

# All Party Parliamentary Carbon Monoxide Group (APPCOG): Stakeholder Forum Minutes

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Thursday 24 June 2021, 10:00 – 11:50

Chair: Chris Bielby

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## Attendees

Barry Sheerman MP, APPCOG Co-Chair (BS)  
Chris Bielby, APPCOG Stakeholder Forum Chair (CB)  
Aaron Horsley, Parliamentary Intern (AH)  
Adrian McConnell, CO Research Trust (AMC)  
Alan Young HETAS Ltd (AY)  
Avril Samuel, Katie Haines Memorial Foundation (AS)  
Andy Speake, AiCO (ASp)  
Chris Yates, CORGI (CY)  
Claire O'Meara, Fire Angel & Project SHOUT (CO)  
Craig Drinkald, Cumbria Fire & Rescue Service (CD)  
Daniela Gentile, National Poisons Information Service (DGt)  
David Goodall, APPCOG SciTech Chair (DG)  
David Knipe, OFTEC (DK)  
Gordon Lishman, Gas Safe Charity (GL)  
Gordon Samuel, Katie Haines Memorial Foundation (GS)  
Hilary Bath, Gas Safe Charity (HB)  
Ian Palmer-Smith, Domestic & General (IPS)  
Isabella Myers, APPCOG COMed Chair (IMy)  
Jilly Robson, London Fire Brigade (JR)  
Laura Fatah, Policy Connect (LF)  
Lisa Pollitt, National Energy Action (LP)  
Maureen Nolan, Gas Safe Charity (MN)  
Oona Muirhead, Policy Connect (OM)  
Peter Glover, Essex County FRS (PB)  
Phil Cleaver, Chimney Skills Training (PC)  
Plamena Stroh UCL Queen Square Institute of Neurology (PS)  
Prachi Stafford, Sheffield Hallam University (PSt)  
Reece Emmitt, Wales & West Utilities (RE)  
Rob Lyon, APPCOG Comms Group Chair (RL)

Robert Flanagan (RF)  
Robert McLaren, Policy Connect (RM)  
Scott Darroch, Gas Safe Register (SD)  
Simon Main, Gas Safe Charity (SM)  
Simon Trollope, IGEM (ST)  
Stephanie Trotter, CO-Gas Safety (STr)

## Apologies

Baroness Finlay, APPCOG Co-Chair  
Gill Jackson, National Poisons Information Service  
Phil Burrows, Cadent  
Wilma Brooks, Coal Merchants Federation (Great Britain) Ltd & Solid Fuel Association Ltd  
Becky Close, Public Health England  
Ian McCluskey, IGEM  
Ady Hutt, APPCOG stakeholder and expert panellist

## Welcome by the Chair and apologies

CB welcomed all the stakeholders attending today. Particular thanks are due to Ian-Palmer Smith, Supplier and Heating Services Director for Domestic & General, who will give a presentation to the forum at 11am.

## Matters arising since the last meeting

Actions from last Stakeholder Forum (4 March) largely complete, ongoing Secretariat actions include developing connections with supplier and manufacturer contacts; and two stakeholder actions are pending further developments:

- ER to share info for virtual online fire and CO safety checker (when available)
- SD to share update re innovative blood monitoring (when available)

## APPCOG Working Groups Update

### Comms Group – Rob Lyon

Comms group has been focussing on the #CarbonMonoxideSafe4Summer campaign which launches at 12:00 today, just after the Stakeholder Forum meeting. Preparations have included several full meetings of the comms group and separate smaller working group meetings.

The campaign will focus on three key areas:

1. Safe use of solid fuel BBQs and outdoor equipment such as pizza ovens and fire pits
2. The importance of packing a CO alarm when you go on holiday
3. Safe use of LPG, both BBQs and outdoor heaters

We look forward to welcoming you to the launch, which will feature a preview of Baroness Finlay's podcast interview.

### COMed – Issie Myers

COMed last met on 24 May, members received a presentation from Dr Fahad Malik, Dr Randa Ghazal-Asswad & Dr Simon Clarke from Aintree Hospital. Simon has been a member of COMed for many years and he has garnered some interest in work aiming to improve the diagnosis of carbon monoxide poisoning in the Emergency Department, and raising awareness with clinicians. The researchers provided a presentation on their Emergency Department work with Patients presenting to ED with headaches and awareness of CO in clinicians. This work is currently unpublished, but the results presented to the group were very promising, exploring ways to promote CO awareness further in the ED. Stakeholders will be updated with further details when possible, it is hoped that this will become a wider project which can be spread to more hospitals.

Prof Shirley Price from the University of Surrey presented the work from two of her students who are looking at Adverse Outcomes Pathways for CO exposure in pregnant women and the neonate (from birth to one month). Adverse Outcomes Pathways (AOPs) are ways of examining scientific evidence to demonstrate a definite health outcome as a result of CO exposure.

The current projects looked at how CO affects pregnancy, in terms of tissue hypoxia and the binding to myoglobin and cytochrome, and how CO diffuses across the placenta, resulting in low birth weight. Low birth weight has many implications for child health and development throughout life. Numerous human and animal studies which have shown a link between chronic CO exposure and low birth weight have been analysed. A further project has explored chronic CO exposure in pregnancy and effects on the new born at 0 – 1 month. This AOP was looking at brain development in the neonate, which can have major implications for an individual's development and life prospects. Both concluded that CO can impact brain development and low birth weight. It is unclear what exact levels of exposure can lead to such implications; however it is worth bearing in mind that these projects looked at chronic levels of exposure, below the acute levels that are known to have severe implications for health.

Prof Price's interesting presentation led to a reflective and thoughtful discussion around current practices in midwifery, with attendees questioning how systems might be improved and where further data might be sought.

COMed's membership is growing; we most recently welcomed Prof Derek Steele, a Professor of Cell Physiology at the University of Leeds who is instrumental in the work looking at the cardiovascular effects of carbon monoxide exposure. Prof Steele was the key note speaker at a cardio vascular workshop funded by the GST, and as a result was invited to join the group. We are pleased to include Prof Steele, and look forward to future discussions and collaborations, using the benefit of his expertise.

Further updates from COMed members shared at the last meeting include:

a) Pregnancy and CO (HW)

HW has secured all funding required and is now recruiting for sites. Cadent have offered to provide personal CO monitors free of charge for all those who will be entering the 400 homes as part of the research, this has now been added to the protocol. LMJU will then analyse the data that these monitors collect from the 30mins – 1hr visit. HW is currently recruiting for sites. The group will be kept updated.

b) COMA

Dr Simon Clarke reported that he has now added COMA to the electronic record at his ED, so that every time a patient in ED presents with a headache it will automatically trigger a pop-up, prompting the clinician to go through COMA and consider carbon monoxide. SF will review records after two weeks to see if more clinicians are referencing carbon monoxide. The 'COMA' (Co-habitants, Outside, Maintenance (of appliances), Alarm) acronym, which the Quality Improvement Project was based on, seems to be what is making the biggest impact in raising clinical awareness.

c) CV (cardio vascular) workshop & further development: a report will be published imminently. Nearly fifty people attended the workshop; including some from USA, who are developing work with ICORN. They will also be examining hospital attendances and the potential to miss CO exposure.

d) The British Toxicology Society Annual Congress took place in mid-April; IMy hosted a symposium specifically on CO, chaired by Baroness Finlay. A wide range of topics were covered, including: how research can help with policy development, Mari Herigstad's work on the effects of CO on the chick embryo, development of blood protein bio-markers from Chris Morris in Newcastle, Dr Plamena Stroh from UCL presented work on treating CO poisoning looking at the effect of treatment on neuronal cells, and the difficulties of oxidative damage when supplying pure oxygen. Dr Robert Dickinson from Imperial College talked about his work looking for a therapeutic and also the neurological effects of CO exposure, memory and ambulatory issues. Prof Rob Chillcot from the University of Hertfordshire discussed a new project on pupillometry and its potential as diagnostic for low level CO exposure. AMc also spoke about the re-brand of the Gas Safety Trust and the new funding stream.

STr: is there any further information on what levels of carbon monoxide the women were exposed to in the pregnancy study presented by Prof Shirley Price?

IMy: the work included a range of pre-published peer reviewed studies, which are then reviewed in a systematic way to form an AOP. Therefore the work included a range of different levels. The key aim of an AOP is to show an effect exists, which were the findings here. Hilary Wareing's research, which is collecting primary data, will be linked to specific measurements.

### CO+ SciTech – David Goodall

The questionnaire for SciTech past and new members has been re-circulated but only one further response has been received. The deadline for final input is tomorrow, so DG is hopeful for more feedback.

**Action:** DG and LF will meet to discuss next steps.

### APPCOG Secretariat Update – Laura Fatah

A full written Secretariat update has been provided for June and circulated to stakeholders; LF highlights a few particularly relevant points and updates:

IGEM held their annual online conference on 9 June with a specific section for CO Safety, which included presentations from many APPCOG stakeholders and LF. ST will give a further update.

#### MHCLG consultation

Members will be aware of the MHCLG consultation re extending the regulations for domestic CO alarms (which opened in November 2020 and closed in January). It is unclear when the outcome of the consultation will be announced, however LF has now been provided with an official point of contact within the department, who has expressed a particular interest in ‘smarter’ CO alarms, which measure lower levels of CO, and can record data over time. LF has had productive initial discussions with the official and is seeking further information from alarm manufacturers on the more affordable models available. LF thanks stakeholders, in particular from Chimney Skills Training, for highlighting alarms with this function, and for explaining the usability of these products. Once the new regulations are announced there will be the need for a public information campaign, not just for landlords but also for those receiving alarms, so that they know how to respond.

RL highlights United Against CO have produced a [series of videos with different alarms](#) and the sounds they make, to help people to differentiate between the ‘chirp’ which indicates the battery being low, from an alarm which indicates a dangerously high level of CO. This could be useful both in #CarbonMonoxideSafe4Summer and a future information drive.

#### Health and Social Care Inquiry: [Raising Awareness and Reducing Risk](#) [working title]

Liz Twist MP is leading the inquiry to explore opportunities to increase CO protection for both Health and Social Care Professionals (HSCPs) and those they care for. Current thoughts are that CO safety practices could be well placed with the existing H&S procedures, such as risk assessments, mandatory training and emergency protocol. The first parliamentary session of the Health and Social Care Professionals Inquiry was held on 11 May, chaired by Liz Twist MP. The APPCOG is most grateful for the insightful comments made by attendees, and in particular to the prestigious expert panel:

- Nadra Ahmed OBE, Executive Chairman of National Care Association
- Gordon Lishman CBE FRSA, Executive Chair of the Gas Safe Charity
- Hilary Bath, Programme Manager, Think CO
- Simon Main, Programme Manager, Think CO

A document summarising the key findings and discussions from the first parliamentary session has already been circulated to stakeholders, in addition to full minutes for the session. The next step for the inquiry is to launch a survey for health and social care professionals, to understand what the experience is for frontline workers.

Office for Product Safety and Standards (OPSS) engagement

Stakeholders may know that a coroners regulation 28 report by Geraint Williams (relating to those who died due to faulty Beko cookers) has highlighted that there is no obligation for gas appliances to be registered on a centralised database when they are installed. This means that products are not traceable, and early warnings cannot be given if design flaws or badly manufactured appliances are identified. Earlier this year Minister Paul Scully asked the Office for Product Safety and Standards (OPSS) to engage with relevant groups to consider these concerns. The APPCOG has discussed issues for consideration with an official from OPSS. Following this, the Secretariat has requested and received valuable input and evidence from several industry stakeholders, which will be reviewed by parliamentary officers and then fed back to the OPSS for consideration within their inquiry. LF will keep stakeholders updated as this work progresses.

APPCOG Carbon Monoxide Framework:

In order to better explain and frame the work streams and various linked projects of the APPCOG, an overall ‘framework’ has been proposed. At present it seems that all projects fit within one or more of four themes, below:

Prevention	Detection	Treatment & Response	Intelligence & Data
Awareness – public, community and medical			Prevalence
Servicing Appliances	Alarms	Response Protocols	
Healthy Homes	Low Level symptoms	Treatment outcomes	
Ventilation	Patient Pathways and integrated services		
Appliance register	Training & education	Improved NHS Facilities	
Innovation			

This structure has been approved by the Advisory Board and will be uploaded to the APPCOG website shortly. However, it is in no way intended to be restrictive, merely informative.

CO Research Trust Update – Adrian McConnell

Gas Safety Trust has re-branded as the CO Research Trust (CORT), and has launched a [new five year strategy](#). CORT is currently running small grants call of up to 10k; the autumn grants call is open until 20 October for larger amounts. CORT sponsored the Cardio Vascular Workshop, and the CO section of the British Toxicology Society Annual Congress. In autumn CORT will start a monthly lecture series, and have asked grant recipients to come a give 30mins presentation about the work they are undertaking. CORT newsletter will start at the end of July, stakeholders can [sign up online](#) to receive this.

Meet the Member: Ian Palmer-Smith, Supplier and Heating Services Director, Domestic & General

D&G are primarily insurers, and are the leading suppliers of specialist warranty providers in the country. IPS is responsible for all the appliance repairs that are done under warranty for D&G.

Most people will have a D&G insurance in some way, D&G cover all the major white good manufacturers including AEG, Bosch, Hoover, Whirlpool, in addition to sky boxes and Nintendo. If an appliance is in warranty then the manufacturer does the work, if it is out of warranty then D&G do that via their supply chain network. D&G undertake 2.4 million repairs a year, and half a million product replacements. 97% of claims from consumers are accepted, and if we can't fix it – we will replace it, including boilers. There are 9250 engineers in the field nationwide, with a very low complaint rate.

In heating, D&G partner with all the major heating OEMs (Original Equipment Manufacturer) and D&G is the service, repair and installation arm for Scottish Power and now EDF. For EDF, as well as providing service and repair for heating, D&G operate the 'Home Emergency' service, which includes plumbing, drainage, locks, rooves and pests. These contracts lead to approximately 410,000 appliance repairs per year, a thousand boiler replacements and almost half a million safety checks.

A key part of the D&G model is 'Service Watch', a team which monitors work marked as 'in progress', and if there is over 24hrs with no movement, the team can intercede and speed things along. Vulnerable customers, and over COVID also key worker can be prioritised. Customers have responded well to this model.

D&G have not a traditionally sat in the gas sector, however now their presence has increased. IPS explains that the interest in CO awareness came as D&G felt this was an area they could make an impact in, and creating a positive difference. Following discussions with a number of individuals, including the Katie Haines Memorial Trust, the company decided to join the APPCOG.

Two years ago a "Check It, List it, Say it" campaign was launched, to ensure that engineers are not only just making appliances safe, but also listing their work and explaining what has been done to the customer. Often customer feedback is driven by what the engineer has communicated to them, so informing them is an important part of the service, and calls on the 'soft skills' that perhaps do not come as naturally to those more technical workers.

The 'Moment of Truth' has been developed to raise awareness of CO safety with D&G customers. When engineers visit for the annual safety check, they are promoted to discuss carbon monoxide with the customer. D&G research shows that customers appreciate having a physical folder to keep all their documents together, so this is where a printed carbon monoxide safety reminder has been placed, in the form of 'Nicoletta's Story'. This has been more accessible than plain safety information, and has brought the element of humanity to the message.

CB thanked IPS for an excellent and informative presentation and opened the floor for questions.

LF: this is a great initiative, I wonder how engineers are taking this forward in visits, are they actually telling the CO safety story, or is it more to highlight that CO could be risk? Sometimes it can take a while for professionals to absorb new working practices.

IPS: There is some variation, as some engineers will read through the whole story – although it is not an expectation for them to do so. Many engineers are comfortable talking with the customer, but we do not try to force anyone into being a talkative person if this is simply not in their DNA, as it is just not possible and

could have a negative effect. The engineers are not our direct labour; they are part of our supply chain, so we persist with communication and training, whilst understanding limitations.

STr: congratulates IPS for this excellent initiative.

## Member Updates:

### **Craig Drinkald, Area Manager Cumbria FRS**

Cumbria FRS are bringing forward some CO initiatives, developing a protocol for incident responses and taking CO readings at Safe and Well visits. When Cumbria attend a CO incident, they take atmospheric readings and record these on a form, a copy of which is given to the individual affected to enable them to get medical treatment, either at the ED or with their GP. Cadent have partnered with Cumbria FRS, and have installed 500 CO detectors and smoke detectors in the homes of vulnerable people when doing their safe and well visits. In addition, the specialist community safety team will soon be given personal monitors, so that when they visit people's home for safe and well visits they are able to do a quick check of the fuel burning appliances.

CD is looking for workable ways to promote CO safety in FRS and within the NFCC, and is glad to join the APPCOG Stakeholder Forum to hear from others and share ideas.

### **Fire Angel, Project Shout update, Claire O'Meara**

Project shout is a carbon monoxide awareness campaign originally started by RL, during his time at Fire Angel. In the past this has included media work, interviews with victims, and ensuring that people buy certified alarms. The campaign usually ramps up in the autumn, [the website](#) has full details of the project. Claire is seeking support for the campaign and would like to share her details with the group:

[comeara@fireangeltech.com](mailto:comeara@fireangeltech.com)

### **Think CO, Hilary Bath**

Think CO continues to deliver workshops online, and is currently developing video content aimed at BAME communities, in particular those from South Asia, with Leicestershire FRS and other partners. It is hoped that this will be ready to launch in September. HB: Simon and I delivered a CO Awareness workshop this morning to over 40 people, both paid and volunteers. The e-learning course runs in parallel with the workshops to reinforce learning. During the pandemic, a number of people have switched to telephone or online support, rather than home visits. Think CO have received requests from workshop attendees on what questions to ask when doing telephone check-ins, to check on CO safety, they are now developing some guidance on this, which should be available in the next couple of months.

### **CO-Gas Safety, Stephanie Trotter**

STr: CO-Gas Safety continue lobbying for appliance testing to become a formal part of CO incident response, so that when domestic appliances are re-lit following an incident, the Gas Emergency Service will test them to ensure they are no longer emitting CO. This would be beneficial for customer awareness, clinical information, and to gather accurate data. ST has given a talk to the civil servants at the Cross Departmental Committee on CO, and spoke at the IGEM conference; unfortunately there were some technical issues which prevented the survivors from accessing the digital platform and speaking at the conference, which is regrettable.

STr highlights a CO Safety competition that CO-Gas Safety are running in Jersey, as this sits outside the GDN areas and so does not take part in the nationwide competition. The competition closes on 17 September, and is for “young people aged 5 to 18 years old to raise awareness of this deadly poison by producing an informative and accurate warning of the dangers of Carbon Monoxide (CO) poisoning and/or products of combustion and/or how to avoid them” full details can be found on the [CO-Gas Safety website](#).

CO-Gas Safety is also seeking to do something to support people living off grid, and will keep members updated. ST asks for ideas for doing a Christmas warning for CO safety.

#### **IGEM, Simon Trollope**

ST IGEM recently ran a safety conference; one of the themes was particularly around carbon monoxide. Chris Bielby chaired the session and several APPCOG stakeholders spoke, including Laura Fatah, Hilary Wareing, Stephanie Trotter and Julie Connolly and additionally Beth Cheshire. The session has been recorded, and Simon can send the link out so it can be shared with a wider audience.

**Action:** Simon to send link to LF for CO section of conference (if CORT can do this)

The [Energy Innovation Centre](#) had a call recently for a research project into CO Awareness and Education programs, to try and understand what is out there, who it is targeting (in terms of vulnerable groups) and analysis of that against the Ofgem VCMA and wider goals. IGEM have bid and have been appointed in partnership with Frazer-Nash Consultancy and will be in touch with stakeholders to ask for input. This work will lead to recommendations, which we have suggested that APPCOG should be a key part of. ST will keep members informed as this progresses.

#### **Essex County FRS, Peter Glover**

PG is a Safe and Well Officer and this is his first Stakeholder meeting. PG and staff carry a simple CO monitor with them, and there have been occasions where this has triggered on the job. Cadent have attended both CO leaks and gas leaks. PG can also share his experience of visiting vulnerable people in their homes.

**Katie Haines Memorial Trust** (written update has been circulated)

### *AOB & Chair's closing remarks*

CB closed the meeting and thanked all stakeholders for attending and sharing their excellent work. The date of the final APPCOG Stakeholder forum meeting for 2021 will be circulated via email.

**Update:** Now confirmed for Thursday 11 November 2021 at 10:00 – 12:00.