



Preventing Carbon Monoxide Poisoning

An update on progress made since 2011

Introduction

Following on from the publication of the All Party Parliamentary Carbon Monoxide Group's report 'Carbon Monoxide: From Awareness to Action' in January 2015, now is a good opportunity to look back at the 2011 report 'Preventing Carbon Monoxide Poisoning', and assess the progress that has been made on its recommendations by members of the APPCOG, the CO All Fuels Action Forum and our collaborators in industry, academia and the third sector.

1. The Government should remove VAT on all carbon monoxide alarms

What's happened?

A parliamentary question was tabled by Jason McCartney MP, APPCOG co-Chair, in December 2012. In response, it was indicated by David Gauke, then Exchequer Secretary, that "there are no provisions under EU VAT law which would allow for an exemption or a reduced rate of VAT on the sale of carbon monoxide alarms. Under EU VAT law, the UK (or other EU countries) cannot extend the scope of existing zero rates or introduce new ones."

However, with detectors available in the price range of £10-£30 and lasting for 5-10 years, they remain a very affordable form of improving carbon monoxide safety.

2. Mortgage providers and estate agents should include a declaration that the property has a carbon monoxide alarm and that appliances have been serviced by a Gas Safe registered engineer (or similarly registered for other fossil fuel appliances).

What's happened?

Discussions are ongoing across the utility sectors towards creating a 'Home MOT' certificate. The 'Home MOT for Safer Homes Task Group' was established in October 2014 following an APPCOG seminar bringing together interested parties in May 2014, and consists of a diverse mix of stakeholders from different industries and Fire & Rescue Services, to work toward creating industry consensus on what form a Home MOT would take. Checking for the existence and function of CO alarms should be included on this certificate.

What did the APPCOG do?

To engage industry directly in the issue, the APPCOG convened a meeting with a selection of the major home insurance providers including Legal & General, Zurich, LV and AXA in 2013 to explore the possibility of including carbon monoxide detection and awareness

resources as part of their customer engagement. In addition, a seminar on Home MOTs was held in 2014. The insurance providers were invited to join the Home MOT for Safer Homes Task Group.

- 3. The Government should ensure that all work under the Green Deal includes the installation of a carbon monoxide alarm and is carried out by a Gas Safe registered engineer (or similarly registered for other fossil fuel appliances).**

What's happened?

In July 2015, the government announced it is to cease funding for the Green Deal. According to Section 78 of the Green Deal Code of conduct published in June 2014, Green deal providers must consider whether it is necessary to install CO detectors in the homes that they visit. If they deem it necessary, they then pass this information on in the specification that they provide to the Green Deal Installer.

What did the APPCOG do?

Substantial work by members of the APPGOG on this issue with the Secretary of State and Department for Energy and Climate Change meant that the recommendation was partly incorporated into Green Deal provisions. Questions remain over the implementation of the safety measures, which the APPCOG is monitoring.

- 4. The Government should ensure that under the NHS contracts for services GPs' surgeries and A&E departments are trained to recognise the symptoms of carbon monoxide poisoning and have the ability to monitor for it, using the appropriate equipment whenever carbon monoxide exposure is suspected**

What's happened?

To encourage effective reporting of carbon monoxide poisoning incidents, Public Health England hosts informal training for emergency services, local authorities, GPs and hospital staff. Using the acronym 'COMA', they help to enable health care professionals to diagnose CO poisoning through the following questions:

- C - Cohabitees/companions: is anyone else, or are pets in the property affected?
- O - Outdoors: do your symptoms improve when out of the building?
- M - Maintenance: are your fuel-burning appliances and vents properly maintained?
- A - Alarm: do you have a CO alarm?

Additionally, Public Health England, in collaboration with the Department of Health and the Gas Safety Trust, has developed a diagnostic algorithm to identify CO exposure levels in pregnant women attending prenatal medical appointments.

What did the APPCOG do?

The APPCOG has contributed to greater collaboration across the medical and healthcare sector through establishing the Carbon Monoxide Medical & Healthcare Professional Group, a sub-group of the All Fuels Action Forum. The group is working towards a report to be published in 2015, which will explore how the diagnosis and treatment of CO poisoning can be improved.

5. Industry should collaborate with the Medical Research Council and other research funding bodies to:

- **Support studies that attempt to evaluate the prevalence of carbon monoxide poisoning across different population groups.**
- **Set up a longitudinal study to assess the sequelae of acute and low-level exposure to carbon monoxide poisoning**
- **Facilitate a study of the neurological effects of repeated exposure to carbon monoxide at low-levels.**

What's happened?

Since 2011, we have seen a broad range of research conducted through the collaboration of industry and research institutions. Examples include:

- In 2013, a joint study between Public Health England and Hackney Homes saw 23,000 CO detectors installed in local authority housing across Hackney, to explore CO exposure among tenants [[details](#)].
 - The study identified that “although boilers are considered one of the commonest hazards for CO exposure at home... cookers are also a major source of CO exposure at home, both in terms of faulty cookers giving off excess CO and methods of cooking which produce excessive amounts of CO.”
- In March 2015 a study by King's College London and Public Health England found that out of a 2,463 Accidental Non-Fire related (ANFR) CO poisoning admissions in England over a 10 year period, the numbers of people admitted to hospital are larger than previously estimated and do not appear to be reducing. Admissions were most frequent in colder months and among individuals aged over 80 years old.

There was also a pattern of increasing admissions with increasing deprivation [[details](#)].

- In April 2015, the Gas Safety Trust announced funding for National Energy Action's study, which will investigate the risks of CO exposure faced by individuals who qualify for the Priority Services Register [[details](#)].
- Since 2011, researchers from Liverpool John Moores University have been collaborating with Merseyside Fire and Rescue Service to monitor levels of carbon monoxide present in the home environment. Thanks to additional support from the Gas Safety Trust and the Council for Gas Detection and Environmental Monitoring, the scope of the study has been extended to 75,000 homes across the northwest region [[details](#)].

What did the APPCOG do?

The All Fuels Action Forum has overseen the creation of a Carbon Monoxide Science and Technology' Group (CO+SciTech). The group draws together a range of professionals and organisations concerned with either research or the development of technology in the field of carbon monoxide and other harmful by-products of burning fossil and other fuels. Chaired by Roland Wessling of Cranfield University, the group enables researchers to share knowledge with one another, and showcase their work to industry, parliamentarians and the media.

- 6. The Government should ensure that all coroners' post-mortems routinely test for carboxyhaemoglobin levels, recording death from carbon monoxide poisoning as a distinct category and to notify this to a central register if a verdict is recorded only in the narrative section of the coroner's certificate.**

What's happened?

Following this recommendation, in June 2015 the Gas Safety Trust announced funding for Public Health England's carbon monoxide pilot study, which aims to develop and establish a protocol for coroners to follow to test for CO poisoning at post-mortem. This will mark an important first step toward obtaining a more precise estimate of the annual number of deaths caused by CO poisoning [[details](#)].

- 7. Gas Distribution Networks should ensure that all Gas Emergency Service personnel are equipped with either personal carbon monoxide alarms, carbon monoxide detection equipment, or both.**

What's happened?

Gas Distribution Networks (GDNs) have taken this on and now require their personnel to be equipped with personal carbon monoxide alarms, and may also carry other detection equipment on an occupationally-variable basis, in conjunction with the additional training they now receive.

What did the APPCOG do?

Further work is required to ensure all personnel are equipped with detection equipment, and the All Fuels Action Forum (see Recommendation 13) supports efforts by the GDNs to increase collaboration on their carbon monoxide-related work.

8. Ambulance Services should ensure that all their operatives have the equipment to monitor for carbon monoxide in the pre-hospital environment.

What's happened?

In December 2014, the Gas Safety Trust announced funding for a study that would look at CO exposure levels among the East of England Ambulance Service users. Launched in May 2015, the study explores the effectiveness of CO screenings performed by ambulance clinicians as part of routine observations carried out in the patient's home. The study is providing valuable data on the incidence of CO exposure in the region, and gives an opportunity for ambulance clinicians to share views on best practice for pre-hospital CO screening [[details](#)].

What is the APPCOG doing?

The Medical & Healthcare Professionals Group of the All Fuels Action Forum is working toward advancing this study and the recommendation at a national level.

9. Retailers selling camping and barbecue equipment, registered campsites and caravan sites should promote the dangers of carbon monoxide and the use of carbon monoxide alarms. The British Standards Institute should revise European standard EN 1860 to include a requirement for a prominent warning about carbon monoxide poisoning as part of the information on appropriate usage.

What's happened?

In 2013, the APPCOG collaborated with the Gas Safe Register to launch an awareness campaign that focused on the dangers of CO poisoning while camping. In particular, the

campaign highlighted the risks of using gas or charcoal barbecues around confined spaces such as tents and caravans. Combining web site views, television and radio figures and newspaper sales, it is estimated that the campaign has reached over 150 million people.

What is the APPCOG doing?

The 2015 report *Carbon Monoxide: From Awareness to Action* recognises that the risks of CO poisoning found outside of the domestic context - such as in campsites and boating environments - need to be addressed separately from risk found in the home. Accordingly, the report contains several recommendations tailored to these environments:

- Recommendation 16 states that all campsites “should provide isolated, clearly marked areas for barbecue use and disposal”.
- Recommendation 17 suggests that all recreation parks offer suitable carbon monoxide alarms to purchase or rent for the duration of stay.
- Recommendation 19 states that Public Health England should commission and support a study of carbon monoxide exposure in the leisure and recreation environments.

10. The Government should include carbon monoxide in the home safety module of the Personal, Social and Health Education curriculum.

What’s happened?

While discussions and submissions on the PSHE curriculum have not led to an immediate commitment from government, the drive to educate young people about CO safety continues. In July 2014 the Royal Welsh College of Music & Drama in partnership with Wales & West Utilities employed three recent theatre design graduates to hold puppetry workshops with 11-18 year olds, which illustrated the dangers of carbon monoxide poisoning.

In September 2014 as part of the Gas Safe Register’s Gas Safety Week, there was a drawing and short story competition around the theme of gas safety aimed at 4-12 year olds, with the winner having their entry turned into a short cartoon that was screened at the Week’s House of Commons launch. The CO & Gas Safety Society also hold a school poster competition for 10-11 year olds on an annual basis.

11. Ofgem should regularly review and evaluate the effectiveness of the requirement for gas retailers to raise awareness of carbon monoxide.

What’s happened?

As part of the gas distribution price control review (effective from April 2013 to March 2021) there is encouragement Gas Distribution Networks to consider measures that will raise awareness and reduce the dangers of carbon monoxide, with all Gas Distribution Networks engaged in a number of initiatives and trials related to CO.

On November 26th 2013, Ofgem published the ‘Report on the GDPCR Gas Discretionary Reward Scheme 2012-13’. The report notes the “establishment of partnerships and cross-industry dialogue...most notably on carbon monoxide (CO) safety issues”, and goes on to detail financial awards to the Networks:

“Category three: Schemes promoting gas safety, including awareness of the dangers of carbon monoxide. In this category a total of £1.1 million was awarded. The Panel decided to reward all GDNs £100,000 for the collaborative nature of their work addressing CO safety.”

12. The Gas Safe Charity should support an All Fuels Carbon Monoxide Awareness Forum to coordinate cross industry campaigns, share knowledge and to strengthen links.

What’s happened?

The ‘Carbon Monoxide All Fuels Action Forum’ was formally launched in Parliament in October 2012, and promotes collaboration and knowledge sharing between industry, charities, parliamentarians and policymakers, as well as coordinating awareness-raising campaign activities across the sector. Specialised groups within the Forum structure focus on medical and healthcare issues, campaigning, and scientific and technological research.

13. The Government should update the Gas Safety (Installation and Use) Regulations 1998 to:

- **Make mandatory the use of flue gas analysers for installation, commissioning and maintenance, where specified by the manufacturers' instructions (and manufacturers should ensure that those instructions. are updated to reflect the latest British Standards).**
- **Include a full service of all appliances according to manufacturers' instructions.**
- **Require all rented properties to be fitted with an audible carbon monoxide alarm manufactured to the European standard EN 50921.**

What's happened?

In March 2015, the Housing Minister Brandon Lewis announced that from October 2015 private landlords will be required to install working carbon monoxide alarms in rooms where 'high-risk' solid fuel burning appliances are installed. According to government estimates, such appliances are installed in 8.2% of all private rental properties, so when this requirement comes into force approximately 40,000 more homes will have detectors installed. Additionally, grant funding from government has been announced that will enable Fire and Rescue authorities across England to distribute these alarms.

What did the APPCOG do?

Following extensive work by APPCOG co-Chairs, a Government amendment was included within the Energy Act 2013, providing enabling powers for the Secretary of State to make CO alarms mandatory in private rented houses. Following this, a review of rented sector safety was undertaken, which led to the March 2015 announcements. The APPCOG continues to campaign for increased levels of CO alarm ownership through both regulatory and non-regulatory means.

14. The Government should consider both the public asset message and the possibility that new appliances may breakdown when determining the requirement for a wired-in carbon monoxide alarm in Part J of the Building Regulations.

What's happened?

A key component of increasing the installation rate of carbon monoxide alarms is the government's Building Regulations. Northern Ireland has recognised the importance of fitting carbon monoxide alarms, and has amended its regulations to require them to be fitted in all new homes where new or replacement appliances have been installed in the home. The Scottish Government has also recently introduced similar standards, and imposed requirements on private landlords to install CO alarms in all properties with carbon-burning appliances. Currently, England and Wales only require carbon monoxide alarms when a new or replacement fixed solid fuel appliance is installed in a dwelling.

What did the APPCOG do?

APPCOG members are campaigning to open up the Building Regulations in England so that alarms are fitted in all homes with carbon-burning appliance, regardless of the type of appliance installed.

15. The Government should bring regulation for the whole fossil fuel sector in line with that of the gas industry.

What's happened?

APPCOG members have asked questions of the government to highlight issues of fossil fuels, including 'instances of carbon monoxide poisoning as a result of faulty solid fuel burners' and 'regulations governing the installation of solid fuel burners' with respect to carbon monoxide. Indeed the regulation being introduced in October 2015 requiring private landlords to install CO detectors in rooms where solid-fuel burning appliances are installed is a success in this regard.

The All Fuels Action Forum, as its name suggests, promotes consideration of 'all fuels' in campaigning and awareness of carbon monoxide. The Forum has pushed for holiday and camping safety campaigns that raise awareness of non-gas CO poisoning sources. One example of this is the iFest campaign which was launched in summer 2015, and aims to raise awareness among 18-24 year olds regarding the dangers of CO poisoning at music festivals.

16. The Health and Safety Executive, working in partnership with industry, should create a central collation point for data relating to carbon monoxide injuries and fatalities, together with a dedicated helpline that would help act as a signposting service.

The HSE leads the Cross Government Group on Gas Safety and Carbon Monoxide Awareness. This group meets regularly and reports annually, to ensure a joined-up approach across departments, the devolved administrations and other governmental bodies to improve gas safety and tackle carbon monoxide risks from all fuels. Their reports are published every November [[detail](#)].

The Gas Safety Trust, working in partnership with Downstream Gas, publishes an annual, detailed review of carbon monoxide incident information, produced from the investigation of domestic incidents which involved mains natural gas and piped liquid petroleum gas in the UK, including an assessment of incidents involving solid fuel and oil appliances.

The launch of the CO Portal in January 2015 by the Gas Safety Trust, which brings together information on gas safety ranging from academic data to standards and legislation, will also undoubtedly be a valuable tool for campaigners, policymakers and researchers to share knowledge.