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EDITORIAL

Disease and death from work: RIDDOR and covid-19

A second technical summary by the Health and Safety Executive (HSE) reports 8666 covid-19 notifications (including 125 deaths) in Great Britain where occupational exposure was suspected as the cause during the pandemic up to 8 August 2020 [1]. These notifications arise out of the statutory duty of employers (usually acting on a medical diagnosis) to notify such cases to the HSE (or local authorities) as specified in the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (2013) (RIDDOR). The HSE has a legal mandate to collect the information and to investigate these reports in respect of biological agents [2]. After the start of the pandemic, the HSE iterated its guidance specifically for coronavirus RIDDOR reporting [3]. However, several questions remain unanswered: Is this just the tip of the iceberg? Are the right lessons being learned in time to protect other workers?

The HSE has an unenviable task. The prevalence of covid-19 infection in the community and its high contagion mean that its definition as a disease contracted at work, as well as its monitoring and control, shares limited analogy with other infectious diseases such as tuberculosis and hepatitis B. The HSE's additional funding of £14M [4] to contend with the pandemic bears no relation to the scale of the task in hand.

Out of the 8666 cases in the HSE technical summary, 6736 (78%) were workers in the industry sectors of health care, residential care and other social work activities including 102 (81%) of the deaths. The HSE acknowledges various shortcomings in these reported data including widespread under-reporting of cases, misclassification, variable strength of evidence, and that the 'individual case reviews by the relevant enforcing authority may conclude that there is insufficient evidence to confirm work as the source of exposure' [1]. Moreover, the HSE's technical summary does not show data notified before the 10 April 2020. On the 12 of May, HSE stated that there had been reports of 75 covid-19 deaths attributed to work [5]. This figure is of 23 more deaths than the HSE's technical summary reported as notified up to the 9 May and gives a crude indication of the size of the data redaction.

Substantial undercounting arises from the HSE guidance quite categorically excluding notification of covid-19 cases in workers whose job does not entail dealing with ill people but with the public [3]. However, the available evidence from the Office for National Statistics (ONS) statistical bulletins [6] shows elevated age-standardized mortality rates (ASMRs) for various occupations dealing with the general public. For example, the ONS data show ASMRs for male security guards and related occupations to be nearly four times higher than for all men of working age. Moreover, for male drivers exposed to passengers (in cabs, taxis, cab, buses and coaches), the ASMRs were also significantly raised being at least two or three times higher than for all the male working age population or than the ASMR for drivers of large goods vehicles (who carry no passengers). In women the ONS data have shown more than doubling of ASMR in national government administrative occupations (such as 'jobcentre' staff) [6].

RIDDOR data are unlikely to give as good estimates of the work-related burden of covid-19 as ONS data once the latter are analysed to take account of co-morbidity and adjusted for deprivation and ethnicity [2]. Other good estimates of the risk of contracting covid-19 from work are likely to arise from analysis of hospital episodes/activity data, and from studies of the UK Biobank cohort [2,7].

Undercounting in the HSE data may give a wrong impression of the overall burden of disease, but more concern arises from circular reasoning with prior assumptions of adequacy of control leading to non-reporting and hence missing opportunities for prevention. It is understandable that the HSE works closely with Public Health England (PHE) and shares preventive guidance. The HSE guidance [3] on reasonable evidence of occupational exposure to warrant a report explicitly includes, amongst the factors to be considered, a reference to 'effective control measures, as set out in the relevant PHE guidance' [8]. A health or social care worker managing suspected cases of covid-19, and not engaged in so-called 'aerosol generating procedures' should have worn an IIR surgical mask as respiratory protective equipment (RPE) according to PHE [8]. However, many concerns have been raised, including in this journal [2,9] that PHE guidance was not adequately precautionary because of spread of the virus in aerosols arising even from breathing. Therefore, it has been asserted [10] that the higher standard of RPE in the European Centre for

Disease Control guidance [11] recommending respirators should have been applied. The current HSE guidance [3] would imply to an employer that if PHE guidance had been followed this could weigh against their reporting of cases of covid-19. If such cases are not reported, they will not be investigated by the HSE. However, if they were reported, investigations using sequencing of SARS-CoV-2 genomes in these workers, and in the patients or residents who they looked after, could complement epidemiologic approaches to establish the pattern of transmission [12]. This could help determine whether health and social care workers contracted covid-19 occupationally despite following extant PHE guidance, and if so the guidance might be improved in preparation of possible further surges.

The HSE guidance [3] allows doctors to highlight the significance of work-related factors when communicating a diagnosis of covid-19 such that these cases would also be reportable. Perhaps this latitude explains cases such as the 47 reported in food manufacture [1]. Where employers have access to occupational physicians, they should accept advice to report to widen the opportunity for HSE to investigate and thus identify means of prevention. Employers facing the sad and delicate task of interpreting the death certificate of a worker may also find the HSE guidance confusing. In keeping with international coding rules, if covid-19 is the disease which initiated the train of events leading directly to death, then it should appear in the Part I of the death certificate [3]. Yet HSE guidance seeks to limit reporting to deaths where covid-19 as a cause must have been 'significant' [3]—a word which only appears in Part II of the death certificate [13]. Therefore, to make the employers' task easier as well as to avoid under-reporting, the HSE's 'significant cause' qualification of the certification of death should be simply improved by merely stating that covid-19 (or synonym) should appear in Part I of the death certificate. This, and other aspects of the HSE's guidance discussed here render it difficult to disagree with the HSE's statement that 'these are not easy criteria to apply' [3].

The evidence suggests that the HSE may be systemically underestimating covid-19 caused by work and so missing vital opportunities to investigate and learn lessons to prevent further disease. The HSE should accept RIDDOR reporting of cases of covid-19 in workers with close and frequent exposure to the public such as in security, retail and passenger transport. These workers deserve the reassurance that the HSE recognizes their risk and will investigate such reports so as to develop detailed safe working plans for specific jobs and thus achieve 'covid-secure' workplaces. Before winter, the HSE should also aim for RIDDOR reporting and assiduous investigation regardless of the use of control measures since it may be a mistake to assume that the standards applied or resources used have been adequately protective. In order to assess the worrying and uncertain panorama of occupational risk from covid-19, starting with tunnel vision is a serious handicap.

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