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

Annual Report 2010/11

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 carbon monoxide 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 carbon monoxide (CO) risks and how to manage them.

- Department for Business, Innovation and Skills (BIS)
- Department for Communities and Local Government (DCLG)
- Department of Health (DH)
- Health and Safety Executive (HSE)
- Health and Safety Executive for Northern Ireland (HSENI)
- Health Protection Agency (HPA)
- Office of Gas and Electricity Markets (Ofgem)
- Partnerships for Schools
- The Scottish Government
- Welsh Government

Gas safety and more broadly carbon monoxide 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 2010 to Autumn 2011.

A number of the Group have met and discussed CO poisoning with the policy lead of the All Party Parliamentary Gas Safety Group inquiry into low-level CO exposure, and given evidence to the inquiry. Several of the Group also attended the launch of the report at the House of Commons on 31 October 2011. [http://www.policyconnect.org.uk/appgsg/node/494](http://www.policyconnect.org.uk/appgsg/node/494)

Carbon monoxide poisoning is a serious and preventable form of poisoning. Each year there are around 50 deaths from accidental CO poisoning in England and Wales (ONS Statistics) and in excess of 200 non-fatal cases that require hospitalisation. A new 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 and HSE is provided in the final section of this Report.

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 1995 (RIDDOR). 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. Reporting of HSE CO incidents depends on the consequences of the exposure i.e. exposure results in a death or major injury.
CONSUMER AWARENESS

DH: Work with stakeholders and charities
DH has regular meetings with stakeholders from the charity sector and attended stakeholder events. DH sponsors a School poster competition run by CO Gas Safety as an innovative way to communicate to families. Recent activity has highlighted the new estimate of 4,000 diagnosed with CO poisoning attending A&E departments to illustrate the scale of the problem.

HSENI and HSE: Gas Safe Register
HSENI ran a major advertising campaign in support of the introduction in Northern Ireland of the statutory registration scheme for gas engineers, Gas Safe Register, aimed at consumers and gas engineers. http://www.hseni.gov.uk/gas_safe_register_campaign.htm. The campaign included numerous participative events, with a strong focus on use of Gas Safe registered engineers, regular maintenance of gas appliances and use of audible CO alarms. Measurement of public awareness in Northern Ireland of Gas Safe Register and its role has indicated that the targets set at the launch have been exceeded.

HSENI is currently working closely with HSE in designing and running a new publicity campaign based closely on the Gas Safe Registered-branded materials used by HSE in Great Britain, to be run alongside an HSE campaign, which started with Gas Safety Week during 12-18 September 2011.

The Gas Safe Register has undertaken significant campaigns, including national TV advertising, coverage on a wide variety of consumer programmes and national and regional press and radio, along with regional and community events to raise public awareness of gas safety risks. Recent research by the Gas Safe Register has shown that 81% of consumers in GB are aware of gas safety risks and the Gas Safe Register.

HSE and Gas Safe Register continue to work to raise awareness of the risks of carbon monoxide poisoning, particularly with vulnerable groups such as the elderly and students. Gas Safe Register ran their first Gas Safety Week in September 2011 and reached millions of consumers with key gas safety messages via television, radio, national press and consumer events. The week was well supported by almost 1,000 organisations such as RoSPA, National Landlords Association and boiler manufacturers. http://www.gassaferegister.co.uk/learn/gas_safety_week.aspx

Gas Safe Register and HSE are working together to expand the range of consumer factsheets on gas safety and CO. The factsheets will support consumer awareness and knowledge. Factsheets already published include who can work on my gas appliances, landlords gas safety responsibilities and information for tenants and flues concealed in voids. Plans are in place to publish further factsheets during the year. http://www.gassaferegister.co.uk/learn/gas_safe_fact_sheets.aspx

HSE domestic gas website
HSE has revised and relaunched the domestic gas website http://www.hse.gov.uk/gas/domestic/index.htm. It contains information that gas consumers need to know in order to manage their gas appliances / equipment safely and tells them what to do in an emergency. The answers to frequently asked questions are also included in an easy to access format.

HSE: Gas Safety Advice Line
HSE provides a free gas safety advice line, which gas consumers, tenants and landlords can contact for advice and information, telephone 0800 300 363.
HSENI: Consumer Campaign
HSENI developed a high-profile Carbon Monoxide Awareness Campaign with the assistance of an advertising agency, which went live throughout the media in Northern Ireland on 1st November 2010 following a launch by a Minister of the Northern Ireland Assembly at Stormont. The campaign had its own creative identity with the slogan ‘WATCH OUT! CARBON MONOXIDE KILLS’, with a specific colour scheme, which was used in promotional materials for TV, radio, outdoor and press. The campaign ran until the end of the first quarter of 2011. Emphasis was on the symptoms of CO poisoning, the need for servicing and maintenance and a recommendation to install an audible CO alarm. The campaign covered all fuels and was supported by both an information helpline and a dedicated website – http://www.hseni.gov.uk/watchout

Consumer research before and after the campaign showed that the campaign performed very well indeed and provided strong pointers for how it could be refreshed for a repeat campaign, which is currently being organised for winter 2011/2012, kicking-off in November 2011.

HPA: Press Releases
The HPA issues a national press release to mark Carbon Monoxide Awareness Week to raise awareness about CO through the national media. HPA regional units produce regionally focussed press releases based on the national release to raise awareness through local media. http://www.hpa.org.uk/ProductsServices/ChemicalsPoisons/Environment/Air/CarbonMonoxide/CarbonMonoxidePressReleases/

Ofgem: Gas Distribution Price Control review
In 2007, Ofgem published the Supply Licence Review, which considerably increased the obligations of licensed gas suppliers to keep consumers aware of the dangers of natural gas and CO.

The licensed gas distribution network operators (GDNs) are subject to price control mechanisms, which both regulate revenues and set standards for quality of service. Work undertaken as part of the current 2008-13 price control and the more recent engagement with stakeholders as part of the new RIIO-GD1 price control (effective from April 2013) have shown there is support for encouraging GDNs to consider measures that will raise awareness and reduce the dangers of CO.

As a result, all the GDNs are engaged in a number of CO related initiatives and trials. Ofgem anticipate these will assist in assessing how the GDNs can contribute further to reductions in occurrences of CO incidents in a cost-effective way.

The RIIO-GD1 Customer and Social Issues Work Group (which includes HSE) has placed considerable emphasis on CO. The GDNs will submit their RIIO-GD1 business plans by end November 2011. Ofgem expect that these plans will include effective and proportionate proposals, together with measureable outputs, to raise awareness and reduce the risks of CO.

Welsh Government: Carbon Monoxide Awareness
The Welsh Government’s CO warning leaflet “You can’t see it, you can’t smell it and it can kill” is available on the Welsh Government’s website at http://wales.gov.uk/topics/health/protection/environmental/publications/smell/?lang=en

The Welsh Government also holds a small stock of these leaflets and these are available from Health Protection Division on 02920 801061.

Welsh Government: Other activities
The Welsh Government plans to continue awareness raising activities through measures such as reminding key stakeholders (such as the Fire Service and Universities) of the availability of the CO leaflet so that they can obtain stocks. Also through the issuing of a Chief Medical Officer letter to
the health sector and health professionals (GPs, nurses, health practitioners in hospitals, clinics and GP surgeries etc) to remind them of the dangers of CO and their need to remain vigilant in recognising symptoms in patients.
SUPPORTING PROFESSIONALS

DH: GP and Team Practice Bulletin
DH publishes the GP and Team Practice Bulletin and this has been used to alert medical professionals to the new estimate of patients diagnosed with CO poisoning at A&E. In addition, the Bulletin was also used to promote the smoking cessation carbon monoxide card.

DH and HPA: The Smoking Cessation Carbon Monoxide (CO) card
This is an aid for health professionals to use with patients attending smoking cessation clinics. Levels of CO, which is present in tobacco smoke, are measured in the patient’s breath to monitor progress towards stopping smoking. However, patients who are compliant with the smoking cessation programme but still record higher than expected CO levels may have been exposed to environmental sources of CO. The card is used to help identify such cases, which can have serious health consequences, but are notoriously difficult to diagnose. http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1296683193634

HSE: domestic gas website
HSE has revised and relaunched the domestic gas website which supports landlords/letting agents in understanding their legal duties. The website also includes advice for engineers on how to become Gas Safe registered. The information is broken down into easy to use sections, including not only maintenance and repair advice but also annual gas safety checks and record keeping as well as answering frequently asked questions.

HSENI: Gas Safety Working Group for Northern Ireland
HSENI continued to facilitate the Gas Safety Working Group for Northern Ireland in working with key stakeholders, to drive joint initiatives. The group includes representative from HSENI, Local Government Councils, the Consumer Council, Gas Safe Register and all the suppliers of LPG & natural gas in Northern Ireland. When appropriate, representatives from other organisations are invited to participate at group meetings.

During 2010/2011, activities of the group in the areas of gas safety and carbon monoxide awareness focussed on landlord’s duties, risks from gas cookers, ventilation in commercial kitchens, flues in voids and buried LPG pipework. The group is currently broadening its range of contacts for fostering collaborative work, including relevant stakeholders in the Republic of Ireland - particularly in raising awareness of hazards from carbon monoxide.

HPA: Carbon monoxide response work
The HPA receives notifications from the emergency services, local authorities and GP and hospital staff about incidents of carbon monoxide poisoning in England and Wales. To encourage the notification of such incidents, HPA staff provide ad hoc training to local partners and have participated in local CO initiatives to identify CO poisoning.

HPA: Indoor Air Working Group
The HPA set up a working group to establish how indoor air quality fitted or should fit into the remit of different groups within the HPA so that that indoor air pollutants (including CO) could be addressed by the HPA in an holistic way. A working group on CO was established in HPA West Midlands, focusing on response and awareness raising. In addition, a departmental group was formed within the Environmental Hazard and Emergency Department of the HPA to co-ordinate resources and the provision of training workshops on CO throughout the country.

HPA: Training
The HPA holds workshops throughout the country to assist local authority personnel, healthcare practitioners, emergency responders, HPA staff, government departments and industry in understanding their role in preventing and responding to carbon monoxide incidents. These workshops make use of the residential inspection aid produced by HPA and CIEH in 2010 and also encourage joined up working practices within the region in which they are held. CO workshop for 2011 – Surrey & Sussex Health Protection Unit as part of the South East Non-Infectious Environmental Hazards Group (with the Centre for Radiation Chemicals and Environmental Hazards (CRCE) London & Chilton).


HPA: Centre for Radiation Chemicals and Environmental Hazards (CRCE) Nottingham
CRCE Nottingham delivered a number of presentations on CO at a regional Chartered Institute for Environmental Health (CIEH) training day in February 2011. An overview of work on CO was provided, examples of best practice in multi-agency working given, and use of the HPA/CIEH inspection aid was promoted.

HPA personnel provided a CO presentation as part of a monthly CPD Update (1 hour session via teleconference) to SW(N) Health Protection Units, PCTs and Local Authorities.

HPA: UK Indoor Environments Group Annual Conference
The HPA supported this annual conference for indoor environment research specialists and stakeholders, where papers on work focussing on carbon monoxide within the HPA were presented. http://www.ukieg.org

The Scottish Government: Building Standards Division Scotland: guidance document covering biomass installations to new and existing buildings
This guidance document is being finalised, and it raises the issue of carbon monoxide poisoning and provides guidance on how to reduce the risks. The guide should be published on our website (www.scotland.gov.uk/bsd) in the very near future.
RESEARCH

DH and HPA: A&E study final report
DH funded research on "Non-invasive screening for carbon monoxide exposure in selected patient groups attending rural and urban Emergency Departments in England' has been completed and a report submitted. A copy of the report can be requested from the Principle Investigator, Simon Clarke, at simon.clarke@fph-tr.nhs.uk. Discussions on publication of the report are being held with the research team and HPA.

DH: Pilot study of risks and long term effects of carbon monoxide poisoning
DH funded research. A final report has been submitted and concluded that a full scale study using the methods tested would not produce representative results and so did not recommend that such a study be commissioned, the study report can be found at http://www.iom-world.org/pubs/IOM_TM1102.pdf.

HSE: Scoping study on the long term reliability of carbon monoxide alarms
As highlighted in last year’s Annual Report, HSE has worked with CO awareness charities, COGDEM, the trade association for carbon monoxide alarm manufacturers, and the Gas Safe Register on a scoping study looking at the long-term reliability of carbon monoxide alarms. The study has involved collecting alarms that have been in use in consumers’ homes and then testing them to establish if they continue to operate to the standards prescribed in the British and European Standards. The report has now been published http://www.hse.gov.uk/research/rrhtm/rr847.htm.

HPA: Environmental Health Tracking
HPA is undertaking an environmental tracking project to facilitate the identification of interventions which could prevent carbon monoxide poisonings in homes. A report ‘Carbon monoxide mortality surveillance in England and Wales: A feasibility study’ has been completed and is awaiting publication. http://www.hpa.org.uk/Products/ChemicalsPoisons/EnvironmentalPublicHealthTracking/Newsletters/

HPA: Air Tight Homes
The HPA is involved with others in overseeing a MSc by Cranfield University into indoor air pollutants in air tight homes, which includes work on carbon monoxide. A short paper was presented at the UK’s Annual Air Pollution conference and a full paper is being produced. http://www.cranfield.ac.uk/health/researchareas/environmentalhealth/ieh/page19562.html

Health Protection Scotland: Restaurant emissions study
The Health Protection Scotland paper on restaurant emissions referred to in last year’s Annual Report has now been published and is titled "Odour as a Potential Proxy for Carbon Monoxide Exposure". The report is available at http://www.documents.hps.scot.nhs.uk/posters/2008/odour-potential-proxy-co-exposure.pdf.
BIS: Product Safety
BIS continues to be actively involved with Product Safety legislation and supporting the enforcement and operational requirements of that legislation. BIS are actively engaging at the European level in Commission working groups involved in clarifying intent of legislation and revision of the product safety legislation. The European Commission have held a number of workshops to inform them for the revision of the Gas Appliances Directive. Experience from the current Directive has been taken into consideration to focus the requirements with a view to increase clarity. A major consideration being proposals for the expansion of the scope, ensuring they are proportionate and any increased burdens on industry are justifiable and that protection of consumers continues at the expected high level. The European Commission are currently considering the input from Member States and other stakeholders and anticipate a proposal for a revised Directive in early 2012.

BIS attend and participate in European working groups involving test houses and manufacturers on operational issues and resolving day to day problems. In the UK BIS supports the test houses and UK manufacturers in assisting them to understand their obligations. Following reorganization at BIS involvement in the development of standards and participating in BSI Technical Committees has been reduced, though alternative means have been developed to ensure good contact is maintained with the principle participants. Good liaison is maintained with enforcement authorities (Local Authority Trading Standards Services and HSE) to support them as necessary. BIS have been involved with several safety issues over the year. BIS deals with policy issues and while ready to act should an enforcement authority identify a shortfall in its powers or there be a general issue with regard to safety of consumers the incidents have primarily been related to a single companies products and as such are dealt with by the relevant enforcement authority on a case by case basis with BIS providing support and assistance as required.

For the next year BIS, while dealing with continuing budgetary constraints, intend to remain closely engaged in ensuring that new products being made available on the market are safe and the product safety legislation is fit for purpose. BIS will continue to engage to support the stakeholders and enforcement regime.

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. 8.8% of HSE’s prosecution informations1 are brought under the Gas Safety (Installation and Use) Regulations 1998. Significant cases have included that of a gas engineer in Burnley who was jailed for two years after he carried out unsafe gas work and continued to work while not registered with the Gas Safe Register. Another engineer was jailed for 6 months for ignoring a prohibition notice issued by HSE and continuing to work while not Gas Safe registered.

A number of landlords, ranging from individuals to large organisations, were also prosecuted for failing to ensure that gas appliances in their properties were safe. In one case a Norwich landlord was jailed for two and a half years after a fire at one of his properties left his teenage tenant with 80% deep tissue burns and a less than 1% chance of survival. In another case, a Nuneaton landlord was handed a six month suspended prison sentence, 200 hours community service and

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1 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.
ordered to pay £30,000 costs because of his repeated failure to carry out annual gas safety checks at his properties.

**HSE and Gas Safe Register: Enforcement Review**
Gas Safe Register have completed an industry review of the investigation and enforcement activities undertaken by all parties involved in the enforcement of gas safety legislation. HSE are reviewing the relevant recommendations on regulation and securing justice, and will take appropriate action.

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

**HSENI: enforcement and consumer protection**
HSENI works through its gas team, in close cooperation with Gas Safe Register, 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 Scotland: reviewing the requirements for CO detectors**
Scottish Ministers are committed to reviewing the requirement for CO detectors. A requirement for the installation of CO detectors within the Scottish building regulations will be considered as part of a forthcoming review of the building regulations. The Working Group meeting will consist of interested parties, including industry experts. The review will consider the applicability of CO detectors in relation to all combustion appliances that operate on carbon containing fuel, such as gas (natural or bottled), oil, coal, coke and wood.
The statistical section is a new addition to the Annual Report, and 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 1995 (RIDDOR). 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. Reporting of HSE CO incidents depends on the consequences of the exposure i.e. exposure results in a death or major injury.

The recording of deaths is not standardised between Scotland, NI and the combined England and Wales figure. Essentially, the figures are not comparable.

For information on Northern Ireland CO data please contact Health.Protection@dhsspsni.gov.uk
For information on Scottish CO, data please contact ceu@scotland.gsi.gov.uk

DH:Departmental Analysis

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

DH has produced a new estimate of the impact of non-fatal CO poisoning, based on the Hospital Episode Statistics (HES) A&E database. This shows approximately 4,000 people attend A&E each year diagnosed with carbon monoxide poisoning. Even though the 4000 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 50 deaths and 200 serious injuries in England and Wales that require hospitalisation each year. The new estimate shows that 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. GP’s have been alerted to this new estimate through the DH GP 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.
- Keeping rooms well ventilated while using an appliance.
- Installing an audible approved CO alarm in the home.

2 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 carbon monoxide 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 carbon monoxide poisoning.

3 Gas Safe Register (gas appliances), HETAS (solid/fuel biomass) and OFTEC (oil appliances).
DH analysts have also compiled mortality statistics from the Office of National Statistics for accidental carbon monoxide poisoning 2004-2010.

Health and Safety Executive published statistics

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

Number of deaths from accidental poisoning by carbon monoxide, England and Wales, 2004-10\(^1,2,3\)
Excluding fires and transport accidents

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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.

Source: Office for National Statistics

Table RIDGAS

Incidents relating to the supply and use of flammable gas (a) 2006/07 - 2010/11p

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<td>Other Exposure</td>
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<th>Number of fatalities</th>
<th>Carbon monoxide poisoning</th>
<th>Other Exposure</th>
<th>Total</th>
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<tr>
<td>Number of non-fatalities</td>
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<td>Other Exposure</td>
<td>Total</td>
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Notes:
(a) Mainly piped gas but also includes bottled LPG
(b) An incident can cause more than one fatality or injury
p Provisional

Regulation 6(1) of RIDDOR places a duty on certain conveyors of gas (including LPG), to notify HSE of an incident involving a fatal or major injury that has occurred as a result of the distribution or supply of flammable gas. The statistics published above are as reported to HSE. When a report is made under Reg 6(1), it will be at an early stage of the incident, thus the detailed circumstances of the incident will not have been confirmed.

HSE also provides details of members of the public who have died in reportable domestic gas incidents on their website. For 2010/11 [http://www.hse.gov.uk/foi/fatalities/2010-11.htm](http://www.hse.gov.uk/foi/fatalities/2010-11.htm)