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**Summary of research**

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Chronic obstructive pulmonary disease (COPD) is a progressive lung disease often referred to by patients as emphysema or chronic bronchitis. The main cause of COPD is cigarette smoking, but about one in six cases are believed to be due to breathing harmful dusts or fumes in the workplace, for example in the construction industry, the pottery industry, foundry work, welding and agriculture. The occupational causes of COPD have not been explored in depth in the UK and the UK Health and Safety Executive have asked us to provide evidence for their development of a long-term preventive strategy. We need to quantify how much COPD in the UK can be attributed to occupation and identify important industry sectors that are related with poor lung health.

To do this, we want to carry out a detailed analysis of the respiratory health of UK Biobank participants (including information from lung function tests) and their current occupation while taking account of the non-occupational causes such as smoking. This analysis is important in its own right but will also help us plan a study in which we will return to UK Biobank participants and ask them about all the jobs they have held in their life. This project requires baselines data on the full cohort for occupation, smoking, self-reported illness, ethnicity, anthropometry and spirometry.