

CO-Gas Safety Unintentional Carbon Monoxide Poisoning Case Study

ANONYMOUS FAMILY, Survived in 1989



Fuel: Mains gas

Appliance & Location: Gas fire in the family home

Notes by CO-Gas Safety: This gentleman contacted CO-Gas Safety in 2023, over thirty years after the exposure that hospitalised his wife, who was pregnant at the time. As he was living in a newly-built house that came with his job, he feels there were failings from the builder, his accommodation provider, the gas engineers who checked the appliances and also the medics who oversaw his wife's emergency and maternity care; failings which may still be having repercussions to this day.

A gas fire similar to the family's

In 1989 I was appointed to a new position which afforded my family and I tied accommodation in a newly-built house.

Failings by the builder and my employer

The post had proved difficult to fill so the house had stood empty for some time after completion. The house was meant to have been checked by a surveyor appointed by my employer but I have doubts that this inspection took place, or was purely superficial; there were several obvious faults with the property, such as missing electrical fittings and pipework. There were also meant to be two gas fires, one in the main living room and the other in the study. Neither had been installed during construction, meaning that the flue in the living room was open when we first saw the house.

By the time we moved in, in April, the gas fires were installed. We didn't use them until the autumn when the weather got colder. The gas fire in the study worked without any problem. It had a 'balanced flue', which vented straight outside the house and was sealed off from the internal space. The fire in the living room used a conventional flue, like a chimney, which we eventually found was faulty and leaked fumes into the room.

An emergency hospitalisation

On walking into the living room one day I became aware that the air wasn't right. It was very damp and there was a smell of combustion gases. My wife was conscious, but drowsy and struggling to focus. I realised there was a problem from the fire so turned it off and opened the windows. Not knowing anything about CO we didn't really know what to do other than that. Shortly after my wife, who was ten weeks pregnant at the time, began to lose blood so we called 999.

An ambulance took her to Warrington hospital. The emergency call centre judged my wife needed the one ambulance in the whole region that was operational during a strike. She was in a serious state. At the hospital the doctors' immediate concern was for the baby, which they told us to expect to lose. Due to our lack of knowledge of CO I don't recall raising it with the medics when we arrived at the hospital. I do seem to recall mentioning something about the fumes to someone some hours later but I don't know if any tests were done. It was all pretty traumatic. My wife has no memory of the event at all. We weren't thinking of causes or linking the escape of fumes to what happened. With hindsight that seems crazy but we just didn't know about CO at the time.

When checks showed the baby to be still alive they cautioned us that there would be problems with the development of the foetus due to the severity of my wife's condition. They could not be specific about what kinds of issues this could present, either at birth or in our child's future.

My wife was in the high dependency ward for a week. Upon returning home she was required to attend the hospital twice a week for the remainder of the pregnancy and the baby was induced on medical advice.

Failings by gas engineers

We were not aware of the severity of carbon monoxide poisoning but reported the fault to my employer, who arranged for a gas engineer from a reputable company to visit. He removed the fire, found that the flue was not pulling, and then proceeded to heat it with a gas torch. Once warmed, the flue worked and he refitted the fire. He did, however, advise us to check for signs of water vapour on the composite stone fireplace, which would indicate combustion gases leaking into the room. We found that every time we lit the fire, water would run down the fireplace indicating that the flue was not working and gases were leaking into the room.

Several visits were made by gas engineers from the same large company, who repeated the same process. They found the flue would not pull when cold so they heated it using a gas torch. I now realise that engineers we trusted re-installed the fire despite knowing it would spill fumes from a cold flue, which seems unbelievable.

A desperate and dangerous investigation

After some 18 months I became so exasperated by the problem that despite no technical knowledge I removed the fire myself and shone a torch up the flue. This was probably a dangerous step on my part but the problem was immediately apparent. The flue was constructed using pre-formed blocks with mortar joints. In some joints too much mortar had been applied and the excess partially blocked the flue. In others, not enough mortar was present and it therefore left gaps in the flue. When another gas engineer from the same company then saw this I was told that the flue was unsafe and could not be repaired. It was bricked up to prevent it being used and a balanced flue fire was fitted. This was all a very slow process.

Missed opportunities to ensure our safety

Again, with hindsight and greater knowledge of the dangers of carbon monoxide poisoning, I am now aware of a number of issues. Firstly, the builder should have ensured that the flue was built properly. Secondly, the surveyor sent by my employer should have checked the house. As the gas fires were not installed it would have been a simple matter to inspect the flue at that time. Thirdly, the gas engineers heating the flue with a gas torch only covered up a major fault. We certainly couldn't heat the flue ourselves in that way before using the fire. The fact that we were left in a house with obvious signs of a leaking flue for so long is unacceptable.

Legislation relating to gas safety has improved somewhat since the time of our exposure. At that time there was no requirement for annual gas safety checks by landlords, and we had no CO alarm in the property. The gas fires had no kind of safety cut-offs, as many do now.

Frustrating lack of accountability

Over the years I have become more aware of carbon monoxide safety and have tried to raise this with my employer. I regret to say there has been little interest within the organisation's administration in taking this matter seriously, despite extensive reviews of their safeguarding history, issues and literature in recent times.

For example, in August 2023 during an unrelated conversation with a senior member of staff it was mentioned that the organisation, which is a highly regarded nationwide body, was about to install CO detectors in their staff houses, beginning over the autumn. I questioned this; so far as I understood them the 2015 and 2022 regulations already required all tenanted properties to have CO detectors fitted from October 2022. In response, another senior member of staff informed me that my employer did not see itself as a landlord and was not obliged to comply with the regulations. I

find this quite extraordinary as they do carry out annual gas safety checks and five-yearly electrical inspections, as is required of landlords.

I sought advice via The Carbon Monoxide and Gas Safety Society, with the response that having requested further advice themselves*, it seems for the purposes of the regulations the relationship between an organisation and their staff living in tied accommodation is the same as between a landlord and tenant. As such, the employee's housing should have had CO detectors fitted from October 2022. My employers appear to have acted to ensure all houses do now have CO detectors fitted but I find the claim that their housing is not covered by safety regulations to be concerning.

I have had several conversations with senior staff who assure me that this is not a safeguarding issue, despite poisoning being identified in the organisation's safeguarding literature. As a result they have swept this under the carpet and have no means to acknowledge what happened to us. I have not sought to make this a matter for litigation or compensation. I have only ever sought some acknowledgement that our family suffered harm which should not have happened.

Continuing repercussions for our family

The lead spokesperson at one stage told me they were glad all our issues had been resolved. We may have had our residence made safe and my wife appeared to recover, but we continue to fear the consequences of our experience. Our child was thankfully born with no major health issues. It has only been as they have grown into adulthood that we are aware of difficulties and challenges they face which I am now beginning to associate with my wife's CO exposure during pregnancy. My research continues into possible links and treatments.

Anonymous

CO-Gas Safety comments

We are very grateful to this survivor for agreeing to contribute this case study. It was a deep concern to us that the organisation responsible for both his employment and his accommodation seemed, initially, not to be committed to adhering to regulations required of landlords.

The *Smoke and Carbon Monoxide Alarm (Amendment) Regulations 2022* came into force on 1 Oct 2022. Unfortunately, tied accommodation is not explicitly mentioned, but given it follows the usual model of private residential landlord and tenant, we believe responsibility for installing CO alarms should lie with the owner of the property. This view was shared by the administration of the All-Party Parliamentary Carbon Monoxide Group* when we asked for clarification.

The other major note to make regarding the family's experience is that raising awareness of the dangers of carbon monoxide and the effects it can have on the human body in such small doses and swift timescales is essential. Although we hope that there is now more awareness among both the public and medical professionals than there was at the time of this incident, the response of this survivor's employer to his more recent enquiries suggest that we must continue to push for further knowledge and education for all.

The family were extremely lucky that this man could register a change in the air within their living room in time to take action. If he had not left the room and re-entered it, he and his wife could both have easily succumbed to CO symptoms even more seriously than they did, and they may not even have been aware of his wife's bleeding in time to call 999. As it was, although she recovered and their baby was born safely, their lack of knowledge of CO meant that it wasn't considered during their medical care. They may well never know how severe their exposure was or if it caused any enduring damage. We believe the number of exposures that are not recognised or recorded, and whose victims are untreated in this way, is shockingly high.