



COMEAP's on-going work on air pollution and COVID-19

COMEAP is aware of emerging evidence regarding possible links between air pollution and the transmission and/or severity of COVID-19. As these studies started to emerge, COMEAP established a small working group of members to provide ad-hoc advice to government departments and agencies on issues such as the quality of the available studies and the appropriateness of methods used to investigate potential interactions between air quality and COVID-19.

The full committee also discussed this issue at the COMEAP meeting held on 19 May 2020. The focus of the discussion was the drafting of a response to a question in the recent Department for Environment, Food and Rural Affairs (Defra)/Air Quality Expert Group (AQEG) call for evidence on air quality during the COVID-19 outbreak in the UK¹: 'Based on what is already known about air pollutants as respiratory irritants or inflammatory agents, can any insights be gained into the impact of air quality on viral infection?' COMEAP's response to this question is included in AQEG's review of all the evidence that was submitted in response to the call.

AQEG's report² was published on the UK-AIR website³ on 1 July 2020. In summary, COMEAP's views (as discussed in May 2020) on this issue are: A number of epidemiological and other studies investigating possible links between air pollution and COVID-19 mortality have been reported. Most of these are currently available as 'pre-prints' and have not yet been subjected to the rigours of scientific peer review. It is difficult to draw causal conclusions from the available studies because many of the risk factors for disease transmission and severity are likely to be correlated with concentrations of air pollutants. The studies which report correlations without appropriate attempts to adjust for confounding are not informative. In addition, studies of the associations of COVID-19 disease with both past and contemporary air pollution exposure are limited by the current incomplete understanding of the factors controlling the transmission and progression of the disease, and especially individual risk factors. Nonetheless although there is, as yet, no clear empirical evidence that exposure to air pollutants increases the likelihood or severity of COVID-19 infection, knowledge of the impacts of air pollution on health suggests that this is likely. In addition, infection may temporarily increase subsequent responses to air pollution in those with pre-existing conditions.

¹ <https://uk-air.defra.gov.uk/news?view=259>

² https://uk-air.defra.gov.uk/library/reports.php?report_id=1005

³ <https://uk-air.defra.gov.uk/>