at higher risk of mental health disorder, suicidal behaviour and substance misuse.

**2.2 Evidence of complaints on grounds of discrimination:** (Are there any complaints or concerns raised either from patients or staff (grievance) relating to the policy, procedure, proposal, strategy or service or its effects on different groups?)

No

**2.3 Does the information gathered from 2.1 – 2.3 indicate any negative impact as a result of this document?**

No
3. Assessment of Impact

Now that you have looked at the purpose, etc. of the policy, procedure, proposal, strategy or service (part 1) and looked at the data and research you have (part 2), this section asks you to assess the impact of the policy, procedure, proposal, strategy or service on each of the strands listed below.

RACE:
From the evidence available does the policy, procedure, proposal, strategy or service affect, or have the potential to affect, racial groups differently?
Yes □ No √

Explain your response: The intention of this policy is to provide the safe delivery of medical gases. There is no differential impact identified due to race.

GENDER (INCLUDING TRANSGENDER):
From the evidence available does the policy, procedure, proposal, strategy or service affect, or have the potential to affect, different gender groups differently?
Yes □ No √

Explain your response: The intention of this policy is to provide the safe delivery of medical gases. There is no differential impact identified due to Gender.

DISABILITY
From the evidence available does the policy, procedure, proposal, strategy or service affect, or have the potential to affect, disabled people differently?
Yes □ No √

Explain your response: The intention of this policy is to provide the safe delivery of medical gases. If a responsible member of staff requires the policy or testing instructions in an alternative format e.g. large print, this can be made available.

AGE:
From the evidence available does the policy, procedure, proposal, strategy or service affect, or have the potential to affect, age groups differently?
Yes □ No √

Explain your response: The intention of this policy is to provide the safe delivery of medical gases. There is no differential impact identified due to age.

LESBIAN, GAY, BISEXUAL:
From the evidence available does the policy, procedure, proposal, strategy or service affect, or have the potential to affect, lesbian, gay or bisexual groups differently? Yes □ No √

Explain your response: The intention of this policy is to provide the safe delivery of medical gases. There is no differential impact identified due to sexual orientation.
RELIGION/BELIEF:
From the evidence available does the policy, procedure, proposal, strategy or service affect, or have the potential to affect, religious belief groups differently?
Yes □ No √

Explain your response: The intention of this policy is to provide the safe delivery of medical gases. There is no differential impact identified due to religion/belief.

CARERS:
From the evidence available does the policy, procedure, proposal, strategy or service affect, or have the potential to affect, carers differently?        Yes □ No √

Explain your response: The intention of this policy is to provide the safe delivery of medical gases. There is no differential impact identified due to carer status

OTHER: EG Pregnant women, people in civil partnerships, human rights issues.
From the evidence available does the policy, procedure, proposal, strategy or service affect, or have the potential to affect any other groups differently?        Yes □ No √

Explain your response: The intention of this policy is to provide the safe delivery of medical gases.. No other impacts identified.

4. Safeguarding Assessment - CHILDREN

a. Is there a direct or indirect impact upon children?    Yes □ No √

b. If yes please describe the nature and level of the impact (consideration to be given to all children; children in a specific group or area, or individual children. As well as consideration of impact now or in the future; competing / conflicting impact between different groups of children and young people:

<table>
<thead>
<tr>
<th>c. If no please describe why there is considered to be no impact / significant impact on children:</th>
<th>Policy relevant to personnel implementing policy to ensure the management of Medical Gas Pipeline Systems (MGPS) and Medical Gas Cylinders within the East Cheshire NHS Trust.</th>
</tr>
</thead>
</table>

5. Relevant consultation

Having identified key groups, how have you consulted with them to find out their views and that the made sure that the policy, procedure, proposal, strategy or service will affect them in the way that you intend? Have you spoken to staff groups, charities, national organisations etc?

A wide range of MDGH senior staff and Medical Gas specialists have been spoken with and draft copies of the Medical Gas Policy have been sent to them for comment.
6. Date completed:                               Review Date:

7. **Any actions identified**: Have you identified any work which you will need to do in the future to ensure that the document has no adverse impact?

<table>
<thead>
<tr>
<th>Action</th>
<th>Lead</th>
<th>Date to be Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. **Approval** – At this point, you should forward the template to the Trust Equality and Diversity Lead [lynbailey@nhs.net](mailto:lynbailey@nhs.net)

Approved by Trust Equality and Diversity Lead:

[Signature]

Date: 8.11.13