

Carbon Monoxide Reduction Policy

CQC Fundamental Standards

Legislation	Details
Regulation 12: Safe Care and Treatment	Providers must assess the risks to people's health and safety during any care or treatment and make sure that staff have the qualifications, competence, skills and experience to keep people safe.
Regulation 15: Premises and Equipment	Premises for the delivery of care and treatment are clean, suitable for the intended purpose, maintained and where required, appropriately located, and the equipment that is used to deliver care and treatment is clean, suitable for the intended purpose, maintained, stored securely and used properly.

Key Lines of Enquiry

KLOE	How this applies to Carbon Monoxide Reduction Policy
Safe	Minimizing risks to the health of staff and service users from the care environment is central to providing safe treatment.
Well-led	A well-led care organisation must have clear lines of responsibility regarding the safety of premises, equipment and the response if an incident occurs or is at risk of occurring.

This policy should be read in conjunction with our:

- Gas Safety Policy
- Electrical Safety, Maintenance and Checking Policy
- Accident and Incident Policy
- Fire Risks Policy
- Fire Safety Policy

Policy Statement

Policy Aims

The purpose of this policy is to outline Micrah Healthcare's commitment to, and strategy for, dealing with Carbon Monoxide poisoning and its associated risks, and preventing them from occurring in the first place. According to the NHS there are around 60 deaths per year across England and Wales caused by accidental Carbon Monoxide poisoning.

What is carbon monoxide?

Carbon Monoxide (CO) is a colourless, odourless, tasteless gas. After breathing in CO it enters the bloodstream and mixes with haemoglobin (the part of red blood cells that carries oxygen around the body) to form carboxyhaemoglobin, and the blood is no longer able to carry oxygen, causing the body's cells and tissues to die.

It is produced during the incomplete burning of carbon-based fuels, such as gas (mains or liquid petroleum gas), oil, wood and coal. These types of fuel are normally completely safe to use; it is only when the fuel does not burn properly, e.g. in a defective central heating boiler, that excess carbon monoxide is produced. Gas fires, stoves, heating boilers, gas-powered water heaters, paraffin heaters and solid fuel-powered water heaters are all potential sources of carbon monoxide.

Carbon monoxide can be produced:

- if an appliance is not working correctly or is not installed properly
- if an appliance has not been properly maintained or serviced regularly
- if the room has inadequate ventilation
- if the chimney or flue is blocked
- If improperly trained engineers are used to install or maintain appliances.

Why is carbon monoxide dangerous?

Carbon monoxide is poisonous and can kill. It cannot be seen or smelled and so is easily inhaled by victims who have no way of knowing they are being poisoned. When carbon monoxide enters the body it prevents the blood from bringing oxygen to cells, tissues and organs, and this can quickly lead to unconsciousness and, ultimately, death.

Lower levels of carbon monoxide that do not kill can still cause serious harm to health if breathed in over a long period. In extreme cases, paralysis and brain damage can be caused as a result of prolonged exposure.

Symptoms of low-level carbon monoxide poisoning include:

A headache is the most common symptom of carbon monoxide poisoning. Other common symptoms include:

- Dizziness
- Breathlessness
- Nausea
- Tiredness
- Pains in the chest or stomach
- Confusion
- Visual problems.

Symptoms of higher levels of carbon monoxide can be more severe and include:

- Intoxication, erratic behaviour and changes in personality
- Vertigo
- Ataxia (loss of physical co-ordination due to underlying damage to the nervous system and brain)
- Breathlessness and tachycardia (a heart rate of more than 100 beats a minute)
- Chest pain due to angina or heart attack
- Seizures
- Loss of consciousness.

Symptoms can develop within two hours if carbon monoxide levels are high. However, at lower levels, the symptoms will build over a number of days or months.

In cases where there are very high levels of carbon monoxide, death may occur within a few minutes.

The early symptoms of carbon monoxide poisoning can look like a number of other common ailments and can easily be missed or ignored without realising that something serious may be wrong. In its early stages, carbon monoxide poisoning can easily be mistaken for food poisoning, viral infections, flu or simple tiredness. However, unlike the flu, carbon monoxide poisoning does not cause a high temperature (fever).

It may be noticed that symptoms are less severe at times when away from the source of carbon monoxide.

What action should be taken if someone has carbon monoxide poisoning?

If a staff member of Micrah Healthcare suspects that an appliance is malfunctioning and may be producing carbon monoxide, they should switch off the appliance immediately and shut off the gas supply at the meter control valve. All doors and windows should be opened and the service user's home should be ventilated. Any service users who may have been made ill through exposure to carbon monoxide should be moved to fresh air and provided with urgent medical advice from either their GP or an A&E department.

In an emergency, an ambulance should be called:

A Gas Safe registered engineer should be contacted to check the suspect appliance immediately. In an emergency, the National Gas Emergency Service can be called on 0800 111 999.

The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) cover the reporting of certain incidents involving gas, gas appliances and fittings. If a person becomes unconscious because of exposure to gas on business premises, the incident must be reported in line with the regulations.

Indicators of CO leakage into the environment

The following should be taken as warning signs of potential leakage of CO into the environment:

- Constant experience of symptoms listed above in low-level symptoms. These can progress to higher-level symptoms if left unchecked.
- Other persons in the service user's home fall ill with similar symptoms.
- Symptoms disappear when leaving the service user's home (for example, for an extended break), and return when coming back to the service user's home.
- Symptoms tend to be seasonal (for example, headaches happen more often during the winter months when central heating is used more often).
- Pets become ill.
- Black, sooty marks on the front covers of gas fires.
- Smoke building up in rooms due to a faulty fire.
- Yellow instead of blue flames coming from gas appliances.

Action to be taken if CO leakage is suspected

If more than one person develops flu-like symptoms without a temperature, and there is cause to believe that this is due to a CO leak, the following action should be taken:

- Immediately stop using all appliances that use fuel other than electricity.
Move away from the probable source of the CO and open all the windows.
- Visit your GP as soon as possible. If you have been exposed to high CO levels then referral to a hospital for oxygen therapy treatment may be indicated. Young people, pregnant women, persons with chronic heart disease, and persons with respiratory problems are particularly vulnerable to CO poisoning. Prolonged exposure to CO during pregnancy can also damage an unborn child.
- For gas appliances have a suitably qualified (**Gas Safe Registered**) engineer inspect all cooking, central heating and water heating appliances to check that they are safe.

The Gas Safe Register

The Gas Safe Register replaced the Council of Registered Gas Installers (CORGI) as the UK body that certifies gas engineers as being competent to install and maintain gas systems and appliances.

Registration is a legal requirement for anyone installing or repairing gas fittings or appliances.

The engineer's registration card should always be inspected before work is commenced. The card contains a photograph of the employee, their trading title, their registration number and the expiry date of the card. On the back, the card specifies the type of appliance the engineer is qualified to work on. For example, some engineers servicing gas-fired heating systems may not be qualified to service gas catering equipment.

Protecting people from carbon monoxide poisoning

It is the responsibility of the Registered Manager at Micrah Healthcare to ensure that the service user's home(s) of the service users that they are responsible for has a functioning carbon monoxide alarm. Registered Managers should never merely assume that all of their appliances are working properly. They should look out for signs that may indicate incomplete combustion is occurring in their appliances and fires which may result in the production of carbon monoxide. These include:

- yellow or orange rather than blue flames (except fuel effect fires or flueless appliances which display this colour flame)
- Soot or yellow/brown staining around or on appliances
- Pilot lights that frequently blow out
- increased condensation inside windows.

Registered Managers at Micrah Healthcare should also make sure that appliances are appropriately serviced and checked to ensure they are burning correctly. Carbon monoxide can be produced by any appliance that burns fossil fuels. All of these appliances should be properly serviced and maintained by a competent person. The blockage of flues and outlets is a common problem causing carbon monoxide production. Flues and outlets should be regularly checked and chimneys should be swept.

All work on gas-powered appliances should be conducted by a Gas Safe registered engineer.

Micrah Healthcare staff should be made aware of the dangers of carbon monoxide poisoning and should know the symptoms to look out for and the signs that appliances may be emitting the gas. There should be a set procedure in place that specifies what staff should do in an emergency and all relevant emergency phone numbers should be available to duty managers. If any concerns are noted, staff should be instructed to report the matter immediately to their line manager who should arrange for immediate remedial action.

Other steps that can be taken include:

- Never use oversized pans on the gas stove or place aluminium foil around the burners.
- Never use ovens or gas ranges to heat the service user's home.
- Ensure that rooms are adequately ventilated and that air vents are not blocked.
- Ensure that the kitchen is fitted with an extractor fan that is regularly cleaned to prevent blockage.
- Do not sleep in a room that has a gas fire without a flue, or a paraffin heater.
- Ensure all chimneys and flues are not blocked and are regularly swept by a qualified Chimney Sweep.
- Do not burn charcoal in an enclosed space, such as on an indoor barbecue.
- Do not leave cars or petrol-fueled lawnmowers running in the garage.

Should a carbon monoxide alarm be fitted?

The HSE strongly recommends the use of carbon monoxide alarms as one useful precaution to give people advance warning of carbon monoxide on a property. However, the HSE state that alarms should not be regarded as a replacement for regular maintenance and safety checks by a Gas Safe registered engineer.

Carbon monoxide alarms should comply with British Standard EN 50291 and carry a British or European approval mark. They should be installed and maintained in line with the manufacturer's instructions. Detectors

must be tested weekly and the results recorded on the carbon monoxide alarm test log sheet. Any faults must be reported to the maintenance department immediately.

Legal requirements regarding carbon monoxide

In domiciliary care services, both staff and service users may be at risk from carbon monoxide poisoning as they both share the same premises and breathe the same air. Workplace premises in the UK are subject to a range of legal duties and health and safety regulations. Key pieces of legislation are the Health and Safety at Work, etc. Act 1974 (HSWA) and the Workplace (Health, Safety and Welfare) Regulations 1992. Also relevant are the Building Act and current fire regulations.

Under the HSWA, employers have a duty, so far as is reasonably practicable, to ensure the health, safety and welfare of employees at work. This duty includes the provision and maintenance of safe and healthy workplace premises and working environments. A similar duty is placed on occupiers or persons in control of work premises, but who is not the employer of the people who work on the premises.

Employers have a further duty to ensure, so far as is reasonably practicable, the health and safety of non-employees who visit the premises, such as members of the public, contractors and other care professionals.

In addition to the above, all owners of workplace premises are covered by the Gas Safety (Installation and Use) Regulations 1998 which impose a duty to make sure gas appliances, fittings and flues are safe. In particular, the regulations make them responsible for the maintenance and repair of flues, appliances and pipework by a Gas Safe registered engineer. Although there is no prescribed timeframe for these duties they should ensure that regular maintenance checks and subsequent repairs are in place.

Training

All new staff will receive training in Micrah Healthcare's policy and in line with the Care Certificate standards on health and safety.

Further and refresher training is provided to staff with specific responsibilities for health and safety and monitoring CO levels in Micrah Healthcare.

Monitoring and Review

The Company Secretary will check this policy is working properly and they will review it at least once a year. We will make improvements to the policy wherever we can.

Employees are invited to suggest any ways the policy can be improved.

This policy does not form part of any employee's contract of employment, and it may be amended at any time.

After reading this Policy, you should be able to:

- Understand what Carbon Monoxide Reduction Policy is and how the Carbon Monoxide Reduction Policy operates;
- Understand how Carbon Monoxide Reduction Policy operates at Micrah Healthcare and have an awareness of the actions we take in preventing, identifying and reporting concerns;
- Understand the role you play in Carbon Monoxide Reduction Policy.

If you have not understood any of these points, please ask your Line Manager or trainer for further help

Policy Review

A Director will review this policy at least once a year to make any updates needed.

Authorisation and Signature

This Policy is the authorised version agreed by the Directors of Micrah Healthcare.

All employees are expected to follow this policy and failure to do so could result in disciplinary action.

A handwritten signature in black ink, reading "Adetutu Adeyinka".

Director's Signature

Adetutu Adeyinka

Director