

CO Research Trust Strategy 2021 - 2025





FOREWORD

Since 2013, the CO Research Trust (formerly the Gas Safety Trust) has focused on funding research and data collection to help us better understand the causes, effects, and treatment of exposure to carbon monoxide. The emphasis has been on better detection and diagnosis and, ultimately, the prevention of injury and loss of life.

Important progress has been made, but many questions remain.

With this in mind, the CO Research Trust has launched a new strategy for 2021-25, which sets out how we will help find answers to those questions.

Our rebranding and name change reaffirms our commitment to research, with a very clear focus on carbon monoxide exposure, but we will also support stronger networks to share knowledge, promote collaboration and develop the next generation of researchers working on carbon monoxide issues.

This strategy highlights the areas in which we are keen to fund research, but we are by no means limited to these topics. We recognise that professionals working in relevant sectors and those who have been personally affected by carbon monoxide exposure, will have greater insights than we do, and we welcome hearing their views to inform our work.

We recognise that we cannot do this on our own and will seek to develop our existing partnerships with industry, healthcare professionals, and academia, as well as to forge new meaningful relationships.

We are now entering an exciting new stage in the work of the CO Research Trust. I am confident that our work will have great impact and significantly contribute to our understanding and prevention of carbon monoxide exposure.

We recognise that we cannot do this on our own and will seek to develop our existing partnerships with industry, healthcare professionals, and academia, as well as to forge new meaningful relationships.

Baroness Finlay of Llandaff

OUR VISION

Our vision is a world where people are not exposed to carbon monoxide (CO). Not only are people dying but many are unaware that they are being poisoned at low levels, which can lead to adverse health outcomes. Additionally, there is some evidence that suggests low level exposure may exacerbate other medical conditions.



We want a world where CO exposure does not occur but understand that this may not be possible. So, where CO poisoning does occur, we want it to be easily detected, diagnosed, and treated.

We fight CO exposure through funding research, which in turn supports awareness, campaigning, and educational activities, with a view to saving lives and improving the quality of life of those already affected.

Our Commitment to Research

Our key focus is research, as we believe that this will make the greatest difference to everyone exposed to CO poisoning, now and in the future.

We have invested almost £3m since 2013 and are committed to investing a further £1.5m in the next five years.

We have been able to find additional funding for CO research by:

- Working in partnership with other organisations, where possible, in order to co-fund significant research projects. Co-funding ensures that our contributions are effectively doubled.
- Identifying opportunities for organisations to donate resources or to offer support in kind to increase the scale and scope of projects.
- The CO Research Trust is National Institute of Health Research (NIHR) portfolio registered and therefore those research projects taking place in the NHS have been able to access NIHR Clinical Research Network support and funding.

The way we work is:

Innovative - We are bold and inventive in the pursuit of our vision, seeking new ways to make a difference.

Committed - People are at the heart of our charity. We are passionate about preventing death and injury from CO exposure and ensuring that everyone who has been affected has the highest quality of life and chance of recovery.

Collaborative - We will only achieve our vision by creating networks, partnerships, and a strong CO research community. We collaborate and value everyone's contribution.

Intelligent - We are focused and thoughtful in our approach to preventing CO exposure.

We have invested almost £3m since 2013 and are committed to investing a further £1.5m in the next five years.



A World Where CO Exposure Is Prevented

We will invest in forward-thinking, outcomes-oriented research and support collaboration (in the UK and globally) to improve our understanding of CO exposure and to find ways to reduce risk and harm from this largely avoidable poison.

Our key priorities are, but are not limited to, the following areas:

A Novel Biomarker - This is a critical area of research. Given the limitations of carboxyhaemoglobin (COHb) it is essential that a new biomarker is found to make diagnosis easier, to ensure that those who need treatment receive it, and to make sure that all cases of CO exposure are identified, so a true picture emerges.

Better Treatments and Therapeutics - To improve the treatments and therapeutics for CO exposure, we need to better understand the mechanisms of CO poisoning, to review and build upon current methods, and to further explore the increased susceptibility and specific risks associated with vulnerable groups and those with underlying health conditions.

Understanding Vulnerable Groups / Co-Morbidities - It is generally thought that the elderly, children, pregnant women, people living in fuel poverty, and people with underlying health conditions are more susceptible to CO exposure. In order to be able to develop policies and solutions to mitigate these risks, we need to increase our knowledge of why these groups are more vulnerable, and what the level of risk is.

Quantifying Prevalence / Data - An important focus for the Trust over the next five years is to better quantify the prevalence of CO exposure in the UK – capturing both the fatalities (and where possible CO exposure was a secondary cause), as well as low level exposure. We will do this by funding primary data collection, assisting with the aggregation of data collected by others, and supporting the analysis of healthcare datasets held by others (i.e. the UK Biobank).

Built Environment / Energy Efficiency Measures - The Trust will continue its interest in the effect that changes to Building Regulations, energy efficiency measures, and way people heat and cook impact on CO safety. To do so we will work more closely with our industry colleagues to establish potential collaborative projects.

Other Fuels and Environments - Whilst the UK's gas industry has taken steps to prevent CO exposure – thanks in part to better regulation and improved technologies – in other fuel sectors, the picture is less clear. With no requirement to report CO incidents and fewer regulatory requirements, it is unclear what the level of risk and specific issues are in, for example, the solid fuel sector. Similarly, we will work towards developing a better understanding of risks in non-domestic environments – including transportation, leisure environments, hospitality and catering, and other specific workplaces.

GOAL 1

Zero accidental deaths from CO exposure in ten years.

GOAL 2

A reliable biomarker for CO exposure and the right treatments and theraputics.

GOAL 3

Providing evidence for better awareness, education, and regulation which minimises the risk of CO exposure.

GOAL 4

Better detection where the risk of co exposure cannot be eliminated.

THIS CANNOT WAIT





We are now in a strong position to stimulate advances and accelerate developments in CO research through funding pilot and exploratory studies.

Since 2017, we have brought together the UK's leading industry, scientific, and clinical experts at our workshop series, which has sought to encourage conversation and collaboration around key areas relating to CO exposure. This has included *CO biomarkers, the medical management of CO exposure*, and most recently *the effects of CO exposure on cardiovascular diseases*.

We will continue to work to bring about the best possible outcomes for people affected by CO exposure in the UK and internationally.

In the UK, we are leading the drive for investment into research to discover better treatments, improve diagnosis, improve quality of life of those affected, and ultimately prevent CO exposure, building on the experience of the last 15 years and the research, reports, and workshops that we have funded so far.

We will continue to work to bring about the best possible outcomes for people affected by CO exposure in the UK and internationally.





Collaboration is key - We know from the broader research community that a collaborative approach has enabled progress to be made and brought together experts across the country and internationally. We will work to facilitate and further this collaborative approach for research into CO exposure. We know that we cannot achieve this alone.

We will seek to develop further co-funding partnerships with research institutions, medical research charities and funding organisations, both in the UK and internationally, where synergies exist to achieve our ambitions. We will also continue to develop our current partnerships with industry and other key stakeholders.

In line with our collaborative approach to funding, we will encourage and facilitate collaborations and consortia between researchers to drive forward our understanding of CO exposure.

We will prioritise innovation in the work we fund - To achieve our goals, we will encourage innovation. We will support pioneering approaches and new techniques to prevent CO exposure. We acknowledge that new methods and fresh thinking are needed and that some may be high risk, but also potentially high reward.

We will facilitate attracting new people from other disciplines and research fields into this area as well as developing the next generation of future leaders in CO exposure research, who are passionate about improving outcomes.

United as a community, committed to preventing CO exposure - We frequently witness the impact of CO exposure on people's lives and this makes us committed to its prevention, diagnosis, and treatment. However, we can only do this as part of a community of people affected by and working against this disease.

We will be active in the united community that includes those personally affected by CO exposure: clinicians, researchers, industry, first responders, political and thought leaders as well as other charities. When those personally affected become actively involved as experts by experience, we are collectively far more effective.

Research must continue to focus on the priorities of those affected by CO exposure as well as those actively working to prevent its occurrence and treating its effects. In addition to this, we will look for further ways to engage our community in the design, commissioning, and dissemination of research.

The challenge of CO exposure requires an intelligent approach - We will maximise our impact by being thoughtful and flexible in our attitude to funding research. We will ensure we monitor the latest research and emerging trends to make sure our focus remains on reducing risk and that we pursue those areas which will have the greatest impact.

We will invest in forward-thinking, outcomes-oriented research and support collaboration.





Background

The CO Research Trust (formerly the Gas Safety Trust) is a registered charity, established in 2005. The objective of the charity has been to reduce the incidents of death and serious injury from carbon monoxide (CO) exposure.

The CO Research Trust has a stable financial position with regards to reserves. This enables the Trust to continue momentum in commissioning academic research which will allow it to lobby policymakers and reduce the risk and harm caused by CO exposure in the UK.

The challenge of CO exposure requires an intelligent approach - We will maximise our impact by being thoughtful and flexible in our attitude to funding research. We will ensure we monitor the latest research and emerging trends to make sure our focus remains on reducing risk and that we pursue those areas which will have the greatest impact.

The Trust intends to explore options for co-funding larger projects. This will facilitate an increase in the number of projects that are granted funding.

Trustees

The CO Research Trust Trustees have overall responsibility for the strategic direction and governance of the Trust. The Trustees meet at least four times per year.

Our Values

The CO Research Trust is an independent organisation, free from the influence of external stakeholders. It is inclusive and transparent in all its actions and operates within a system of sound governance.

We aim to be an authoritative voice and source of information and evidence relating to CO exposure from all sources. The CO Research Trust will work in partnership with external stakeholders in order to achieve our goals.

The evidence produced will be consumer friendly, easy to understand and available to all through our website www.coresearchtrust.org



