sites showed increasing risks by employment duration. Results for mesothelioma and bladder cancer exhibited low heterogeneity and were largely robust across sensitivity analyses evaluating bias.
Conclusions There is epidemiological evidence to support a causal role for occupational exposure as a firefighter and certain cancers, especially mesothelioma and bladder cancer. Challenges persist in the body of evidence related to the consistency and quality of exposure assessment and control of confounding and medical surveillance bias.

Methodology

O-42 A NOVEL WEIGHTING APPROACH TO ADDRESSING HEALTHY WORKER SURVIVOR BIAS

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Introduction Radon gas is a major source of ionizing radiation exposures in humans that contributes to the global burden of lung cancers. Human carcinogenicity of radon has been established, in part, in studies of exposed workers, including uranium miners. Impact estimates from occupational studies are subject to healthy worker survivor bias, which has been proposed to result in substantial underestimates of radon's health effects. However, existing analytic methods for addressing bias due to healthy worker survivor bias are sensitive to model misspecification.
Material and Methods We describe a new approach for estimating health effects of occupational exposures that addresses healthy worker survivor bias while reducing modeling assumptions. This approach utilizes inverse probability weighting and originates from the literature on dynamic treatment regimes. We use this approach to estimate impacts of hypothetical occupational standards on lung cancer mortality using data from 4124 miners from the Colorado Plateau Uranium Miners' cohort followed through 2005.
Results The estimated cumulative lung cancer mortality risk at age 80 was 14.9% (95% confidence interval [CI] = 13.7%, 16.1%). Under a hypothetical intervention to limit exposure to 20 working levels, we estimated a risk reduction (at age 80) of 2.7% (95%CI = 3.6%, 1.7%). Estimates at lower exposure levels were larger but subject to greater uncertainty than previous analyses in this cohort using modeling-based estimators.
Conclusions Our approach offers substantial strengths when addressing healthy worker survivor bias, namely regarding computational simplicity and reduced reliance on modeling assumptions. Use within this highly exposed cohort also highlighted challenges with using our approach to estimate effects at low exposure levels: model-based extrapolation with the parametric g-formula can be used to reduce uncertainty under stronger assumptions. The proposed approach provides a simple approach to addressing healthy worker survivor bias that provides promise for reducing modeling assumptions in studies of occupational exposures.

Healthcare workers

O-43 SURGEONS REPORT A HIGH PREVALENCE OF MUSCULOSKELETAL PAIN AND HOME, WORK CONFLICT

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Introduction Many surgeons in public health systems were deployed away from elective surgery during the COVID-19 pandemic and are now working under high pressure to reduce long waiting-lists including for people with malignancy.
Methods Using validated methodology, a questionnaire was circulated to surgeons via societies and social media. Anonymized data from voluntary respondents were collected via a centralized database.
Results 242 Surgeons responded amongst whom 170 (70.3%) were male. 14% were aged 25 to 34, 28% 35 to 44 years, 35% 45 to 54 years, 17% 55 to 64 and 5.8 % were aged 65 and over. 65.7% were urologists, 13.6% orthopaedics and trauma – others came from a range of surgical specialties. 46.3% suffered lower back pain in the prior month, 47.3% stated that this adversely affected work and recreational activities, 57.1% stated this had occurred > 5x in the previous year. Hip, neck and shoulder pain ranged from 6.2–43.8 % with up to 33.9% stating MSK symptoms had interfered with their work and (with the exception of shoulder pain (48.5%)) in each case >50% described symptoms > 5x pa. Only 8.7% reported receiving any ergonomic support to ensure comfort at work and 26.5% had ever received training in ergonomics. Surgeons reported 26% of the time they were often or always at work when required at home, with 48.8% reporting regular impact on private life. Many surgeons (84.4%) also report conflicting demands at work.
Conclusions Post-pandemic, surgeons report a high prevalence of musculoskeletal pain and work/life conflict. Surgeons could themselves take measures to mitigate these effects but planning and development of rotas and operating theatres could also be optimized. Maintaining the health of surgical staff is fundamental to patient safety and to retain highly-trained professionals within their discipline.

Occupational epidemiology in unorganised sectors: agriculture, construction, service sectors

O-44 PREVALENCE AND DETERMINANTS OF HYPERTENSION AMONG BLUE COLLAR JOBS: OBSERVATIONS FROM MULTICENTRE STUDY

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