

EDITORIAL

Covid-19 and Health at Work

While millions of people are in ‘lockdown’ in their own homes to avoid the contagion of Covid-19, many workers lack a comparable degree of protection. The planning and logistics of contending with this pandemic may be analogous to those of war, but we are not in a conflict: workers’ lives need not and must not be lost.

The UK Government’s response to the pandemic has been severely criticized because it did not follow through on the World Health Organization (WHO) exhortation to ‘test, test, test’ and it soon gave up on long-standing public health tenets of isolation, quarantine and determined contact tracing [1]. Serious shortcomings and delays in action by the authorities [1,2] have had occupational health as well as public health consequences. Thus, National Health Service (NHS) staff who either had Covid-19 symptoms or were contacts have been denied RT-PCR swab tests for viral RNA with many NHS occupational health services (OHS) limited in their access to tests [3]. This resulted in essential staff being held back by mandated quarantine even when they might have been able as well as willing to return unto the breach [3]. There are worrying reports of new or continuing swab positivity for SARS-CoV-2 RNA even after post-symptomatic quarantine, as well as of poor or inconsistent sensitivity of the swab tests [4]. These factors lead to a significant risk of health care-associated infection and of horizontal transmission among staff. A wide-ranging policy including an increase in widespread, repeated and reliable tests will be needed not only in the hospital front lines, but in primary and social care and other sectors which might be at risk of collapse while sustaining the fabric of our society [5].

Like the WHO, the UK Government had learnt from past RNA virus epidemics, was well aware of the pandemic threat and had undertaken risk-register planning as well as exercises leading to valuable recommendations. Yet by the time the pandemic struck ‘emergency stockpiles of Personal Protective Equipment (PPE) had severely dwindled in the years of austerity. The training to prepare key workers for a pandemic had been put on hold for two years while contingency planning was diverted to deal with a possible no-deal Brexit’ [2]. Early steps to source PPE were weak, and repeated opportunities to work collaboratively with our neighbours to procure substantial quantities of PPE appear to have been missed, possibly for political reasons [6]. Some of the more technical aspects of PPE are considered in a

companion contribution in this journal. However, it is worth noting that in 2008, the UK Health and Safety Executive (HSE) was well aware of concerns of the inadequacy of ‘surgical masks’ as PPE. It had aptly commissioned research comparing these with respirators and the study concluded that ‘Live viruses could be detected in the air behind all surgical masks tested. By contrast, properly fitted respirators could provide at least a 100-fold reduction’ [7]. The widespread reported shortcomings in the availability or standards of PPE have left large numbers of NHS or other workers without adequate protection [8,9]. Recent amended guidance has confirmed the suspicion that although guidance and policy may have a foundation in ‘the science’ it often becomes constrained by the policy and outcomes of the executive [10].

The current big societal challenge is the ‘exit strategy’ from the ‘lockdown’. The debate should not be framed as a dichotomy of choice between ‘health’ and ‘working’. Workers who are sick or scared of getting sick tend not to work. Although Government has yet to declare its strategy, management of key sectors (ranging from manufacturing to local authorities) in partnership with their workers are at the cutting edge. However, OHS specialists backed up by burgeoning guidance from professional organizations and learned bodies are crucial in supporting this.

In the first instance traditional occupational hygiene measures such as segregation, ventilation, PPE, etc. must be comprehensive and unrelenting to prevent viral recrudescence. Returning employees should be screened by questionnaire for symptoms and contact history. Large-scale and even repeated swab testing will be needed. Testing strategies may initially be stratified, i.e. including all symptomatic subjects and those with potential contacts, besides samples of the rest. Obviously any workers with ‘red flags’ on questioning or positive swab testing (plus their occupational contacts) will warrant re-isolation.

Risk matrices, with orthogonal banding of estimates of job exposure and of ‘odds’ of individual susceptibility, will be essential for the mitigation of risk (e.g. an anaesthetist or intensive care nurse with chronic obstructive pulmonary disease, asthma or diabetes might be in the highest risk ‘cell’). The author and others are working on relevant guidance. Such risk matrices would be used to guide iterations of policy on PPE (e.g. should it be

necessary to provide military/industrial full face/powerful respirators to those at highest risk). As validated antibody tests become available, and critically once vaccines are produced, such matrices will guide effective and efficient use of resource.

Research in workplaces will need support from OHS as well as other stakeholders to systematically collect 'routine' data such as 'sickness absence' as well as pandemic-specific data (e.g. RNA swab tests and serology). Consideration needs to be given as to whether some workforces (such as in health care) with a higher potential for exposure might contribute to 'Phase 2' clinical trials of vaccines against Covid-19.

Workers are owed rehabilitation, which may include redeployment, other help and understanding while they and their employers face change and challenge on an unprecedented scale. OHS are competent and well experienced to advise, for example, about stresses on mental health ranging from adjustment disorders to 'burnout' to post-traumatic stress disorder (PTSD). These conditions are bound to affect many workers who may present symptomatically or through sickness absence or 'presenteeism'.

Lessons must be learnt at several levels—not least from suspected adverse exposures of individuals at work. With at least 100 tragic deaths of UK health workers at the time of writing [10] it is a matter of grave concern that Mr Hancock, the Secretary of State for Health and Social Care, when questioned at a House of Commons Select Committee sitting apparently only considered employers as investigators of the deaths of NHS staff [11]. For reasons which should be obvious, exemplary British law has long provided for such matters to be investigated independently by other bodies. The HSE has confirmed that unintended occupational exposures to the SARS-CoV-2 ('dangerous occurrences'), and Covid-19 disease or deaths with 'reasonable evidence that it was caused by exposure at work' are reportable (statutorily by employers) as a 'dangerous occurrence' or as a 'disease' under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) [12]. Such reports are then followed by HSE investigation, with the prospect of further action. Arguably an even higher degree of forensic scrutiny, and one which is held in public, can be expected from the coroners (or analogous officers such as the 'Procurator Fiscal' in Scotland). Doctors have a legal duty to notify a senior coroner of a death if 'the registered medical practitioner suspects that the person's death was due to ... disease attributable to any employment held by the person' [13]. As the statutory instrument makes clear, the obligation to notify the coroner is triggered by a mere suspicion on behalf of the notifying doctor. If the coroner deems that an inquest is necessary relevant witnesses can be summoned to testify. The coroner is entitled to make 'Reports on Action to Prevent Future Deaths' which may compel any addressees such as the HSE to respond. These legal provisions are designed

to protect other workers. Therefore it is disappointing to note that NHS Covid-19 guidance makes no mention of RIDDOR responsibilities. Moreover the statement (3c) [14] that 'Where an attending medical practitioner cannot complete an MCCD (Medical Certificate of Cause of Death), the death should only be notified to the coroner if there is no other medical practitioner who can complete the MCCD' might lead readers to conclude that no other obligation exists besides the MCCD.

As the data from MCCD citing Covid-19 ramp up at the Office for National Statistics (ONS), preliminary age and gender adjusted determinations of odds ratios can be undertaken comparing the distribution of Covid-19 deaths by occupational category to census data (e.g. in relation to NHS staff, care workers, prison officers, transport staff, etc.). In due course more sophisticated occupational epidemiology studies, such as using the UK Biobank cohort, would determine the risk of SARS-CoV-2 seroconversion, and Covid-19 morbidity and mortality in relation to exposure. The exposure variables would include occupation, extent of protection and if possible estimates of the very important metric of 'viral dose' from contending with patients shedding a high viral load [15]. Other variables such as co-morbidity, ethnicity, genetics and socio-economic deprivation would also be studied.

On the face of it, the conclusion that during this pandemic thousands of workers may have been seriously jeopardized and denied the safeguards that are theirs by right is difficult to refute. However, hopefully these matters will be substantively addressed by a wide-ranging independent public enquiry such as a 'Royal Commission'. Action is then essential to protect the workforce and also to prevent future existential calamities facing our society and which may range from other pandemics to climate change.

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