to disease onset. Odds ratios were estimated by logistic regression models, adjusted for age, sex, smoking and alcohol.

Results Data were available for 1040 sporadic ALS cases (63.6% male) and 2050 controls (60.2% male). Ever occupational exposure to diesel engine exhaust was not associated with risk of ALS (OR=1.06, 95% CI 0.87–1.28). No exposure-response relation was observed for either cumulative exposure or exposure duration on a continuous scale.

Conclusion Our analysis suggests that exposure to diesel engine exhaust is not associated with an increased risk of ALS.

Oral Presentation

Other

0412 CLIMATE CHANGE IMPACTS ON OCCUPATIONAL HEALTH VIA WORKPLACE HEAT

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10.1136/oemed-2017-104636.340

Climate changes will markedly affect working people as increased heat and extreme weather may directly affect health and indirectly via reduced food access and spread of vector-borne diseases among outdoor workers. The effects will primarily affect low income people in tropical and sub-tropical areas, but occupational health authorities in all countries need to consider the emerging challenges. A recent EU project (www.HEAT-SHIELD.eu) is dedicated to improving heat resilience in workers, and NIOSH/USA recently (2016) published new guidelines.

Considering the theme **Eliminating Occupational Disease**, a widespread occupational health threat from climate change will be excessive heat exposure causing "workplace heat related illnesses". This is already a major problem in large parts of the world. A number of aspects of the occupational health challenges will be presented during this Mini-Symposium.

Translating research into action involves broadening existing research/analysis to produce improved "heat exposure evaluation" and "occupational health impact assessment" related to climate change. Research needs to identify remediable conditions and solutions/interventions. This requires a major increase in occupational epidemiology studies (including intervention studies), focusing on hot parts of the world. The detrimental health and economic impacts should encourage global and national policies to address climate change mitigation.

The Mini-Symposium will consider how to address these needs, and encourage networking among scientists in different fields for future studies. It also aims to engage young scientists in a field which has been overlooked in climate change impact analysis. The HEAT-SHIELD project welcomes cooperation in specific studies and sharing of methodologies.

Poster Presentation

Specific Occupations

0414 RETROSPECTIVE CHANGES IN LUNG FUNCTION OF SERVING SCOTTISH FIREFIGHTERS DURING THEIR CAREERS

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10.1136/oemed-2017-104636.341

Background Firefighters are exposed to a wide range of respiratory hazards during their careers, and respiratory disorders can sometimes result in ill-health retirement (IHR) or death. While papers have reported findings from many countries, most originate from North America and/or are in response to specific incidents (eg '9/11'). This is the first report regarding specifically Scottish firefighters

Aim To observe the changes in lung function in a group of male Scottish firefighters during the course of their service, and to determine any differences between firefighters who took IHR, or completed maximum service (MS)

Method Retrospective data from routine 'over-40' medical examinations of firefighters who retired on the grounds of IHR or MS between 1985 and 1994 which included lung function data such as Peak Expiratory Flow Rate, (PEFR), Forced Expiratory Volume in one second (FEV1), and Forced Vital Capacity (FVC) were gathered and divided into two groups - those who took IHR, and those who completed MS. The results were expressed as a percentage of predicted values for age, height and male sex.

Results Peak expiratory flow rate

Total Number	no with usable PEFR data	% range of predicted value	Mean (+/- SD)	Median (IQR)	No of reduced PEFR (%)
IHR 505	235	-46 -+65	+3.7 (16.8)	1(-6-+9)	104(44)
MS 209	181	-31 -+79	+5.2 (14.9)	3(-3.5-+13)	61(34)