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**CROSS GOVERNMENT GROUP  
ON GAS SAFETY AND CARBON  
MONOXIDE (CO) AWARENESS**

**ANNUAL REPORT 2013/14**

Published November 2014

# CROSS GOVERNMENT GROUP ON GAS SAFETY AND CARBON MONOXIDE (CO) AWARENESS

## Annual Report 2013/14

### Introduction

The Cross Government Group on Gas Safety and Carbon Monoxide (CO) Awareness reconvened in June 2009 to ensure a joined-up approach across departments, the devolved administrations and other governmental bodies to improve gas safety and tackle CO risks from all fuels. The Group, whose members are listed below, also aims to develop effective Government strategies and promote knowledge and understanding of gas safety and CO risks and how to manage them.

- Department for Business, Innovation and Skills (BIS)
- Department for Communities and Local Government (DCLG)
- Department for Energy and Climate Change (DECC)
- Department of Health (DH)
- Health and Safety Executive (HSE)
- Health and Safety Executive for Northern Ireland (HSENI)
- Health Protection Scotland (HPS)
- Office of Gas and Electricity Markets (Ofgem)
- Partnerships for Schools
- Public Health England (PHE)
- Scottish Government
- Welsh Government
- Public Health Wales (PHW)

Gas safety and more broadly CO awareness is a truly cross government issue with the majority of Government departments, the devolved administrations and other governmental bodies having an interest from their particular perspective. This report provides a summary of the work carried out by all members of the Cross Government Group on Gas Safety and CO Awareness under four key headings:

- Consumer Awareness
- Supporting Professionals
- Research
- Legislation and Securing Justice

Activities in this Report cover the period Autumn 2013 to Autumn 2014.

A representative from the Cross Government Group attends the meetings of the All Fuels Forum which was created to facilitate meetings between the All Party Parliamentary Carbon Monoxide Group (APPCOG) and other stakeholders to encourage debate and action on issues relating to CO. Further information can be found at:

<http://www.policyconnect.org.uk/appcog/>

The Cross Government Group maintains a watching brief on current initiatives that will be useful or of interest and regularly invites an organisation to provide an update of their work. In the past year these were:

- Gas Safe Register (GSR) presented an overview of the 2013 Gas Safety Week. Items included the success of the media coverage, regional events and useful data

collected; as well as the launch of the interactive gas map and increasing number of companies who had pledged their support to the campaign.

- Policy Connect presented the work of the 'CO All Fuels Action Forum' (AFF) and the 'All-Party Parliamentary Carbon Monoxide Group' (APPCOG).
- The Council of Gas Detection & Environmental Monitoring (CoGDEM) gave a presentation explaining the use of domestic CO alarm detectors, electronic combustion gas analysers and PPE CO detectors, and other developments in relation to these appliances.
- The Marine Accident Investigation Branch (MAIB) attended explaining its role to examine and investigate all types of marine accidents to or on board UK ships worldwide, and other ships in UK territorial waters.

Carbon monoxide poisoning is a serious and preventable form of poisoning. Each year there are around 40 deaths from accidental CO poisoning in England and Wales (ONS Statistics) and in excess of 200 non-fatal cases that require hospitalisation. A DH estimate based on the A&E Hospital Episode Statistics database shows that approximately 4,000 attend A&E each year diagnosed with CO poisoning. Further statistical data from DH (covering England and Wales), Health Protection Scotland, HSENI and HSE is provided in the final section of this Report.

The DH, HPS and HSE figures reflect the differences in the relevant data sources. The DH and HPS data are based on public health information and excludes self-harm where that has been coded, but it is likely that self-harm is under-reported. HSE collects data on incidents, which are reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) (<http://www.hse.gov.uk/riddor/>) (and previously under the 1995 Regulations). The Regulations apply to events, which arise out of or in connection with work activities covered by the Health & Safety at Work etc Act 1974. The Regulations require gas conveyors and LPG suppliers to report incidents where someone has died, lost consciousness, or been taken to hospital for treatment to an injury where gas is likely to be a cause.

## **CONSUMER AWARENESS**

### **BIS**

BIS continues to work with UK and other organisations across Europe to increase consumer awareness of the risks involved in using barbecues in tents and similar poorly-ventilated areas.

### **DCLG: Fire Kills Campaign**

The Fire Kills Campaign, run by DCLG and local fire and rescue authorities, is the national fire safety campaign. However, some fire safety messages - such as barbecue safety and chimney safety - have clear crossovers into CO issues. The close partnership between the Campaign and GSR provides an avenue for CO messages to be delivered to consumers. Promotional material created by Fire Kills Campaign partners, notably the Boat Safety Scheme's "Carbon Monoxide Safety on Boats" leaflet (<http://www.boatsafetyscheme.org/media/180329/carbon-monoxide-safety-on-boats-june14.pdf>), is made available to authorities to use in their community outreach activity. Additionally, the national Chimney Fire Safety Week coordinated by Fire Kills in partnership with chimney sweep trade associations provides a hook on which fire and rescue authorities and the chimney and fuel sectors can hang awareness-raising activity.

### **DCLG: Private rented homes**

DCLG published a discussion document ([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/283979/Review\\_of\\_Property\\_Conditions\\_in\\_the\\_Private\\_Rented\\_Sector\\_2.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/283979/Review_of_Property_Conditions_in_the_Private_Rented_Sector_2.pdf)) in February 2014 seeking views on safety conditions in private rented homes including consideration of CO and smoke alarms. DCLG is currently considering responses.

### **DH**

Advice to the public on protecting themselves and their families from CO poisoning was made available on the Get Ready for Winter website (<http://www.metoffice.gov.uk/learning/get-ready-for-winter>) hosted by the Met Office. DH officials attended CO-awareness-raising events including Gas Safety Week and CO Awareness Week.

### **DH/PHE: Policy**

DH/PHE provided input into the All Party Parliamentary Carbon Monoxide Group inquiry into CO poisoning.

### **HSE and HSENI: Gas Safe Register**

The primary purpose of the Gas Safe Register is to protect people from unsafe gas work.

It does this through two distinct streams of activity:

- the maintenance of the register itself, which includes holding details including qualifications of registered engineers and businesses, providing a website for the public to find and check engineers and businesses, inspecting gas work carried out by registered businesses and investigating work which may have been carried out illegally and building a case for prosecuting bodies such as HSE;
- the other primary stream of activity is undertaking consumer-focused activity designed to raise awareness of gas safety issues and, more recently, to encourage positive behaviour change amongst consumers.

In the initial years of operation since the launch of the Register in April 2009 much of the focus was on awareness-raising, both of the new Register brand and of gas safety issues overall. Over time, and as brand recognition targets have been met, the focus has moved slightly from simple awareness-raising towards a model centred on encouraging consumers to actually change their behaviour to make themselves safer. This shift towards a 'behaviour change' model was initially trialled in a pilot project in north-west England but has now been adopted as a central part of overall campaigning, the aim of which is to engage gas consumers to have their gas appliances checked and maintained annually.

More information on the Behaviour Change project and the assets developed for it is given in the 2012/13 Cross Government Group report (<http://www.hse.gov.uk/gas/domestic/cross-government-group-1213.pdf>). A copy of the Behaviour Summary Analysis Report is also available on request from [marketing@gassaferegister.co.uk](mailto:marketing@gassaferegister.co.uk)

The Register has continued to innovate, evolve and improve the assets and campaign tools used to reach the public, building on existing successes and making the most of relationships with stakeholders across the sector.

The key consumer-focused campaign continues to be Gas Safety Week. Now in its fourth year the campaign has continued to evolve from its initial conception as a GSR campaign into something more accurately described as an industry-wide proposition with the Register acting as catalyst and host but which is delivered by a range of stakeholders. It is also notable that there is much greater coordination with other campaigns which occupy a similar space, including the industry-focused Gas Industry Safety Week.

After taking on-board feedback from stakeholders about helping create a positive view of the industry, and registered businesses, the Register campaign has focused on 'Gas Safe Heroes' and the role played by Gas Safe registered engineers in keeping the public safe. This more positive approach has been enthusiastically supported by stakeholders with over 4100 pledges of support (continuing the year-on-year growth since launch). The campaign utilises PR, marketing, digital and social channels as well as face-to-face interaction with the public. A dedicated online hub hosts information about the campaign and also highlights supporters and key pieces of activity ([www.gassafetyweek.co.uk](http://www.gassafetyweek.co.uk)). A full campaign analysis will be undertaken with results available before the end of 2014.

A key campaign asset for Gas Safety Week, but which is also used for other activity, is the Gas Map – an interactive online tool which allows consumers to find out about gas safety incidents in their area and which then encourages them to take action (specifically, to sign up for an annual reminder). The Gas Map has been fully updated for 2014 and the user experience streamlined in line with feedback. Much of the incident data has been provided by the gas distribution networks and their ongoing support reinforces the value they place on the tool and on the work of the Register overall. The map can be accessed here: [www.staygassafe.co.uk](http://www.staygassafe.co.uk)

The Register also continues to undertake other seasonal campaigning activity including material aimed at those going on holiday – be that in caravans, tents or rented

accommodation. The Register achieved good coverage of the campaign on breakfast television (the campaign worked alongside the messaging of other stakeholders).

Gas Safe Register also continues to engage positively with other industry and stakeholder forums including the All Party Parliamentary Carbon Monoxide Group (APPCOG), and the All Fuels Forum. The Register is also represented on APPCOG Enquiry which is hearing evidence ahead of an updated report from Baroness Finlay.

### **Key GSR statistics**

The Register continues to develop a presence on digital channels and social media, including recently developing an engineer-focused profile on Instagram.

Current followers (approximate at September 2014):

Facebook:	27,900
Twitter:	10,900
LinkedIn:	1,200
Instagram:	750

The Register website also continues to be a key channel in reaching the public and registered businesses:

Consumer website visits 1 Sep 2013 – 31 Aug 2014 = 2,162,140
Engineer website visits, same time period = 894,519

The GSR contact centre also handles in excess of 330,000 calls a year (this includes calls from engineers).

HSENI promoted the GSR's Barbecue Safety Campaign in Northern Ireland. Ahead of the 2014 Easter break HSENI issued a news release reminding the public of the potential dangers of CO poisoning away from the home highlighting the dangers when using barbecues in areas without adequate ventilation. (<http://www.hseni.gov.uk/ilink-news?id=15647&watch-out-for-carbon-monoxide-this-easter>)

A mailshot exercise was carried out and 5,500 leaflets were issued to specifically targeted premises including caravan and forest parks, marinas and camping suppliers, independent DIY/hardware stores and garden centres.

### **HSE: 2014 APPCOG Inquiry**

APPCOG is conducting an Inquiry into behavioural change in relation to CO (<http://www.policyconnect.org.uk/appcog/research/inquiry-behavioural-insights>). HSE is participating in the Inquiry by attending relevant meetings and engaging with focus groups, eg Knowsley Old People's Voice, who have responded to the call for evidence.

### **HSE: Gas Safe Register and FENDIX pilot communications campaign**

HSE worked with FENDIX Media and GSR in September to pilot a digital campaign to raise awareness of CO poisoning. The campaign targeted NHS staff and members of the public by placing messaging on NHS Trust intranet and internet sites. Initial impressions show an encouraging outcome but data analysis is continuing.

### **HSE: Domestic gas e-Bulletin**

Since last year's report subscription to HSE's gas e-Bulletin has risen from approximately 17,000 to almost 23,000 <http://www.hse.gov.uk/gas/ebulletin.htm>.

### **HSENI: Carbon Monoxide Awareness Campaign**

The fourth year of the HSENI "Watch Out – Carbon Monoxide Kills" awareness campaign has been delivered via a range of events press releases and online activities. Emphasis continued on the importance of servicing and maintenance of home heating appliances. The campaign covers all fuels and was supported by both an information helpline and dedicated website – <http://www.hseni.gov.uk/watchout>

Numerous public and private sector organisations have received the CO leaflets, posters and other promotional items through our awareness campaign. We have established contact within the two major universities and have negotiated that the student specific CO leaflet is circulated widely on their campuses.

### **HSENI: Carbon Monoxide Safety Group**

The membership of this group is made up of representatives from both the private and public sector including Northern Ireland Fire and Rescue Service the Public Health Agency and University representatives. The aims of the group are to work in partnership to deliver the message of the dangers of CO to employees, students and members of the public.

### **HSENI: Carbon Monoxide Awareness Month**

November 2013 saw the launch of Northern Ireland's first Carbon Monoxide Awareness Month (<http://watchout.hseni.gov.uk/co-awareness-month.htm>). Developed by members of the CO Safety Group, the new safety drive aims to help protect the public from the dangers of CO.

Throughout the month the Northern Ireland public were reminded that the best way to protect themselves and others is to make sure their fuel-burning appliances are serviced at least annually by a registered engineer, and chimneys and flues are inspected annually and swept, if required, by a registered technician.

A range of promotional activities took place to support these key safety messages, including information events in shopping centres and community venues throughout Northern Ireland, performances of the CO drama, "TOXIC", in 32 local post-primary schools, online activity, leaflet drops and much more.

### **HSENI: Summer carbon monoxide safety advice on chimney sweeping**

In July 2014 HSENI issued a timely reminder to householders that summer is an ideal time to make sure chimneys and flues are inspected and swept by a registered technician.

### **HSENI: Carbon monoxide awareness in student population**

Carbon monoxide leaflets were distributed to students in all six university campuses in Northern Ireland. The universities also signed up to promoting the HSENI Watch Out website campaign (<http://watchout.hseni.gov.uk/>) including links to the ROSPA and "Be a Mate" videos.

### **HSENI & district councils joint underground LPG metallic pipework initiative**

The underground LPG metallic pipework initiative was launched in April 2014. The aim of this initiative was to encourage compliance with the relevant health and safety legislation and industrial codes of practice in relation to the storage and use of LPG. It was taken forward by HSENI in partnership with all 26 district councils.

The two major gas suppliers identified around 1,000 of their customers as potentially having underground metallic pipework. HSENI and the district councils had to notify these customers of the need to check that appropriate steps were undertaken to ensure that all pipework was up to the required standard.

HSENI and the district councils are currently carrying out inspections of the premises identified.

### **PHE: Communications**

PHE supports DH in the production of a number of materials which are issued over the winter period, and provide information on and warnings of the dangers of CO poisoning. These include the Cold Weather Plan (<https://www.gov.uk/government/news/cold-weather-plan-launches-to-prepare-for-winter>) and Winter Health Watch (<https://www.gov.uk/government/collections/winter-health-watch>).

Information provided by PHE on flooding via the broadcast and print media included messages warning people about the dangers of CO from the improper use of generators, cooking appliances and appliances used to dry out properties.

PHE produced a short video on the dangers of using barbecues inappropriately whilst camping. [Publication pending on: <http://www.youtube.com/user/PublicHealthEngland>]

PHE has been liaising with Government departments on the production of materials on CO aimed at consumers for radio broadcast.

PHE issued national and regional press releases to raise public awareness of the dangers from CO poisoning to mark Carbon Monoxide Awareness Week, 2013, and published news stories and tweets reminding people about the dangers of inappropriate use of barbecues while camping. PHE supported Gas Safety Week in 2014 via tweets.

### **PHE: Stakeholder meetings and events**

PHE attended meetings and events on CO arranged by stakeholders.

Public Health England's Centre for Radiation, Chemicals and Environmental Hazards (CRCE) (Wales), with Public Health Wales (PHW) have been involved in the organisation and delivery of consumer awareness events and campaigns on CO. Further details on these events are provided in the submission by PHW.

### **Ofgem**

Each year, the gas network companies must report to Ofgem on their performance under the RIIO-GD1 price control and they have submitted information for the first year of the price control period. This information (<https://www.ofgem.gov.uk/network-regulation-%E2%80%93-riio-model/riio-gd1-performance-data>) includes:

- their performance in delivering their workload and output commitments;

- the costs they have incurred in delivering their service and how this compares to their long-term forecasts in their business plans;
- safety initiatives.

In June 2014 Ofgem consulted on the Priority Services Register and whether suppliers, electricity distribution network operators (DNOs) and gas distribution networks (GDNs) should be required to:

- provide additional non-financial services to energy consumers who are more likely than a typical consumer to experience problems with communication, safety and supply;
- take reasonable steps to identify people who would benefit from these services;
- share consumer information with each other and other utility companies, using vulnerability indicators agreed between them;
- raise awareness of services, including developing a single cross-industry brand; and
- conduct annual independent audits of their performance and publish findings.

The consultation closed in September 2014 and Ofgem is currently considering the responses. (<https://www.ofgem.gov.uk/publications-and-updates/review-priority-services-consultation>)

### **PHW: General activities**

PHW has established a Carbon Monoxide (CO) in Wales Working Group with representatives from industry, emergency services, Health and Safety Executive, health boards, local authorities, Welsh Government and the Royal Society for the Prevention of Accidents.

The group links into a UK-wide CO network via Policy Connect and the UK Cross

Government Group on Gas Safety and CO awareness.

The group aims to:

- co-ordinate action, to prevent CO exposures;
- improve the response to CO incidents; and
- improve information sharing and incident/impact surveillance.

Since January 2014, the group has:

- contributed to a CO summer safety campaign in conjunction with the Gas Safety Register's UK wide campaign;
- contributed to a CO awareness campaign targeting students and private landlords; and
- produced information packs for local authorities and others.

A CO subgroup has been established to map agency incident response roles and responsibilities and improve response.

PHW is also developing a Wales-wide CO impacts surveillance system to help inform

understanding of the epidemiological burden of CO and facilitate targeted interventions by identification of priority areas for action.

Annual analysis of the epidemiology of CO incidents in Wales will be incorporated into future environmental public health annual reviews and fed into a range of multi-agency groups, including the CO in Wales Working Group and Welsh Government's Health Protection Committee.

The identification of any inequalities in the burden of CO impacts in Wales may lead to a focusing of preventative interventions towards at-risk groups. The surveillance system will also facilitate the evaluation of such targeted interventions. The identification of inequalities may also be used as the focus of CO Awareness Week communications, each November.

#### **PHW: Local authority information**

PHW has produced a suite of information for local authority staff to display on their websites and use as an aide-memoire if calls relating to CO exposure are received.

#### **Welsh Government/PHW: Summer safety and student campaigns**

PHW led a summer safety campaign in partnership with GSR, emergency services, Welsh Government and others. It targeted camping and caravan sites, festival organisers, boating organisations and local authority environmental health, trading standards and emergency planning departments. The aim of the campaign was to promote summer-specific CO safety messages such as 'Don't take lit barbecues into tents'. In addition to the distribution of electronic safety materials such as leaflets and posters, fire and rescue services throughout Wales visited festivals and camping/caravan sites.

PHW has led a student safety campaign in partnership with GSR, emergency services, Welsh Government and others. It targeted local authority housing enforcement departments, the enrolment and accommodation departments of universities in Wales and student unions. The aim of the campaign was to increase awareness of CO poisoning and its symptoms and to remind students and landlords of a landlord's legal obligations in relation to gas appliances.

#### **Welsh Government: Safety advice material**

In September 2014 Welsh Government published a new, postcard-sized, safety advice detailing 3 simple steps which householders can take to reduce the risk of carbon monoxide poisoning in the home. Welsh Government has contacted key interested bodies to make them aware of the availability of free hard copies of the advice. These include Wales' Fire and Rescue Service, local authorities, higher education establishments (specifically student unions and student accommodation officers) and charities.

The release of this advice coincided with the publishing of new CO web pages on the Welsh Government website at [www.wales.gov.uk/carbonmonoxide](http://www.wales.gov.uk/carbonmonoxide). They include advice on:

- the symptoms of CO poisoning;

- emergencies;
- potential sources of CO;
- CO alarms;
- maintaining household appliances;
- camping, boats and leisure;
- chimneys, flues and air vents;
- the effects of flooding; and
- landlord, tenant and homeowner responsibilities.

## **SUPPORTING PROFESSIONALS**

### **BIS**

BIS continues to support work in ensuring that consumers can have confidence in the gas appliances made available to them.

### **DH/PHE: CMO/CNO letter on CO poisoning**

The Department of Health and Public Health England prepared a letter from the Chief Medical Officer, Professor Dame Sally Davies, Chief Nursing Officer, Dr Jane Cummings and Director of Nursing, Professor Viv Bennett to health professionals to raise awareness of CO poisoning. This letter was published in November 2013.

<https://www.gov.uk/government/publications/carbon-monoxide-poisoning>

Further advice to health professionals and others involved in public health on the dangers of CO poisoning has been included in the Cold Weather Plan for England 2014. ([https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/365756/CWP\\_2014.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/365756/CWP_2014.pdf))

### **PHE: Training**

PHE has been organising a regional training day to assist local authority personnel, healthcare practitioners, emergency responders, PHE staff, Government departments and industry in understanding their role in preventing and responding to CO incidents. This event is due to take place in the South West in November 2014.

### **PHE: Carbon monoxide response work**

PHE continues to provide information on CO when they are notified of incidents received from the emergency services, local authorities, and GP and hospital staff throughout England and Wales. PHE provided public health advice in 48 reported CO incidents between 1 October 2013 and 30 September 2014 in England and Wales. This includes both suspected and confirmed CO exposures.

### **PHE: Tools to aid diagnosis**

PHE updated its tool for GPs and emergency department professionals to assist in diagnosing poisoning. This was circulated with the CMO/CNO letter on CO (see above). PHE is also in the process of developing further tools to aid professionals diagnose CO poisoning. A tool for midwives is due to be launched in November 2014.

### **PHE: Meetings**

PHE has held meetings with the Chartered Institute for Environmental Health to establish further opportunities for collaborative working to assist professionals.

PHE supports the chairman of the All Fuels Medical Sub-Group which aims to establish ways in which diagnosis, treatment and awareness of CO poisoning by healthcare professionals can be improved.

On behalf of the Cross Government Group on Gas Safety and CO Awareness, a presentation of the Group's work was given at the Institute of Gas Engineers and Managers conference "Carbon monoxide: knowledge is power"

[\(http://events.igem.org.uk/download/knowledge-is-power/\\_/CC\\_017/26232293\\_0950-IGEM-CO-Cross-government-group-Isabella-Myers.pdf/ \)](http://events.igem.org.uk/download/knowledge-is-power/_/CC_017/26232293_0950-IGEM-CO-Cross-government-group-Isabella-Myers.pdf/).

### **PHE: Publications**

Public Health England's Centre for Radiation, Chemicals and Environmental Hazards (CRCE) (Wales), with Public Health Wales has been involved in the organisation and delivery of support to professionals on CO. Further details are provided in the submission by PHW.

### **Welsh Government/Public Health Wales**

PHW has set up a working group to coordinate and lead CO work in Wales. The group comprises many organisations such as the emergency services, health boards, industry, and the voluntary sector. The group is an effective, supportive environment where the future CO work in Wales is shaped. A response subgroup has also been set up to clarify and reinforce professional responsibilities in relation to the response of each organisation to CO incidents.

Welsh Government will continue to publish advice for health professionals (including information on diagnosis, investigations and management). In November 2013, The Chief Medical and Nursing Officers for Wales also issued a circular to health professionals in Wales, reminding them of the symptoms of CO poisoning:

<http://wales.gov.uk/topics/health/cmo/publications/cmo/2013/8218850/?lang=en>

<http://wales.gov.uk/topics/health/protection/environmental/publications/recognise/?lang=en>

Work is currently ongoing to raise awareness of CO incidents with health professionals to help improve diagnosis and early intervention.

## **RESEARCH**

### **PHE: Environmental Public Health Tracking**

Carbon monoxide remains a programme of work for environmental public health tracking (EPHT) and is instructed to do so by the EPHT programme board. The aim is to gain a better understanding of the overall burden of CO in England.

PHE EPHT team has been working with the Small Area Health Statistics Unit (SAHSU) to analyse 10 years' worth of Hospital Episode Statistics (HES) data, the findings of the analysis have been written up into a paper currently under review for publication in a peer review journal.

Every year the EPHT team receive the annual CO mortality figures for England and Wales from ONS under the established service level agreement.

The EPHT team have received ONS coroners text data for deaths which occurred from 1998 to 2010. Data are currently being analysed.

### **PHE: Merseyside FRS and John Moores University**

PHE continues to provide ongoing advice to the Merseyside Fire and Rescue Service and John Moores University research work on CO awareness.

### **PHE: Scientific conferences**

In 2013-14 PHE EPHT team reported results of their research on CO at the meeting of the International Society for Environmental Epidemiology, The Field Epidemiology Scientific Meeting and the 8th UK and Ireland Occupational and Environmental Epidemiology Conference.

Public Health England's Centre for Radiation, Chemicals and Environmental Hazards (CRCE) (Wales), with Public Health Wales have been involved in the organisation and delivery of research on CO. Further details are provided in the submission by Public Health Wales.

## **PHW**

PHW's CO in Wales Working Group has members who are actively undertaking research. The group is supportive of its partner members and has been providing both academic and financial support to the research.

## LEGISLATION AND SECURING JUSTICE

### BIS: Consumer safety

Works with European partners to ensure that the legislation in place provides an effective framework for robust enforcement of consumer safety legislation but without undue burdens to allow reputable businesses to innovate and grow while providing consumers with competitively priced products.

### HSE: Enforcement activities

HSE continues to work to secure justice and provide consumer protection where gas safety incidents are highlighted. This may be through the issue of an enforcement notice or prosecution in the event of a breach of the law. 17.4% of HSE's prosecution informations<sup>1</sup> in 2013/14 were brought under the Gas Safety (Installation and Use) Regulations 1998.

Significant cases have included:

- a suspended prison sentence for a builder who blocked a chimney causing a dangerous leak in adjoining property;
- a similar sentence for a gas engineer who incorrectly serviced a gas fire leading to the occupant collapsing unconscious with CO poisoning; and
- a substantial fine for a gas fitter who carried out illegal, dangerous work and falsely claimed to be registered.

There have been numerous prosecutions of landlords for a variety of offences including: failure to provide landlord's gas safety records; using unregistered gas fitters to carry out work; and failure to ensure safety of appliances.

Further information can be found on the HSE website: HSE Public Record of Convictions is at <http://www.hse.gov.uk/Prosecutions/> and the Media Centre <http://press.hse.gov.uk/> includes press releases relating to prosecutions.

### HSE: L56 Approved Code of Practice/COP20

Approved Code of Practice L56 "Safety in the installation and use of gas systems and appliances" (<http://www.hse.gov.uk/pubns/books/l56.htm>) was updated and published on 11 November 2013. The original intention was to withdraw COP20 "Standards of Training in Safe Gas Installation" at the same time. However, it was decided that the gas industry would become responsible for relevant guidance. Therefore, withdrawal was delayed until 1 April 2014 when the new industry guidance document "Standards of Training in Gas Work" (available at [www.igem.org.uk](http://www.igem.org.uk)) was also published.

### HSE and Gas Safe Register: Enforcement

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<sup>1</sup> In health and safety cases, criminal proceedings are commenced by the laying of an Information in the magistrates' court. The Information is normally accompanied by a summons, which is intended to secure the accused's attendance at court, in order to answer the allegation(s) made against him/her contained in the Information.

Gas Safe Register supports enforcement activity through incident investigation and operational support; they undertake visits with HSE, HSENI and local authorities. The field operations teams also complete inspections to identify unsafe gas work and assess engineers' competence.

### **HSENI: Enforcement and consumer protection**

HSENI works in close co-operation with GSR, to ensure that where legislation is breached and/or recommended guidance is not followed, appropriate action is taken to protect the public and to raise standards in the gas industry. Information is provided to engineers, businesses and the public where appropriate, enforcement notices are served when necessary and prosecutions are pursued. Similar actions are also taken with regard to liquid and solid fuels.

### **The Scottish Government: Building Standards Division**

The requirement for CO detection to be installed where new or replacement fixed heat producing appliances are to be installed in a new or existing building was introduced on 1 October 2014. The guidance in the Building Standards Technical Handbooks is applicable to all fixed combustion appliances, except those used solely for cooking, that operate on oil, gas (mains and LPG) and solid fuel (coal, coke, wood, wood pellets, etc). As well as applying to houses, flats and maisonettes, the guidance applies to residential properties such as hotels, care homes and hostels.

As part of the introduction of the above and other changes to the Technical Handbooks, the Building Standards Division of Scottish Government ran numerous dissemination seminars across the country. These seminars were well attended by building professionals covering all aspects of the design and build process. In addition to this, as part of more general awareness raising on the need for CO detection and to coincide with Carbon Monoxide Awareness Week 2013, Scottish Government distributed in excess of 20,000 householder information leaflets to various professional and trade organisations for their subsequent distribution.

Informal and anecdotal feedback to date is that the introduction of CO detection has been well received by designers, building contractors and the occupants of dwellings.

(<http://www.scotland.gov.uk/topics/built-environment/building/building-standards/publications/pubtech>)

### **PHW**

PHW through its coordination of the CO working group is acting as a central conduit for queries relating to CO from local government and others. The working group with its network of contacts makes it an excellent resource in terms of knowledge of legislation and codes of practice.

## STATISTICS

This section includes statistical data from DH and HSE on CO fatalities. DH and HSE use specific, but different criteria in what they record. The DH and HSE figures reflect the differences in the relevant data sources.

The DH data is based on public health information and excludes self-harm where that has been coded, but it is likely that self-harm is under-reported. HSE collects data on incidents, which are reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) (and previously under the 1995 Regulations). The Regulations apply to events, which arise out of or in connection with work activities covered by the Health & Safety at Work etc Act 1974. The Regulations require gas conveyors and LPG suppliers to report incidents where someone has died, lost consciousness, or been taken to hospital for treatment to an injury where gas is likely to be a cause.

PHW through the CO in Wales Working Group has received data from the emergency services relating to CO incidents that they have dealt with. PHW is currently analysing the data provided and will produce a report that should enable a greater understanding of the burden of CO incidents in Wales. This preliminary analysis will underpin the development of a bespoke CO surveillance system in Wales.

### CO mortality data

For information on Northern Ireland CO data please contact [Health.Protection@dhsspsni.gov.uk](mailto:Health.Protection@dhsspsni.gov.uk)

For information on Scottish CO, data please contact [ceu@scotland.gsi.gov.uk](mailto:ceu@scotland.gsi.gov.uk)

For information on England and Wales CO data, please contact [COfeedback@phe.gov.uk](mailto:COfeedback@phe.gov.uk)

### DH: Departmental analysis

#### **Carbon monoxide poisoning – Department of Health analysis finds thousands affected.**

Carbon monoxide poisoning is a serious and preventable form of poisoning. Each year there are around 40 deaths from accidental CO poisoning in England and Wales (ONS Statistics). DH has produced an estimate of the impact of non-fatal CO poisoning, based on the Hospital Episode Statistics (HES) A&E database. This shows approximately 4,000<sup>2</sup> people attend A&E each year diagnosed with CO poisoning. Even though the 4,000 individuals were not admitted to hospital, this sub-lethal poisoning may lead to lasting neurological harm. Previously, DH figures have shown that there are approximately 200 serious injuries in England and Wales that require hospitalisation each year. The estimate shows that non-fatal CO poisoning affects many more people than had been demonstrated before.

CO poisoning is difficult to diagnose as symptoms can be mistaken for common ailments such as flu or food poisoning. GPs have been alerted to this estimate through the DH GP

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<sup>2</sup> In 2009/10 13 out of 172 units reporting in A&E HES recorded at least 50% of their cases with ICD 10, amounting to over 1,000,000 records (6.5% of the total attendances recorded in A&E HES). Within these trusts, 255 attendances with a mention of CO poisoning were recorded. On the assumption that these trusts make up a representative sample of the country as a whole, a simple calculation scaling up to the England total, would suggest there were about 4,000 attendances in total as a result of CO poisoning.

and Team Practice Bulletin and will be able to download a diagnostic tool to aid diagnosis and a previously published joint CMO/CNO letter, which gives the most up-to-date information on CO poisoning.

Prevention remains the key to tackling this “silent killer” – people and families can protect themselves by:

- Having all appliances, flues and chimneys correctly installed and serviced by trained, competent and registered engineers<sup>3</sup>.
- Keeping rooms well ventilated while using an appliance.
- Installing an audible approved CO alarm in the home.

DH analysts have also compiled mortality statistics from the Office of National Statistics for accidental CO poisoning 2004-2013.

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<sup>3</sup> Gas Safe Register (gas appliances), HETAS (solid/fuel biomass) and OFTEC (oil appliances).

<b>Number of deaths from accidental poisoning by carbon monoxide, England and Wales, 2004-13<sup>1,2,3</sup></b>											
<b>Code</b>	<b>Cause</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>V00-X59</b>	<b>All accidental carbon monoxide poisonings</b>	<b>99</b>	<b>65</b>	<b>87</b>	<b>79</b>	<b>85</b>	<b>90</b>	<b>65</b>	<b>79</b>	<b>65</b>	<b>60</b>
<b>X47</b>	<b>Accidental poisoning by other gases and vapours</b>	<b>34</b>	<b>22</b>	<b>41</b>	<b>47</b>	<b>39</b>	<b>39</b>	<b>32</b>	<b>34</b>	<b>25</b>	<b>24</b>
	Occurrence at home	22	19	34	35	26	29	23	29	18	16
	Occurrence in residential institution	0	0	0	0	0	0	0	0	0	0
	Occurrence at school other institution/pub admin area	1	0	0	0	0	0	0	0	0	0
	Occurrence at sports/athletics area	0	0	0	0	2	0	0	0	0	0
	Occurrence on street/highway	0	0	2	1	4	1	1	1	1	0
	Occurrence at trade/service area	0	0	0	0	0	1	0	1	0	0
	Occurrence at industrial/construction area	3	0	3	4	2	1	1	0	0	1
	Occurrence on farm	3	0	0	0	0	0	0	0	0	0
	Occurrence at other specified place	4	3	2	7	3	5	6	3	5	6
	Occurrence at unspecified place	1	0	0	0	2	2	1	0	1	1
<b>V01-V99</b>	<b>Transport accident</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>X00-X09</b>	<b>Accidental exposure to smoke, fire and flames</b>	<b>64</b>	<b>42</b>	<b>45</b>	<b>31</b>	<b>46</b>	<b>50</b>	<b>33</b>	<b>45</b>	<b>40</b>	<b>36</b>
1 Cause of death was defined using the International Classification of Diseases, Tenth Revision (ICD 10). Deaths were selected where the underlying cause of death was accidental (ICD 10 codes V01-X59), and where the secondary cause of death was the toxic effect of carbon monoxide (ICD 10 code T58).											
2 Figures for England and Wales include deaths of non-residents.											
3 Deaths registered in each calendar year.											
<i>Source: Office for National Statistics</i>											

## Scotland: Mortality figures 2004-2013

### Carbon monoxide deaths (ICD 10 code: X47) data from the General Register Office for Scotland. Data range 2004–2013

Mortality statistics for accidental CO poisoning in Scotland

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Deaths by CO (X47)*	0	2	1	0	2	1	2	2	1	0

National Records of Scotland, Vital Events Reference Table 6.12

\*X47 Other gases and Vapours (Carbon Monoxide)

## Northern Ireland: Mortality figures 2008–2013

### Deaths from carbon monoxide poisoning<sup>1</sup> 2008-2013<sup>P</sup>

Type of carbon monoxide death	ICD10 Code							2008-2013 Average
		2008	2009	2010	2011	2012	2013 <sup>P</sup>	
Uncontrolled fire in a building or structure	X00	4	-	4	3	2	2	3
Controlled fire in a building or structure	X02	-	-	-	2	-		0
Exposure to ignition of highly flammable material	X04	1	-	-	1	-		0
Exposure to other specified smoke, fire and flames	X08	-	-	-	-	-		0
<b>Accidental poisoning</b>	<b>X47</b>	<b>4</b>	<b>7</b>	<b>2</b>	<b>-</b>	<b>1</b>		<b>2</b>
Intentional self-harm	X67, X76	7	5	3	1	5	9	5
Assault by smoke, fire and flames (includes arson, cigarettes and incendiary devices)	X97	-	3	-	-	-		1
Poisoning by and exposure to other gases and vapours, undetermined intent	Y17	-	-	1	-	-		0
<b>Total</b>		<b>16</b>	<b>15</b>	<b>10</b>	<b>7</b>	<b>8</b>	<b>11</b>	<b>11</b>

<sup>1</sup> Deaths from carbon monoxide poisoning have been defined using ICD10 code T58 and where carbon monoxide was mentioned on the death certificate

<sup>P</sup> Data for 2013 remains provisional until the publication of the 2013 Annual Report of the Registrar General due to be released in November 2014

## Health and Safety Executive published statistics

<http://www.hse.gov.uk/statistics/tables/ridgas.xls>

# Table RIDGAS

Incidents in Great Britain relating to the supply and use of flammable gas (a) 2009/10 - 2013/14p

Type of incident (b)		Year				
		2009/10	2010/11	2011/12	2012/13r	2013/14p
Total number of incidents		223	278	173	224	203
	Carbon monoxide poisoning	196	229	142	193	181
	Other exposure, eg to unburnt gas	6	13	7	6	3
	Explosion/fire	21	36	24	25	19
Total number of fatalities		10	17	4	10	6
	Carbon monoxide poisoning	9	13	3	9	3
	Other exposure, eg to unburnt gas	-	1	-	-	-
	Explosion/fire	1	3	1	1	3
Total number of non-fatalities		330	428	266	353	342
	Carbon monoxide poisoning	292	368	226	313	316
	Other exposure, eg to unburnt gas	11	12	8	6	5
	Explosion/fire	27	48	32	34	21

## Notes

Source: RIDDOR - Reporting of Injuries, Diseases and Dangerous Occurrences Regulations

r =revised

p=provisional

Regulation 11(1) of RIDDOR 2013 (previously Regulation 6(1) in RIDDOR 1995) places a duty on conveyors of flammable gas (including LPG), to notify HSE of incidents where someone has died, been found unconscious or has been taken to hospital in connection with the gas they have distributed, filled, imported or supplied, This includes exposure to unburnt gas, products of combustion, ie CO, or fire/explosion incidents. In practice the reporting duties are usually undertaken by the gas Emergency Service Providers (ESPs) representing gas conveyors. The statistics published above are 'as reported' to HSE. When such reports are made, it is at the early stages of the incident, thus the detailed circumstances of the incident will not have been confirmed.

Key changes to the reporting system and the legal requirements for RIDDOR have occurred in recent years. More information on data changes affecting RIDDOR statistics is available at:

[www.hse.gov.uk/statistics/riddor-notification.htm](http://www.hse.gov.uk/statistics/riddor-notification.htm)

(a) Mainly piped gas but also includes bottled LPG

(b) An incident can cause more than one fatality or injury

General information on domestic gas safety is available at: [www.hse.gov.uk/gas/domestic/index.htm](http://www.hse.gov.uk/gas/domestic/index.htm)

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HSE also provides details of members of the public who have died in reportable domestic gas incidents on their website. For 2013/14 <http://www.hse.gov.uk/foi/fatalities/2013-14.htm>