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# COVID-19 in Workplace Settings: Lessons Learned for Occupational Medicine in the UK

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**Summary**

*This paper addresses lessons learned from the COVID-19 pandemic from a UK Occupational Medicine perspective to permit comparison with other national accounts. In spite of good prior research and statute, the necessary resources to protect workers' health were seriously lacking when the pandemic struck. Weak public health guidance, which did not recognise dominant airborne transmission, was applied to workplaces, leaving workers and others unprotected, especially in respect of Respiratory Protective Equipment (RPE). The Health and Safety Executive (HSE) as regulator was lacking, for example, in not producing guidance to protect HealthCare Workers (HCW) who were amongst the most at risk. The UK COVID-19 Public Inquiry should address shortcomings such as these, but recommendations must be accompanied by robust means to ensure appropriate implementation. These should range from substantial measures to improve indoor air quality, to a permanent pandemic management organization with adequate resources. The enforcing authority has to be obliged to publish more specific workplace guidance than the public health authorities. Occupational Medicine as a discipline needs to be better prepared, and hence to assert its responsibility towards high standards of workers' health protection. Future research has to include investigating the best means of mitigation against airborne infection and the management of post-acute covid sequelae.*

## 1. Introduction

The COVID-19 pandemic has taken a terrible toll through death and ill health in workers. Self-reported data indicate that 123,000 workers in 2021/22 in Great Britain were suffering from COVID-19, which they believed may have been from new or long-standing exposure to the coronavirus (SARS-CoV-2) at work. A further 585,000 reported that they were suffering from a work-related illness caused or made worse by the effects of the COVID-19 pandemic [1]. Moreover, the pandemic resulted in other damage ranging from economic cost to negative attitudes toward the acceptability of occupational risk. Serious questions are being raised about how well the pandemic was managed in its first three years and how its enduring legacy is being handled [2]. The main aim of this perspective is to contribute to the important debate about Occupational Health aspects of the COVID-19 pandemic in the UK to learn lessons arising from this pandemic for potential future public and Occupational Health crises.

It is recognised that there are many controversial issues and diverging opinions even when considering the pandemic from only the standpoint of the UK. To permit a comparative exercise alongside national perspectives in this journal and elsewhere, salient themes have been addressed in the following editorially defined template and sequence.

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## 2. Main Occupational Health Challenges During the COVID-19 Pandemic

At the basic level of Occupational Health delivery, the main challenges were that in spite of prior scientific knowledge, UK government preparation was pathetic; the official narrative advocated measures directed against non-dominant modes of transmission (e.g., fomites) while practically ignoring airborne transmission (aerosols). Inadequate source, pathway, and receptor controls resulted in a burden of occupational disease, which should have been avoided [3]. Aspects of these challenges are explored in more detail in other sections below.

Depiction of health and the economy at opposite ends of a see-saw in a zero-sum game risk mistakenly oversimplifying the complex and dynamic interaction between the two. Government's attitudes and actions in the UK often appeared to be based on a naive assumption that workers and other people might have to die for the economy to flourish [4]. A comprehensive appraisal of the costs and benefits of a range of options for risk mitigation in workplaces and other settings is beyond the scope of this account and, to an extent, premature. However, evidence is mounting. For example, the UK Government's "Eat Out to Help Out Scheme" in August 2020 gave 50% subsidies for meals inside restaurants at a cost of about £850m to taxpayers. The scheme, in common with some other UK government COVID-19 interventions, was launched without consultation with public health authorities [5] and diverged from policy in other countries. A study suggested that this scheme may have been responsible for 8% to 17% of all newly detected COVID-19 infections late that summer and accelerated the second COVID-19 wave [6]. This raises a question about the extent to which an alternative investment in measures such as ventilation and particulate air filtration might have had a net positive cumulative effect on the economy and also prevented many hospitality workers and other people from contracting COVID-19. Perhaps as more analyses are undertaken, we may yet conclude that a lockdown in a pandemic is as appropriate a response as an emergency laparotomy in a patient *in extremis* suffering from a perforated peptic ulcer. If the underlying condition had been better managed earlier, such an intervention might never have been needed. The UK Government prevaricated instead of learning from the Italian experience, and its conduct in the pandemic was recently labelled "criminal incompetence" by The Lancet, which stated that "many, if not most, of over 230,000 deaths were preventable" [7].

About 1.7 million people in the UK have self-reported Long COVID symptoms at least 12 weeks post-infection. As a proportion of the UK population, the prevalence of self-reported Long COVID was greatest in people aged 35 to 69 years [8]. Appraisal and interpretation of the epidemiologic evidence laid before the UK Parliament suggests that a substantial portion of this morbidity was caused by work [9]. Moreover, various studies show the effects on well-being in occupational groups. For instance, in a survey of UK doctors with Long COVID, more than 55% of whom had contracted the disease in 2020, one-fifth of respondents were still unable to work at the end of 2022 due to long-term sickness [10].

The direct impacts of the pandemic and its management are an important focus of the UK's COVID-19 Public Inquiry. However, the indications are that the COVID-19 pandemic in the UK exposed and amplified inherent weaknesses in the health service to an extent that could have been largely avoided had the service been more resilient and better resourced prior to the pandemic [11].

## 3. Occupational Settings, Transmission of COVID-19, and Measures Mitigating This Risk

Extensive research has been undertaken in the UK regarding the associations between the risk of contracting COVID-19 and work across industrial sectors and occupations, as appraised by the Industrial Injuries Advisory Council [9]. In large studies, significantly elevated mortality rates (involving COVID-19) were found in a range of occupations, such as in health and social care, as well as taxi and bus drivers. These elevated rates tended to remain significant (though attenuated) even after adjustment for confounding factors including ethnicity, education, deprivation, or prepandemic

health [12, 13]. Infection studies showed comparable results in these occupations but also in others such as education [14]. Other studies investigating SARS-CoV-2 infection as an outcome also showed significantly increased relative risks associated with occupation, such as 8.7 in health care support staff and 2.2 in transport workers [15]. Another study of the risk of infection in the first wave of the pandemic adjusted for age, gender, ethnicity, social deprivation and co-morbidity, focussing on 158,445 health care workers (HCW) and 229,905 members of their households. Besides showing significantly increased relative risks for HCW whether compared to the general population or to members of their household, the study showed that 'front door' HCW had double the risk of (the usually better protected) staff in Intensive Therapy Units [16].

Research into occupational transmission of COVID-19 and mitigation in the UK is being undertaken as part of a national programme [17] as well as several independent initiatives. In general, the findings are consistent with the extant strong evidence of airborne transmission of COVID-19 being predominant [18] as was the case with other earlier recognised beta-coronaviruses. Illustrations of research in UK occupational settings included a time series study of COVID-19 infections in health care workers (HCW) showing the efficacy of FFP3 respirators (replacing surgical masks) in controlling nosocomial infection of hospital staff [19]. Other studies aimed at mitigating the pathway of transmission. For instance, supplementary high-efficiency particulate air filtration was shown to attenuate a range of airborne fine particulate matter fractions [20]. Clearly the advent of vaccines considerably reduced the burden of COVID-19 in occupational settings as they did in the community at large, but vaccines should not be considered a substitute for other measures to mitigate risk [3].

## 4. Key Lessons in Protecting Workers' Health and Safety in Occupational Settings

Even without waiting for the final findings of the COVID-19 Public Inquiry several key lessons have been clear. The favourable pandemic preparedness rank [21] that the UK had in 2019 was based on scientific knowledge, exercises, and policies that had not been implemented when COVID-19 struck [3, 22]. At the onset of the pandemic, the UK Government had other priorities and did not treat worker protection with the measures it deserved [23]. The Government did not include accredited specialists in all the appropriate disciplines, such as Occupational Medicine and Occupational Hygiene, in its topmost advisory groups dealing with the emergency, and often ignored such expertise as it did have [5]. The authorities did not heed recommendations for a precautionary approach to worker protection, especially concerning Respiratory Protective Equipment (RPE), when these were made early in the pandemic by academics [24] or by occupational hygiene bodies [25] recommending control banding based on the 'source-pathway-receptor' model [26]. However, even medical experts need to learn lessons since although the COVID-19 crisis was caused by a 'disease', randomised controlled trials, which are usually the gold standard for evidence of medical treatment, are not the key methods for testing engineering and other measures of pathway and receptor control [27].

Finally, at the level of worker protection, the biggest shortcoming was the denial of the predominantly airborne transmission of the SARS-CoV-2 virus [18, 22]. These clear lessons have not yet been learned [3]. Thus, the current official infection prevention and control 'manual' does not explicitly recommend Respiratory Protective Equipment (RPE) for HCWs who are vulnerable through potential exposure to COVID-19 in routine clinical care nor for individuals who may have increased susceptibility because of risk factors such as immunodeficiency [28]. The manual remains wedded to the concept of Aerosol Generating Procedures (AGPs) even though good evidence has shown that they tend to be less likely to generate aerosols than coughing or mere breathing, and they have therefore been discredited as means of categorising exposure to determine the need for RPE [29].

## 5. Respiratory Protective Equipment

First and foremost, it is worth recollecting the assertions of the founder president of the Institute

of Occupational Hygienists (UK) and a previous president of the British Occupational Hygiene Society [30]. These words are just as valid for COVID-19 as they were in the context of when they were first written:

«There is no question that respirators […] should serve as the last line of defence against excessive exposure […] but there are nevertheless plenty of jobs in which they can and should be used freely, not as a substitute for engineering control but as a necessary adjunct. Respirators enable jobs to be done which could not be done without them».

In 2008, long before the COVID-19 pandemic, researchers at the Health and Safety Laboratory of the Health and Safety Executive (HSE) in the UK summarised the state of prior knowledge saying that it is a «common misperception … that surgical masks will protect against aerosols» [31]. In well-designed experiments they showed 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». Very presciently, they also stated that «The widespread use of respirators might be difficult to sustain during a pandemic unless provision is made for their use in advance». Good empirical evidence grounded in basic science, such as aerosol physics, has served to effectively protect millions of workers worldwide such as coal miners, and asbestos and construction workers. As regards biological agents, HSE guidance stated that «When in an airborne state, micro-organisms can be classed as particles, so they can usually be removed by filter-type RPE. You should always use equipment fitted with the highest efficiency filter possible (protection factor of at least 20)» [32].

The role of respirators as RPE for HCW in the routine clinical care of patients infected with SARS-Coronaviruses was accepted by a consensus of UK infectious disease and health and safety experts well in advance of the COVID-19 pandemic [33]. Comparisons of surgical masks and respirators have been the subject of much controversy, but it is important to correctly interpret appropriate studies to recognise respirators as essential for worker protection [27, 34]. Although respirators should be the default RPE, depending on a risk assessment, the same clinical task may warrant different types of respirators or even none at all [3]. In order to reduce condensation and discomfort for the wearer, circumstances may dictate the wearing of respirators with an exhalation valve, but even in these circumstances, the valved respirator is likely to afford as much source control as a surgical mask [35]. Respirators may cause dermatoses which are treatable [36] or, better still, preventable [37]. Alternatives include elastomeric respirators, and powered air purifying respirators (PAPR) [38] which deserve more consideration especially having less likelihood of skin reactions, being probably more 'sustainable' and costing no more than a mobile phone.

During the COVID-19 pandemic, HCW in the UK and elsewhere were presented with the narrative that surgical masks were effective PPE or RPE. This was probably prompted by the concern that their provision was grossly inadequate, as warnings prior to the pandemic had not been heeded [31, 39, 40]. Surgical masks have never met standards for RPE, though they may protect against fluid splashes. This is not to say that such masks do not provide some measure of attenuation of risk just as practically any footwear would protect otherwise bare feet in a construction site from injury to a very limited degree – but not any shoes are 'safety boots'. Regrettably the unproven belief that fomites were a substantial mode of transmission of COVID-19 coupled with an ignorance of how respirator filters work, stifled informed debate on respirator re-use.

## 6. Vulnerabilities and Inequalities in Occupational Health

The worldwide literature has shown that the risk of COVID-19 mortality is increased further in those people with a prior increased risk of dying, usually associated with increasing age, body mass index or comorbidity such as diabetes, as well as other factors such as male gender. During the COVID-19 pandemic many of these people were ignored [41]. Early in the COVID-19 pandemic, members of the UK Occupational Medicine community developed a model to quantify risks associated with specific comorbidities and other factors by expressing these as "equivalent years of added age" and

thus assist decisions on occupational placement of workers [42]. At a wider population level, mortality studies in the UK using different methods [12, 13] showed that a large part of the crude mortality rate associated with occupation can be accounted for by variables such as socioeconomic deprivation, ethnicity, and comorbidity. However, the data warrant careful interpretation since many 'vulnerabilities' and 'inequalities' are associated with an increased likelihood of exposure to COVID-19 at work or elsewhere [12]. Sadly, during the COVID-19 pandemic, the deaths of many HCWs and other essential workers appeared to be explained away because they had 'underlying factors' such as a comorbidity (which often did not affect their fitness for work and had minimal consequence for their quality of life and expectancy). This narrative deflected concern from the 'necessary cause' of their demise namely exposure to SARS-CoV-2 (often with inadequate protection) [3].

## 7. Occupational Health Principles to Prevent Transmission in Workplace Settings

Contrary to beliefs before the pandemic and in common with some other Western countries, the national UK pandemic control systems were very disappointing in their performance when compared to prior expectations in 2019 [21]. However, this did not happen fundamentally because the basic principles of public or Occupational Health, as traditionally taught by and to practitioners in this area, were flawed. Rather, the failures arose firstly because of prior under-investment [3, 11, 43, 44]. Secondly public as well as Occupational Health principles were ignored or overridden [5, 7, 40, 41]. Instead of fatalism, the country needed a determination to find ways and means to practise traditional principles of Public Health and Occupational Hygiene, especially by using national resources to provide and mandate clean air in workplaces and elsewhere, together with specific measures to protect workers [3, 23].

The ethos of Occupational Health protection in the UK is to ensure health (at work) in the words of the law "so far as reasonably practicable" [45]. This means reducing the risk of ill health, whether or not the outcomes are likely fatal. Yet, at the onset of the pandemic, a decision ostensibly determined by infectious disease and public health experts considered the case fatality ratio of COVID-19 not bad enough to offer RPE to the vast majority of SARS-CoV-2 exposed HCWs [40]. Such an outlook on worker protection is alien to the good practice of Occupational Health. It would be tantamount to denying eye protection to welders, or hearing protection or safety boots to quarry workers on the grounds that blindness, deafness and crushed feet are not deemed fatal injuries. Another analogy might be made with occupational asthma. How would society react if workers exposed to asthmagens such as flour or diisocyanates were denied protection because "yes, the disease may be fatal sometimes, but not usually"? Occupational Health principles need to be reasserted as a robust response to the dangerous combination of death and ill health of workers caused by COVID-19 coupled with the fatalistic attitude demonstrated by many in authority and perhaps in society more generally.

## 8. Mental Health and Strategies to Support Resilience

Although the COVID-19 pandemic has had mental health consequences throughout the population, at the onset potential adverse mental health effects were a cause for concern especially for HCW [23]. In the UK, a survey shortly after the first COVID-19 pandemic peak showed that nearly a third of HCWs reported moderate to severe levels of anxiety and depression, and that more than four times as many reported very high symptom scores than pre-pandemic [46].

Various studies addressed specific occupations; thus, in an investigation of 'Burnout' in trainee/junior doctors, 6 of the 10 highest-rated stressors were specific to the COVID-19 pandemic, with several strong associations with Emotional Exhaustion, as well as Depersonalisation and (reduced) Personal Accomplishment [47].

Sadly, one can expect an adverse legacy on mental health as well as on physical health, as a result of post-acute COVID-19 or Long COVID [10]. Considerable investment needs to be made in a national

strategy to protect and promote health, in the clinical management of these sufferers and in their occupational rehabilitation. In the tradition of Occupational Medicine, emphasis has to be placed on resilient workplaces and work practices at the organisational and environmental level with approaches such as communication, information and training, improvement in teamwork, working patterns and conditions, as well as individual support [48].

## 9. Implications of Teleworking

The effect of homeworking on health and productivity is very complex, with many mediating and moderating factors. Therefore, a consensus, even at a national level, still needs to be achieved. A systematic review based on 27 eligible studies from the UK and other OECD countries showed that those starting homeworking for the first time during the pandemic and those with poor mental health were, perhaps unsurprisingly, at risk of poor productivity [49]. One may have to wait for clear new strategies to emerge, although there have been several helpful indications. For example, occasional remote working from home might have net benefits, whereas the overall consequences of continuously working from home might be negative, especially on mental well-being [50].

## 10. Occupational Health Guidelines and Regulatory Framework

There have been calls to tighten the UK's regulatory framework based on lessons learned from the COVID-19 pandemic, and some changes in statute might indeed be warranted. However, the major failings during the pandemic did not arise from shortcomings in extant regulatory frameworks but from failures in complying with the law as it stands, in providing correct official guidance, and in enforcement [45]. In the UK, Health and Safety Law applies not only to workers but essentially to all people in workplaces including for example patients in hospitals, residents in old people's homes and pupils or students at school. They have all been let down and as has been cogently argued, it is now difficult to avoid the conclusion that there has been an "unwillingness on the part of the state to effectively address the blatant and repeated failure of duty-holders to manage workplace exposure to COVID-19 according to well-established principles of good practice and basic regulatory requirements" [43].

The HSE had a laudable record for publishing guidance to protect workers from hazards ranging from asbestos to Legionnaires' disease. Yet the HSE abrogated that responsibility in an unprecedented manner. Despite requests from trade unions representing nurses and doctors, the HSE refused to publish official evidence-based guidance or an "Approved Code of Practice" for the protection from COVID-19 of HCWs (or their counterparts in social care who have similar risks [9]). Instead, the HSE deferred to "effective control measures, as set out in the relevant Public Health England guidance", an assertion for which the HSE refused to provide evidence and conflicted with its prior evidence or assessment [31-33]. However, the HSE removed the assertion from its website after being questioned [51]. HCWs who took the personal initiative of buying respirators to protect themselves and their colleagues reported being threatened by their superiors. Eventually, healthcare trade unions resorted to producing their own guidelines on COVID-19 risk assessment [52, 53]. Besides UK Trade Unions, Nongovernmental Organisations also stepped in to make up for failures in Government [25, 44]. The experience of the COVID-19 pandemic prompts the question as to whether some obligations to ensure health and safety should additionally be statutorily imposed on the government and its agencies, such as the HSE.

Such generic guidance that the HSE produced was for workplaces other than health care, largely replicating public health guidance on behavioural safety [43] (such as hand washing and 'social distancing'). This HSE guidance did not emphasise legal obligations such as statutory reporting of COVID-19 cases suspected to have been contracted at work as per the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) [54]. Over the period 10 April 2020 – 31 March 2022, employers made 44,458 official notifications to the enforcement authorities in Great

Britain of cases of COVID-19 in workers where there was reasonable evidence to suggest that it was caused by occupational exposure. These ranged across all industry sectors and included 459 fatalities [55]. However, the HSE guidance was flawed [50, 56], and there were gaps in data collection [55]. Widespread inconsistencies, such as in the distribution of these reports made by employers regarding HCW, suggest that there has been gross underreporting despite the law [57].

## 11. National Services Versus Local Initiatives

*A priori,* centralising the development of guidance and policy as well as of resources, whether human or other assets, might appear to be the most efficient and effective approach. Once the guidance would be shared and applied universally and the resources distributed fairly one could thence hopefully achieve equity. However, in the UK, as was apparent early in the COVID-19 pandemic, this 'top down' approach resulted in waste through incompetence or corruption [58]. Moreover, as shown above, this centralised 'command and control' resulted in flawed policy and guidance specifically as regards the protection of workers.

Especially in crises such as the COVID-19 pandemic, the local knowledge and other attributes of primary and community healthcare systems, particularly in dealing with socioeconomic determinants, have a crucial part to play [59]. Anecdotal and other evidence sources suggest that such beacons of good practice as were evident in some private Occupational Health service delivery or in some organisations in the public sector [19, 20] during the pandemic tended to arise from local initiatives, even if modest at times.

## 12. Management of COVID-19 Risks in Occupational Settings

As illustrated in the above sections, the UK generally has poorly managed COVID-19 risks in its occupational settings. As discussed earlier, lessons ostensibly learnt from previous pandemics turned out to have been ignored. Issues arising from a Coronavirus pandemic planning exercise in 2016 [39, 40], such as the provision of PPE and preparation of a video to teach HCW about RPE had not been acted upon. Within the wider public health context, the workplace and workforce were not given the specific protection warranted by their exposure and role [3]. High-risk work environments such as hospital wards did not get investment for improving their work environment through ventilation, nor were HCWs given adequate RPE. In other workplaces, minimal efforts were made, mainly focussed on fomite and droplet control. Generally, the HSE kept a low profile [43, 44] except perhaps in testing imports of PPE. On the positive side, multifaceted research programmes were launched [17], although this investment was minuscule compared to the several billion pounds of public funds which were wasted through incompetence and corruption [58].

## 13. Lessons Learnt

Important UK contributions to learning lessons will hopefully arise from the UK Public Inquiry chaired by a senior judge [4, 5, 7, 11, 41]. Although the final report will be years in the making, witness testimony so far suggests that it is on the right tracks to provide lessons to protect the health of workers and the general public from similar future threats. However, just as lessons learned following past outbreaks were forgotten [3, 22], there is a risk that the same failure in memory or implementation may follow the Inquiry. It will not be enough to say "we learned", but one must also commit to implementing those lessons and to give an iterative public and evidence-based account of what has been "learned". Therefore, robust solutions need to be found such as a specific pandemic organisation. Stakeholders and society in general need to be involved and have transparent reassurance on progress made through means such as regularly published reports, debates in Parliament, regular conferences, and other exercises. Although vaccines were a 'game changer', our paradigm in dealing with infectious hazards in the workplace has to shift from 'vaccines plus' to 'plus vaccines'. Thus, all reasonably practicable means in the control hierarchy must be implemented at the source, in the transmission pathway and at the

'receptor' [26] to protect workers before a vaccine becomes available to face a new threat [3].

History has taught us that step changes in preventing water-borne hazards were not primarily achieved by physicians but by engineers who oversaw the delivery of fresh, clean water and the safe disposal of effluent. Correspondingly, massive investment guided by appropriate expertise will be needed to achieve clean air in our workplaces and elsewhere [60]. Experts in health at work must be involved at the apex of national planning and decision-making. Occupational Health services, enforcement authorities, employers and employees must be well prepared in advance through attitude, resources and training to deal especially with airborne threats at source by interrupting transmission pathways as well as by using PPE, specifically RPE when and where appropriate [3].

## 14. Challenges and Opportunities for Future Research

Clearly, the pandemic has left us with a very long shopping list of future research needs, even in Occupational Health alone. Two salient but very different aspects will be highlighted by way of illustration.

Historical analogies with waterborne disease have already been made. Correspondingly, to protect workers and others from diseases caused by predominantly airborne pathogens such as SARS-CoV-2, a paradigm shift is needed [60]. Some of the research basis for this would be retrospective, based on the experience of employing ventilation, filtration and other measures during the COVID-19 pandemic. In contrast, other research would be prospective and experimental. Disciplines such as aerosol science, engineering and economics would be heavily involved. The aim would be to achieve the most cost-effective means of reducing risk to health while taking into account all relevant considerations such as comfort, productivity, affordability, sustainability and safeguarding the environment.

From a clinical perspective, the biggest challenge probably relates to the post-acute sequelae of COVID-19 infection. These range from an increased risk of various long-recognised clinical outcomes, such as myocardial infarction [9], to less well-defined outcomes, such as Long COVID. Both for the purposes of compensation and for case management the various phenotypes of the latter need better definition. For each of the distinct post-acute COVID-19 sequelae, research needs to establish not just the best methods of clinical management, but also of optimal occupational rehabilitation. Furthermore, well designed surveillance programmes and cohort studies are warranted to determine the possible risk of other outcomes such as damage to the immune system, and even neoplasia.

## 15. Conclusion

The COVID-19 pandemic was unprecedented in living memory in terms of magnitude and complexity. The virus, though novel as a species, transmitted itself similarly to others of the same genus. However, SARS-CoV-2 spread very rapidly in workplaces and in the community with an acute illness often manifest as a multisystem disease with serious sequelae including death. The UK response in workplaces, as elsewhere was often flawed and grossly inadequate. From the standpoint of Occupational Medicine, "following public health guidance" in the UK became a euphemism associated with neglect of the duty of care, of precautionary science and of good practice, such that workers, ranging from nurses to bus drivers, suffered needlessly. Therefore, the health of workers and within workplaces warranted specific considerations best handled by appropriate Occupational Health professionals, rather than being viewed as a mere setting within public health – especially when the latter's authorities may have been constrained by political influence. Within the disciplines important for Occupational Health, Aerosol Science and Occupational Hygiene generally endeavoured to make a significant contribution in protecting workers. Although the role of Occupational Medicine in managing individuals at risk of or from occupational disease is invaluable, it behoves occupational physicians to be even more proactive in preventing such disease in the first place.

**Declaration of Interest:** The Author declares that he is the elected representative for 'Occupational Medicine' on

the Council of the British Medical Association (BMA), and until recently, Co-Chair of the BMA Occupational Medicine Committee. He is also a member of the UK's Industrial Injuries Advisory Council. He was a Past President of the British Occupational Hygiene Society (The Chartered Society for Worker Health Protection), and a member of the Society's ad hoc working group on COVID-19 control measures. The opinions expressed in this article are solely those of the author.

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