

**(d) Research by Dr Julie Connolly at John Moore's university.**

This research can be found <http://researchonline.ljmu.ac.uk/id/eprint/11785/>

Stephanie Trotter of CO-Gas Safety attended a conference in Lille at which Julie gave a talk. Stephanie and Julie corresponded and have come up with the following for inclusion into this submission to Ofgem.

Julie has explored the lived experience of 11 participants who are coping with unintentional exposure to carbon monoxide (CO) using Interpretive Phenomenological Analysis. (IPA). A useful definition can be found

<https://hes32-ctp.trendmicro.com:443/wis/clicktime/v1/query?url=https%3a%2f%2fen.wikipedia.org%2fwiki%2fInterpretative%5fphenomenological%5fanalysis&umid=ba5a5609-f222-4d73-a8cc-a0e6fbaaf71e&auth=768f192bba830b801fed4f40fb360f4d1374fa7c-613204a1857ba3f30071e5d788f36e521d321117>

However, this seems to amount to exploring the lived experience of people who have been exposed to CO.

**Background**

There are about 60 deaths a year from preventable CO exposure in England and Wales and those who survive exposure may be injured and have long lasting burdensome sequelae (effects). Most research is from healthcare professionals and not from the point of view of those who have experienced exposure and those who have been bereaved by exposure. People who don't die or who are not rendered unconscious have a very difficult time and there's so little out there about people who have a lower level exposure. Some of those exposed have told me that the fact that medics and sometimes their own families do not believe they have been exposed to carbon monoxide, is even worse than the life long injuries they've been left with.

The data was analysed using IPA where four superordinate themes emerged: 'traumatic experience', 'power justice and judgement', 'identity and connectedness' and 'everybody seems to be in the dark'.

**About CO**

WHO guidelines. The 24 hour guideline is obviously the most appropriate for people in the home. This is about 6 PPM of CO.

Participants fell into two broad groups – one group was affected by higher levels of CO over a short period and the other was affected by lower levels over a longer period. Of course, few survivors could 'prove' exposure to CO at all, despite having symptoms, sequelae, and/or clear environmental signs that CO exposure had occurred. Nor could they provide measurements in parts per million.

Healthcare professionals who suspect that someone has been exposed to CO often rely on an environmental history (clear information about, for example, a faulty appliance or a generator that has been used inappropriately) as well as looking at the condition of that person and taking a blood test to ascertain the levels of carboxyhaemoglobin. These blood tests need to be taken very quickly once the person is away from the source of the exposure as levels of carboxyhaemoglobin dissipate rapidly.

Another important issue is that CO exposure symptoms can mimic the symptoms of many conditions, including viruses (such as Covid-19), and many healthcare professionals know very little about CO. They will test the blood (or breath) where CO exposure is suspected but they don't seem to understand the significance of a false negative result in the light of the person's environmental

history and symptoms. Healthcare professionals may not be fully informed and that also applies to members of the public. Nor do healthcare professionals have any recourse to free CO alarms to EN 50291 to give to those who report symptoms similar to CO exposure. Therefore, the only safe step is to obtain a test on the air in the property and the appliances powered by carbon based fuels, plus a CO alarm to EN 50291. Such a test is currently almost impossible for an ordinary person to obtain.

'In interviewing the 11 participants I observed the added distress caused to the participants by the lack of proof of their situation, which could be provided in the form of ambient air testing, or testing suspected appliances for CO. I find the lack of testing for CO, to which so many people may be exposed while cooking meals and heating their homes is something which should be addressed as a matter of urgency. The lack of proof leads to an assumption that CO is rare, and this contributes to a lack of awareness, knowledge and understanding of this preventable danger.'