WELSH HEALTH CIRCULAR

Llywodraeth Cymru Welsh Government

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STATUS: ACTION

CATEGORY: HEALTH PROFESSIONAL LETTER

Title: Raising Awareness of Carbon Monoxide Poisoning and Action Required by Health

Professionals

Date of Expiry / Review: N/A

For Action by:

Doctors

Pharmacists

NHS Direct

LHB Chief Executives

LHB Medical Directors

LHB Nurse Executive Directors

Chief Executive Velindre NHS Trust

Chief Executive Ambulance NHS Trust

For Information To:

LA Chief Executives

LA Directors of Public Protection

WLGA Chief Executive

PHW Chief Executive

Providers of Social Housing

Action required:

See section headed "Advice and Action Required"

Sender:

Chief Medical Officer and Chief Nursing Officer

HSSG Welsh Government Contact(s):

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Enclosure(s): Joint letter from CMO and CNO and Algorithm

Dear colleagues,

As we move into the winter season and heating systems come back into regular use, we believe it is important to remind health professionals about the risks of carbon monoxide (CO) poisoning.

CO poisoning places an avoidable burden on health and health services in Wales. It can be both an acute life threatening problem and present insidiously with difficult to recognise symptoms and signs.

Symptoms

Symptoms of CO poisoning can be vague and unspecific but include headache (as the most common symptom), tiredness, nausea, vomiting, vertigo, dizziness, cognitive impairment, long term neurological damage, convulsions, unconsciousness and death. Chronic low level CO poisoning may be confused with other illnesses such as influenza and food poisoning.

CO poisoning is more likely in those patients presenting after midnight or in the early morning, and in those who also had syncope. Risks to health from exposure to CO are more common in the winter months when malfunctioning heating appliances are used.

Advice and Action Required

It is important to remember that the source of any case of CO poisoning must be identified to prevent more harm. CO poisoning may affect other people living at home or those in neighbouring homes. If you are treating a case, or suspected case, of CO poisoning you have a responsibility to inform Public Health Wales' Environmental Health Protection Team on **0300 003 0032** or out of office hours via ambulance control (see algorithm at ANNEX A - http://www.publichealthwales.org/environmental-CO-healthcare-algorithm), just as you would if you were treating a case of infectious disease. The algorithm attached to this circular can be printed off and gives more advice on what to do if you treat a case of CO poisoning.

Further advice on investigations for CO poisoning can be obtained from TOXBASE (www.toxbase.org) or the National Poisons Information Service (NPIS) (Telephone 0344 892 0111).

Further information

Further information can be found on the Welsh Government and Public Health Wales websites:

http://gov.wales/topics/health/protection/environmental/carbon/?lang=en

http://howis.wales.nhs.uk/sitesplus/888/page/39069

Yours faithfully

DR FRANK ATHERTON

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Annex A

Suspected carbon monoxide (CO) exposure:

a guide for use in hospital Emergency Departments and primary care settings



Presenting Complaint

Headache, nausea/vomiting, drowsiness, dizziness, dyspnoea, chest pain, falls, neurological symptoms, 'tired all the time'

Could this be a case of CO poisoning?

Carbon monoxide poisoning can simulate conditions such as flu, migraine, food poisoning, tension headaches and depression. Headache is the most common symptom: *THINK CO!*

Considerations

If you are suspicious then ask the patient:

- C Cohabitees/companions
 Is anyone else in the property affected (including pets)?
- O Outdoors

 Do symptoms improve when out of the building? ('better outdoors')
- M Maintenance

Over a year since heating appliances/boilers serviced?

A Alarm
Has your CO alarm been activated?

Sources of Carbon monoxide

CO may be in the home, car, workplace or in tents or caravans. Malfunctioning gas, oil, coal, coke- and wood-fuelled heating and cooking appliances are the most common sources in the home.

Poisoning can occur in all income groups and types of housing. CO can leak into houses from neighbouring premises. Pregnant women, young children, the elderly and housebound are most at risk.

Yes to any

Acute or Chronic Exposure

 Follow TOXBASE ADVICE for symptoms, signs and management of acute and chronic cases of CO poisoning. <u>www.toxbase.org</u>

For ACUTE EXPOSURES, TOXBASE recommends HIGH FLOW OXYGEN and, if in primary care, urgent referral to hospital.

The half-life of carboxyhaemoglobin is reduced by the administration of high concentration supplemental oxygen.

- Contact the National Poisons Information Service (NPIS) 0344 892 0111
- <u>DO NOT</u> allow your patient to go home until the likely CO source is managed

Testing for exposure

Breath tests and blood samples may prove inconclusive hours after exposure has ended: CO levels in the blood decline with a half-life of about 6 hours.

A normal concentration of carboxyhaemoglobin (COHb) does not disprove CO poisoning unless the sample has been taken during or soon after exposure ended.

For interpretation of results and detailed advice on CO poisoning see TOXBASE and call the NPIS.

If you strongly suspect CO poisoning, do not wait for results, contact your local Public Health Wales HPT immediately

If you suspect CO exposure you must notify the Environmental Public Health
Wales Health Protection Team (HPT) on
0300 00 30032 (office hours) or via ambulance control (24 hours)

Remember to complete an online notification after discussing the case with the Health Protection Team. Available at:

www.publichealthwales.org/environmental-incident-form

Actions the HPT will take to prevent further exposure

- Notify others (including the gas emergency helpline on 0800 111 999)
- Investigate and assess the risk of exposure to others
- Recommend action to mitigate risk
- Provide advice on prevention
- Update the patient and clinician

Clinical follow-up is important as further consequences of chronic exposure to CO may be delayed, or mild symptoms may persist, multiply or intensify.

No to all

Less suggestive

of CO poisoning

Still

___ clinically suspicious?