The UK Covid-19 Inquiry Module 5
Written closing statement of the British Medical Association (BMA)

Introduction

1. It is beyond doubt that the procurement and distribution of lifesaving equipment during the pandemic was severely inadequate. Prior to Covid-19 there was a severe lack of preparation for the scale of procurement and distribution that would be needed in the event of a pandemic, followed by a lack of timely action in the early months of 2020 and a series of flawed decisions.
2. Procurement and distribution are about far more than bureaucratic processes; they are a vital part of ensuring healthcare systems look after their staff and their patients, including the most vulnerable. Both staff and patients were let down by procurement and distribution failings, and a large number continue to experience the consequences today. These failings affected patient care and led to stress, anxiety, moral injury, infection, Long Covid, and death.
3. It is vital that action is taken now to ensure that, when the next pandemic hits, staff and patients do not experience a repeat of these failures.
4. This written statement draws on the evidence disclosed and heard by the Inquiry in Module 5 and sets out the key areas that the BMA urges the Inquiry to consider as it develops its report and recommendations. It focuses on the following areas:
    A. The inadequacy of pre-pandemic preparations
    B. A lack of timely action in the early months of 2020
    C. Flawed and ill-judged decisions related to procurement
    D. The significant and ongoing impacts of procurement and distribution failures on staff and patients
5. At the end of this statement the BMA highlights specific recommendations for the Inquiry to consider. In broad terms, it is vital for this module of the Inquiry to publish recommendations that will:
    a. Lead to better protection for healthcare staff, including through a reliable, diverse supply of Personal Protective Equipment (PPE) available to suit all staff and suitable for a range of potential pathogens.
    b. Improve patient care and reduce staff moral injury through better supplies of key equipment such as ventilators and the ability of NHS estates to supply oxygen at scale in future emergencies.
    c. Reform emergency procurement processes to ensure greater transparency, efficiency, and accountability, thus reducing waste and improving the allocation of resources.

A. Pre-pandemic preparations were woefully inadequate

6. The Inquiry's Module 1 report concluded that the UK was ill-prepared for dealing with a catastrophic emergency and that this lack of preparedness *"failed their citizens"*[1]. In this module, the Inquiry has received clear evidence that sadly the same conclusion rings true in relation to the procurement and distribution of key equipment.

PPE preparations were insufficient and failed to consider the context of a pandemic

7. There was an erroneous assumption that the UK's PPE stockpiles would be sufficient to provide vital protections during the first few weeks of a pandemic, after which the UK would be able to procure further stocks of PPE through the activation of its 'Just in Time' (JIT) contracts. As set out below, the Inquiry heard a significant amount of evidence demonstrating that both parts of this plan were severely inadequate and left staff unprotected when facing a potentially deadly virus.

The UK's PPE stockpiles were not fit for purpose

8. First, the quantities of PPE in the UK's stockpiles were far too low. To mitigate inevitable supply chain disruptions, the stockpiles needed to have more than just a few weeks' worth of supply[2]. Yet, as the Inquiry heard in Module 1, a series of decisions had been taken to reduce their size from 2012 onwards[3]. In this module, Jonathan Marron, for example, outlined that while the stockpiles were *"extraordinarily important, we needed more"*[4], while Caroline Lamb confirmed that the quantities in Scotland were based on an assumption of a single wave of pandemic flu[5].

9. Second, the PPE stockpiles did not contain the levels of respiratory protection required in the event of an airborne virus such as Covid-19[6]. As the Inquiry heard in Module 3, it was well established prior to the pandemic that Respiratory Protective Equipment (RPE) provides far greater protection against an airborne virus than a Fluid Resistant Surgical Mask (FRSM)[7]. Yet as of 03 March 2020 the UK's stockpiles had more than 26 times the quantity of deployable FRSMs (67.86m) compared to RPE (2.59m)[8]. This fatal flaw stems from the fact that, as concluded in the Inquiry's Module 1 report, *"the UK prepared for the wrong pandemic"*[9]. Multiple witnesses outlined that the stockpiles were primarily designed for influenza[10] and therefore, as

[1] UK Covid-19 Inquiry Module 1 report 'The resilience and preparedness of the United Kingdom', p.2-3.
[2] Matt Hancock - 19.03.2025(Day 11)/p.61:20-22.
[3] Published by the Inquiry in Module 1 as INQ000205178_0090.
[4] Jonathan Marron – 05.03.2025(Day 3)/p.140:1-2.
[5] Caroline Lamb – 24.03.2025(Day 13)/p.51:6-12.
[6] INQ000475580_0014.
[7] INQ000145893_0004.
[8] INQ000339122_0001.
[9] UK Covid-19 Inquiry Module 1 report 'The resilience and preparedness of the United Kingdom', p.2.
[10] INQ000475580_0006 and Jonathan Marron – 05.03.2025(Day 3)/p.125:2-11.

described by Paul Webster, *"for a different pandemic [compared] to the one that then transpires [sic]"*[11].

10. Third, the composition of PPE in the stockpiles did not sufficiently consider inequalities and the need for a diverse range of shapes and sizes. In oral evidence Jonathan Marron outlined that, while the stockpile in England contained four different sizes of FFP3, this range was not broad enough to meet the needs of all staff[12]. As outlined in paragraphs 120-128, a lack of diversity in RPE disproportionately impacts the protection available to women and ethnic minorities.

11. Fourth, the PPE stockpiles had not been properly maintained.

    a. A large number of items had expired[13] or the expiry date was unknown[14], possibly as a result of poor recordkeeping[15]. In Wales, for example, an appalling 93% of FFP3 respirators in the stockpile were out of date in February 2020[16]. Similarly, in Scotland, the stockpile contained FFP3 respirators which had expired more than 10 years previously[17].

    b. Given the purpose of a PPE stockpile is to provide immediate protection when needed, having expired items which are not immediately useable but instead need to be retested prior to distribution delayed the speed at which this vital protection reached frontline staff. Emails from Public Health England (PHE) show that, as of 12 March 2020, a shocking 21 million FPP3 respirators across all four nations were undergoing retesting and were not expected to be available until July 2020[18]. This four-month delay likely had fatal consequences for the lives of staff and patients and cannot be overstated.

    c. Moreover, health and social care staff across the UK received PPE bearing multiple expiry stickers layered on top of each other[19]. In some cases, as described by Alan Brace from the Welsh Government's Health and Social Services Group, expired PPE which had been retested was sent out without any new expiry stickers at all due to a lack of time[20]. As outlined in more detail in paragraphs 117-119, the lack of communication about the process of retesting expired PPE completely undermined staff trust and confidence in the items they were being provided with[21].

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[11] Paul Webster – 11.03.25(Day 6)/p.111:20-21.
[12] Jonathan Marron – 05.03.2025(Day 3)/p.212:2-8.
[13] Matt Hancock - 19.03.2025(Day 11)/p.56:9-p.57:13.
[14] INQ000330795.
[15] Matt Hancock - 19.03.2025(Day 11)/p.57:7-10.
[16] INQ000300270.
[17] INQ000528989_0002.
[18] INQ000551495_0003-0004.
[19] INQ000562457_0016.
[20] Alan Brace – 11.03.2025(Day 6)/p.183:1-3.
[21] INQ000475580_0014 - 0015.

There was an overreliance on 'Just in Time' (JIT) contracts

12. It was entirely predictable that supply chains would be disrupted in the event of a global pandemic. Indeed, the procurement of PPE was raised as a consideration within Exercise Iris, Scotland's pandemic planning exercise undertaken in 2018[22], while Exercise Pica, a UK-wide exercise for primary care in 2018, also raised the likelihood of NHS Supply Chain being impacted during a pandemic[23]. As described by Professor Manners-Bell, the nature of PPE being *"absolutely critical"* to health means that it is vital for PPE supply chains to be highly robust and resilient[24].

13. Yet, despite this, the Inquiry received evidence that the UK's preparations failed to take the possibility of global shortages into account[25] and instead placed a misguided reliance on the activation of JIT contracts to access lifesaving PPE. In Module 1, the Inquiry's expert Dr Claas Kirchhelle gave evidence that this reliance on JIT contracts was due to cost-cutting and a prioritisation of financial savings[26].

14. The JIT contracts were not fit for a pandemic and quickly collapsed, with the first JIT contract failing on 28 February 2020[27]. Evidence from Supply Chain Coordination Limited (SCCL), who manage NHS Supply Chain, shows that none of the JIT contracts were able to supply any items of PPE at all[28].

15. A key reason why JIT contracts failed was because they were placed with distributors rather than directly with manufacturers[29]. As explained by Andrew Mitchell, supplies of a product are more reliable when sourced directly from a manufacturer instead of through an intermediary[30]. While doing so may have made some difference, the nature of JIT contracts are fundamentally unsuitable for a pandemic. In oral evidence Lord Bethell reflected that he wishes *"NHS colleagues had had a procurement system that wasn't so focused on just-in-time desirables and keeping as little as possible in the warehouse"* because the approach was not resilient[31]. Indeed, the SCCL 'lessons learned' report from July 2020 concluded that *"JIT is not a viable strategy for pandemic preparedness going forward"*[32].

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[22] INQ000103013_0008.
[23] INQ000023034_0015.
[24] Professor Manners-Bell – 10.03.2025(Day 5)/p.8:13-23.
[25] Professor Manners-Bell – 10.03.2025(Day 5)/p.19:19-20 and Caroline Lamb – 24.03.2025(Day 13)/p.70:23-p.71:5.
[26] Published by the Inquiry in Module 1 as INQ000205178_0091-0092.
[27] CTI opening oral statement – 03.03.2025(Day 1)/p.18:19.
[28] INQ000057528_0003-0004.
[29] Professor Manners-Bell – 10.03.2025(Day 5)/p.29:18-19.
[30] Andrew Mitchell – 10.03.2025(Day 5)/p.72:3-p.74:12.
[31] Lord Bethell – 19.03.2025(Day 11)/p.30:23-p.31:2.
[32] INQ000057528_0005.

16. The fatal combination of inadequate stockpiles alongside an overreliance on JIT contracts placed the UK firmly on the backfoot in relation to PPE, with no sufficient buffer on which to rely for this vital protection.

Preparations failed to ensure the supply of ventilators and oxygen

The UK entered the pandemic with ventilator shortages

17. There was a critical failure to consider ventilator capacity as part of the UK's pre-pandemic preparations. The 2011 Influenza Pandemic Preparedness Strategy, found in Module 1 to be the only UK-wide pandemic strategy in place at the start of Covid-19, did not even include ventilators as a possible area of need during a pandemic. As noted by Matthew Style, this omission from pandemic planning meant that *"ventilator availability was not therefore identified early on as a priority"*[33].

18. The Inquiry received evidence that at the outset of the pandemic decision-makers had a limited understanding of the number of ventilators available, with no centralised list regarding quantities, models, specifications or their state of repair[34]. As explained by Sir Gareth Rhys Williams, not having this inventory *"made trying to estimate how many we would need even harder"*[35] and, as noted by Dr Dame Emily Lawson, these figures were needed to inform purchasing[36]. It was not until late February and early March 2020 that the UK Government conducted a survey of NHS Trusts in England to determine this information[37].

19. As a result of this lack of preparedness, all four nations of the UK entered the pandemic with significant ventilator shortages. The UK was estimated to have around 7,000 ventilators although, as explained by Professor Moonesinghe, only around half of this number were *"true critical care ventilators"*, with the rest being *"second choice equipment"* such as anaesthetic machines and transport ventilators[38]. Modelling in March 2020 indicated that demand for ventilator beds would soon exceed supply by 82,000 and that 3,000 people per week could die due to a lack of ventilators[39].

20. As the Inquiry heard in Module 3, the quantity of ventilators cannot be examined in isolation from the availability of critical care beds and the capacity of the workforce to staff these beds and undertake ventilation safely. In oral evidence Professor Moonesinghe highlighted that the UK entered the pandemic with far lower critical care capacity than comparable OECD countries, and that this continues to be the case today[40].

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[33] INQ000513708_0012.
[34] Sir Gareth Rhys Williams – 05.03.2025(Day 3)/p.51:24-p.52:2.
[35] INQ000536362_0036.
[36] INQ000572261_0021.
[37] Chris Stirling – 17.03.2025(Day 9)/p.7:3-6.
[38] Professor Moonesinghe – 17.03.2025(Day 9)/p.132:11-p.133:1.
[39] Sir Gareth Rhys Williams – 05.03.2025(Day 3)/p.53:1-p.55:12.
[40] Professor Moonesinghe – 17.03.2025(Day 9)/p.131:13-25.

21. Further, there was no large-scale domestic manufacturing of Intensive Care Unit (ICU) ventilators[41]. As a result, there was a rush to secure large numbers of additional ventilators amidst high global demand. This was exacerbated by difficulties purchasing the 300-500 component parts required to manufacture a ventilator in the context of export bans and global supply chain disruption[42].

Hospital estates had inadequate oxygen infrastructure

22. Healthcare infrastructure, including the design and maintenance of NHS estates, is a vital part of pandemic preparedness. However insufficient capital investment meant this infrastructure was inadequate across the UK. As outlined by Julian Kelly, one in eight hospitals in England are older than the NHS and 30% are more than 50 years old[43]. In Module 3 the Inquiry heard that the UK entered the pandemic with substandard estates and a growing maintenance backlog which by 2019/20 stood at £9bn in England alone[44].

23. In this module, the Inquiry received evidence that inadequate oxygen infrastructure led to problems distributing high-flow oxygen in sufficient volumes through ageing hospital pipework[45]. It is incredibly difficult to upgrade estate infrastructure in the midst of a pandemic[46], a problem which was further exacerbated by the lack of central, system-wide understanding about how the oxygen infrastructure worked[47].

24. As described by Chris Stirling, the UK's oxygen pipework infrastructure was designed a long time ago and there have been significant technical advances since then[48]. He outlined how the guidelines for oxygen systems in hospitals make assumptions about how many devices will need to be provided with oxygen at any given time. In his view, these assumptions, and the guidelines as a whole, are no longer appropriate and need to be revised to ensure the UK is prepared for a future pandemic[49].

There was a lack of domestic manufacturing

25. The Inquiry has heard clear evidence that the UK entered the pandemic with a lack of domestic manufacturing of key equipment, including PPE and ventilators.

26. As highlighted by Lord Deighton, the UK Make Programme delivered its first items of PPE in April 2020 yet, *"with foresight and planning"* this could have been started far earlier. Lord Deighton

[41] Sir Gareth Rhys Williams – 05.03.2025(Day 3)/p.54:4-12.
[42] Sir Gareth Rhys Williams – 05.03.2025(Day 3)/p.53:7-25.
[43] INQ000528585_0072.
[44] INQ00040925_00690.
[45] Julian Kelly – 11.03.2025(Day 6)/p.167:18-p.168:3.
[46] Chris Stirling – 17.03.2025(Day 9)/p.66:4-10.
[47] INQ000561670_0033.
[48] Chris Stirling – 17.03.2025(Day 9)/p.68:11-23.
[49] Chris Stirling – 17.03.2025(Day 9)/p.68:21-p.69:7.

reflected that *"I was able to start at the end of April, I see no reason why that couldn't have started at the end of March, had we got ourselves organised and focused that way"*[50].

27. In relation to domestic manufacturing, pre-pandemic preparedness could have, but critically did not, include the early identification of strategic manufacturers in the UK and the tracing of raw materials for each component in a domestic supply chain[51].

28. Instead, the UK was forced to start this domestic manufacturing from scratch which, as described by Tim Jarvis, the UK Government had no experience of doing[52]. External advisers from the private sector were subsequently brought in to provide this expertise[53].

29. It is vital that the UK has the ability to stand up domestic manufacturing capability at pace during a future pandemic or health emergency. Some witnesses suggested that, outside of a pandemic, it would be unrealistic for the UK to manufacture high-volume, low-value items such as PPE[54]. Others, however, argued that the lifesaving nature of these items makes them distinct from other high-volume, low-value goods[55], putting forward ways in which this domestic manufacturing could be achieved including through sleeping contracts[56], grants[57] and high-tech automation[58]. Any recommendation made by the Inquiry in this regard needs to leave no room for uncertainty or failure during a time of crisis.

There was no plan for how procurement and distribution systems would be scaled up

Existing procurement systems were not designed to cope with a pandemic

30. Prior to the pandemic, the UK's supply chains were set up for business-as-usual activity rather than being able to manage major peaks in demand[59]. As described by Professor Manners-Bell, *"the supply chain and the logistics in the UK just wasn't [sic] able to cope with the demands which were being placed upon it"*[60] because preparations *"weren't anywhere near to being sufficiently robust enough"*[61].

31. The Inquiry heard evidence that NHS Supply Chain, the main supplier and distributer of equipment to Trusts in England, was not designed to cope with a pandemic. The organisation did not have a pandemic plan, nor astonishingly were they expected to have one[62]. According to

[50] Lord Deighton – 18.03.2025(Day 10)/p.91:14-20.
[51] Lord Deighton – 18.03.2025(Day 10)/p.91:21-p.92:13.
[52] Tim Jarvis – 12.03.2025(Day 7)/p.7:22-p.8:9.
[53] Tim Jarvis – 12.03.2025(Day 7)/p.7:9-p.8:9.
[54] Tim Jarvis – 12.03.2025(Day 7)/p.32:19-23.
[55] Professor Manners-Bell – 10.03.2025(Day 5)/p.8:13-p.9:3.
[56] INQ000536350_0051.
[57] INQ000066032_0005.
[58] Professor Manners-Bell – 10.03.2025(Day 5)/p.33:4-21.
[59] Professor Manners-Bell – 10.03.2025(Day 5)/p.17:21-25.
[60] Professor Manners-Bell – 10.03.2025(Day 5)/p.18:5-7.
[61] Professor Manners-Bell – 10.03.2025(Day 5)/p.19:2-4.
[62] Paul Webster – 11.03.25(Day 6)/p.124:7-25.

Andy Wood, the lead for the subsequently established PPE Buy Cell, NHS Supply Chain was set up to run a just-in-time process and therefore did not have a deep understanding of the market and the origins of raw materials, which are both necessary for procurement during a pandemic[63].

32. Further, there was no system in place for knowing the inventory held by each NHS Trust, let alone settings such as primary, community or social care. Multiple witnesses highlighted this lack of inventory information as a significant hindrance to the supply of key equipment during the pandemic. Paul Webster, for example, described how *"knowing where stock was and how much stock existed was impossible"*[64], while Lord Agnew described it as *"the most egregious"* pre-existing problem[65]. A survey undertaken by the Inquiry in February 2025 found that many of the NHS Trusts in England recommended the use of an inventory management system to be able to monitor stock in real-time[66].

33. While Emily Lawson suggested that NHS Supply Chain are now *"close to having that end-to-end view of the supply chain"*[67], Paul Webster confirmed that this new inventory management system has in fact only been rolled out to 60-80 of the 240 NHS Trusts, with no funding to expand this any further[68]. Importantly, there seems to be no plan to include primary, community and social care in this inventory management system, leaving them exposed to the same critical issues they experienced during Covid-19.

The existing distribution systems were unfit for a pandemic and too narrow in scope

34. A fundamental part of a pandemic plan is the ability to swiftly distribute items when a pandemic hits. Indeed, Exercise Cygnet in 2016 (a discussion-based exercise which formed part of the build-up to Exercise Cygnus) recommended that a *"whole system approach to the distribution of PPE to health and care staff"* should be developed[69]. Yet, despite this, the Inquiry received evidence that the distribution systems in place at the start of the pandemic were unfit for a crisis and severely unable to cope.

35. First, the overreliance on 'Just in Time' contracts meant that the UK never planned to handle large quantities of items[70]. Warehouses were small and designed to hold only three weeks' worth of stock[71]. The fixed nature of a warehouse size - with the associated finite limits on the number of staff who can work within them – meant they were not fit for the purposes of a pandemic[72]. As described by Dr Dame Emily Lawson, warehouses *"weren't designed to hold large stocks and*

[63] Andy Wood – 06.03.2025(Day 4)/p.187:6-11.
[64] Paul Webster – 11.03.25(Day 6)/p.120:8-9.
[65] INQ000536345_0008.
[66] INQ000565789_0002.
[67] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.77:15-16.
[68] Paul Webster – 11.03.25(Day 6)/p.122:16-p.123:6 and p.131:1-p.132:3.
[69] INQ000022736_0002.
[70] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.24:17-24.
[71] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.24:17-p.25:13.
[72] Paul Webster – 11.03.25(Day 6)/p.117:20-22.

they weren't designed to scale up…there just fundamentally wasn't the capacity in those warehouses to stretch"[73].

36. Second, there was no plan to distribute items to primary, community or social care.

    a. As described by Paul Webster, NHS Supply Chain was only ever set up to deliver to 240 NHS Trusts in England, not the 58,000 health and care settings which needed PPE during Covid-19[74]. Similarly in Wales, the NHS Wales Shared Services Partnership (NWSSP) did not previously provide equipment to social care, GPs, dentists, pharmacies or community healthcare providers[75], while in Scotland delivery of PPE to social care was described as the *"single biggest and most difficult challenge"* due to new arrangements having to be set up[76].

    b. In England, the Department of Health and Social Care (DHSC) did not even have a list of all the social care providers or knowledge of where to obtain that data from[77], resulting in this information having to be identified in real-time at the height of the crisis.

    c. A striking example of this lack of a distribution plan is described in the witness statement of Paul Webster who explained that, at the time Matt Hancock made a public statement promising that all care settings would receive a delivery of PPE by the end of the week, NHS Supply Chain had received *"no advance notice of the Secretary of State's promise. There was no list or plan of where all these care settings were…[we] had never dealt with these customers before and it is extremely difficult to pick, pack and distribute product to customers knowing nothing of who they are or where they are located"*[78].

    d. The inadequacy of the pre-existing distribution systems to cope with a pandemic meant entirely new distribution systems had to be set up from scratch in the midst of a crisis. To be properly prepared, it is vital for equipment distribution plans to involve all health and care settings, wherever they are located.

37. As a result of pre-existing procurement and distribution systems not being designed to cope with a pandemic, they were very quickly unable to handle the level of escalating demand. Some witnesses have described this as the *"collapse"* of NHS Supply Chain[79]. Paul Webster confirmed that the capacity of NHS Supply Chain could not be expanded any further[80] because, as noted

[73] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.25:7-12.
[74] Paul Webster – 11.03.25(Day 6)/p.117:22-25.
[75] Alan Brace – 11.03.2025(Day 6)/p.179:6-10.
[76] Paul Cackette – 24.03.2025(Day 13)/p.152:17.
[77] Helen Whately – 13.03.2025(Day 8)/p.8:16-p.9:5.
[78] INQ000492085_0044-0045.
[79] INQ000536350_0004.
[80] Paul Webster – 11.03.25(Day 6)/p.118:7-25.

by Dr Dame Emily Lawson, they had *"gone beyond the limits of the existing system"*[81]. This ultimately led to a new PPE procurement and distribution system being established.

Testing infrastructure was not designed for a pandemic, resulting in a shortage of tests for healthcare workers and patients

38. As highlighted in the opening statement of the UK Health Security Agency (UKHSA), being able to identify whether somebody is infectious is critical to a pandemic response, both in terms of protecting against illness and mortality, and to ensure the continued availability of staff to provide care[82].

39. However, as concluded in the Inquiry's Module 1 report, pandemic planning exercises did not properly consider the need for a large-scale system to test, trace and isolate[83]. PHE had not been structured or funded to deliver testing at scale[84] and had experienced a 40% reduction in real-terms funding over the course of its life[85]. This meant that PHE, as described by Sarah Collins, *"did not have the capacity nor the remit to scale up what was required in terms of rolling out this scale of testing"*[86].

40. As a result, Lord Bethell confirmed that the UK had one of the worst starting points to deliver the scale of testing that was needed during the pandemic[87], a position described by Dr Beverley Jandziol as being in *"really dire straits"*[88]. Similarly, the 2022 'technical report' published by the Chief Medical Officers (CMOs) and Deputy Chief Medical Officers (DCMOs) stated that being unable to rapidly step-up a large-scale testing operation limited the UK's initial pandemic response[89].

41. While the BMA notes that the issue of testing will receive specific consideration within Module 7, the ability to respond to a pandemic requires both the capacity to rapidly scale up testing infrastructure and the ability to procure the number of tests required.

Pandemic preparations need significant improvement on multiple fronts

42. As this section has outlined, the UK's pandemic preparations were insufficient at every turn. It meant that, when the pandemic began, the UK was already severely disadvantaged in its ability to provide lifesaving supplies and equipment to those who relied on them for their health, safety and care, leaving then exposed and unprotected. As one doctor told the BMA, *"The pandemic has driven depression, anxiety, suicidal thoughts, and I most likely have residual PTSD [Post-*

[81] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.35:23.
[82] UKHSA opening oral statement – 03.03.2025(Day 1)/p.171:15-23.
[83] UK Covid-19 Inquiry Module 1 report 'The resilience and preparedness of the United Kingdom', p.3.
[84] Published by the Inquiry in Module 2 as INQ000273878_0010.
[85] Published by the Inquriy in Module 1 as INQ000148429_0025.
[86] Sarah Collins – 13.03.2025(Day 8)/p.69:23-25.
[87] Lord Bethell – 19.03.2025(Day 11)/p.8:4-8.
[88] Dr Beverley Jandziol – 13.03.2025(Day 8)/p.118:12.
[89] Published by the Inquiry in Module 1 as INQ000087225_0187.

Traumatic Stress Disorder]…we never signed up to be exposed unnecessarily to a potentially lethal virus - I am so angry at the government and NHS for allowing us to be exposed and unprepared in this way".

43. While the preparation failures vary in their specifics, the evidence received by the Inquiry clearly demonstrates that these preparations need to be drastically improved for the UK to have even a chance of coping with the next pandemic or health emergency.

B. The early months of 2020 saw a lack of timely action

44. Despite clear warnings about the threat of the virus from late December 2020, the UK Government failed to take timely and decisive action in the early months of 2020. By the time the virus began spreading more rapidly, opportunities to prepare had already been missed. In his oral evidence Lord Agnew revealed that there was a striking absence of strategic thinking when he joined the Cabinet Office in the middle of February 2020, reflecting that this *"was too late"* to be beginning strategic conversations[90]. This statement sums up the shocking lack of urgency which left the country dangerously exposed.

45. Nowhere was this failure more evident than in the procurement and distribution of PPE. When it became accepted that the 'Just in Time' contracts had collapsed and NHS Supply Chain would be unable to meet surging demand, the UK Government was forced into a desperate scramble to create an entirely new PPE procurement and distribution process from scratch; the PPE Cell. The result was a chaotic and reactive response which left staff without any adequate PPE and subsequently with an increased exposure to infection, Long Covid and tragically in some cases, death.

The new system did not have procurement staff in place until too late

46. Several witnesses provided crucial evidence regarding the delayed deployment of procurement staff for the new PPE system and the significant consequences that ensued. Andy Wood, for example, was deployed to lead the PPE Buy Cell (a subset of the newly-established PPE Cell) on 21 March 2020, just two days before the national lockdown.[91] He emphasised that by this time, *"we were already in a bad place as a country"*, with *"immense pressure"* on the new team[92].

47. As a result of delayed deployment, several hundred offers of PPE made to DHSC from at least 13 March 2020 had *"no one there to process them"*, as described by Chris Hall[93]. This raises the critical question of why procurement staff were only brought in around 21 March 2020 when they could have been involved far earlier.

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[90] Lord Agnew of Oulton – 18.03.2025(Day 10)/p.115:24-p.118:2.
[91] Andy Wood – 06.03.2025(Day 4)/p.162:8.
[92] Andy Wood – 06.03.2025(Day 4)/p.157:20-22.
[93] Dr Chris Hall – 06.03.2025(Day 4)/p.143:1-8.

48. Further, the UK Government significantly underestimated the scale of the PPE procurement challenge, as seen in the new PPE Buy Cell team initially having only 35 staff[94]. This team eventually had to expand to nearly 14 times its initial size, growing to around 500 people[95]. While healthcare workers faced a frightening virus, a lack of timely action in the early months of 2020 to establish the necessary procurement capacity endangered the lives of those working on the frontline.

No processes had been set up for data management and due diligence

49. The early months of 2020 saw a failure to establish the systems necessary for large-scale procurement, particularly in relation to data management and due diligence. As Andy Wood told the Inquiry, the team had to *"build the aeroplane as we were flying it"*[96]. As Professor Moonesinghe stated in her oral evidence, the UK should not have been in the position to have to set up systems and processes in haste, *"ideally…we would have had a plan that could have been executed earlier"*[97].

There was no system to handle the level of procurement data that would be needed

50. In the crucial early weeks of the pandemic, procurement staff had to waste time manually entering PPE offers into an Excel spreadsheet which, as emphasised by Dr Dame Emily Lawson, was *"not designed for that purpose"*[98]. Darren Blackburn, Head of the New Supplier team within the PPE Buy Cell, confirmed that this remained the case until 09 April 2020 by which time the spreadsheet contained an astonishing 55,215 rows of information, amounting to nearly 1.4 million individual pieces of data.[99]

51. Moreover, Chris Hall explained that it was not even possible for this unwieldy spreadsheet to be shared 'live' with other teams because each UK Government department operated on its own separate systems with different technologies[100]. Dr Dame Emily Lawson stated that *"what we needed was a proper CRM system"* and reflected that in future she would not wish to start from the same position again[101].

52. This manual process was time-consuming, inefficient and, most importantly, impacted on the quality of procurement. As Darren Blackburn explained, the absence of a proper data management system meant that staff had less visibility of offers and the volume of those offers, which would have helped with prioritisation[102]. With such a large dataset in a non-dynamic

[94] Sir Gareth Rhys Williams – 04.03.2025(Day 2)/p.163:20.
[95] Sir Gareth Rhys Williams – 04.03.2025(Day 2)/p.190:18.
[96] Andy Wood – 06.03.2025(Day 4)/p.164:18-19.
[97] Professor Moonesinghe – 17.03.2025(Day 9)/p.156:22-p.157:1.
[98] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.44:16-17.
[99] Darren Blackburn – 06.03.2025(Day 4)/p.92:5-15.
[100] Dr Chris Hall – 06.03.2025(Day 4)/p.99:7-23.
[101] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.43:16-p.44:19.
[102] Darren Blackburn – 06.03.2025(Day 4)/p.93:25-p.94:2.

format, it would have been difficult for any procurement team to quickly identify the most promising offers, to assess the overall supply landscape and then make decisions about what to pursue. This lack of clear visibility likely lost valuable time in securing essential PPE.

53. The absence of a basic data management system that could handle a surge in procurement data demonstrates a clear failure to anticipate the challenges of a pandemic response and is something which could have been established in the early months of 2020, if not before.

There was initially no process for comprehensive due diligence

54. In addition to the lack of a sufficient data management system, there was similarly no process in place for conducting comprehensive due diligence at scale. This was described by Andy Wood as the UK Government not having *"due diligence in a box"*, with no *"playbook"* to support the new team to identify financial risks and viability[103].

55. As such, for the first two weeks after the new PPE Buy Cell was established, due diligence primarily took the form of procurement staff conducting basic desktop checks based on publicly accessible documentation, such as reviewing information on Companies House[104], rather than the *"more detailed piece of work"*[105] of usual due diligence processes.

56. Andy Wood explained that, as a result, the PPE due diligence conducted at the very beginning of the pandemic *"wasn't mature…we'd just literally walked through the door"*[106]. Importantly, he confirmed that it meant early due diligence was likely to be worse than the processes which were developed later in a *"much more deep and structured way"* as more personnel arrived from other UK Government departments with due diligence expertise and knowledge of the systems used by these other departments[107].

57. This delay in establishing an effective process for due diligence at scale demonstrates a weakness in the initial pandemic procurement response which could have been avoided.

Procurement staff lacked in-depth knowledge of the PPE they were required to procure

58. The Inquiry received evidence that, as a newly-formed team not used to buying PPE, procurement staff in the PPE Buy Cell lacked the necessary depth of knowledge about the items they were required to procure[108]. As described by Andy Wood, PPE is *"a very, very precise industry in terms of certification…it's a very exacting product"*, noting that, due to the lifesaving nature of these items, there was a lot of pressure *"to get that right"*[109].

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[103] Andy Wood – 06.03.2025(Day 4)/p.169:17-p.172:23.
[104] Andy Wood – 06.03.2025(Day 4)/p.170:3-15.
[105] Andy Wood – 06.03.2025(Day 4)/p.169:24.
[106] Andy Wood – 06.03.2025(Day 4)/p.170:22-p.171:3.
[107] Andy Wood – 06.03.2025(Day 4)/p.171:8-9.
[108] Dr Chris Hall – 06.03.2025(Day 4)/p.152:4-7.
[109] Andy Wood – 06.03.2025(Day 4)/p.165:14.

59. Andy Wood explained that procurement staff would usually become experts in the products they are purchasing, however during the pandemic they did not have time to amass this knowledge for PPE. He described how *"we didn't have time to become experts. We didn't have time to get to know the market, to speak to customers and end users. We didn't get time to visit factories"*, commenting that this presented *"a big problem, particularly…[for] a crucial product that was keeping our people safe"*[110].

60. The Inquiry heard how, instead, some procurement staff attempted to improve their knowledge while in the midst of frantic procurement. Andy Wood described his attempts to *"in my own time, sort of during the night, to go online and to find specific documentation around some of these products"*, noting that only by doing so, often at midnight, did it give him an understanding of the complexity of the products they were tasked with sourcing[111]. This lack of in-depth knowledge was also confirmed by Max Cairnduff who described how they *"didn't have access to people who were experts on PPE, so…we're buying kit by reference to guidelines we've been given…we simply had the specs and we went out to buy those specs"*[112].

61. A key mitigation for this lack of in-depth knowledge would have been mechanisms to enable greater clinical input into procurement, both prior to and during the pandemic. Whilst this can be difficult in the midst of a crisis, it is vital that procurement is able to react in real-time to feedback from frontline staff. For example:

    a. In her witness statement, Rosemary Gallagher explained that the Royal College of Nursing (RCN) had received numerous reports of inappropriate equipment and equipment simply not fit for purpose being received in healthcare settings, despite the attempts of members to inform the procurement process about clinical end-user needs and the efficacy of critical kit[113]. This included the enormous frustration that clinical engagement would take place when it was too late to influence, with one member telling the RCN that *"The clinical engagement is being done AFTER the purchasing decisions have been made. It is paying lip service to it and is too late once decisions have already been made based on tech specs, NOT clinical specifications and evaluations"*[114].

    b. Emily Lawson stated that it was not until May 2020 that information was fed back to DHSC that there were concerns about appropriately sized masks and gowns in PPE deliveries, confirming that changes were subsequently made to procurement decisions from October 2020 onwards, five months later[115]. While this evidence demonstrated that it was possible for some information to move back up the procurement chain, it should

[110] Andy Wood – 06.03.2025(Day 4)/p.167:5-12.
[111] Andy Wood – 06.03.2025(Day 4)/p.166:3-14.
[112] Max Cairnduff – 06.03.2025(Day 4)/p.63:17-p.64:5.
[113] INQ000553817_0007.
[114] INQ000553817_0008.
[115] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.78:15-p.80:13.

have been possible to address such issues earlier through better mechanisms for greater clinical engagement, such as that indicated by Rosemary Gallagher[116], where the feedback of end-users was proactively sought. In this way, earlier action could have been taken to address the disparities in the frequency and impact of ill-fitting PPE for female and ethnic minority staff.

c. Paul Webster acknowledged to the Inquiry that end-user input to any product specification *"makes sense"*[117] so it is significant that the Inquiry has heard so little evidence of this input being prioritised within the procurement process.

62. The Inquiry has received evidence during Modules 2 and 3 pertaining to routes of transmission, Infection, Prevention and Control (IPC) guidance, and the profound consequences that decisions about types of PPE had on the physical and mental health of staff and patients, including acute infection, Long Covid and death. While it is creditable that individual procurement specialists recounted rapid on-the-job self-teaching about, for example, types of PPE and their application during the pandemic, this nevertheless reflects a weakness in the system in which critical knowledge of the efficacy of potentially lifesaving PPE needed to be brought together sooner but wasn't and procurement too often was left to function in a vacuum, a failure of pre-pandemic preparedness. Clinical engagement and end-user experience should be a part of an effective and agile procurement system and the BMA urges the Inquiry to consider the broader evidence it has received across several modules when forming its recommendations in Module 5.

C. There were a number of flawed decisions related to procurement

63. It is clear from the evidence that the challenges with procurement and distribution were not solely the result of a lack of planning and preparedness; a series of flawed and ill-judged decisions in the early weeks and months of the pandemic made the situation significantly worse.

The untargeted 'call to arms' for PPE created significant issues

64. The public 'call to arms' for PPE in late March and early April 2020 came at a moment of crisis, with all four nations of the UK experiencing desperate shortages and a number of frontline workers already having tragically died[118]. Given these pressures, the intention to rapidly scale up PPE supplies was understandable and something called for by the BMA. However, the untargeted nature of the PPE 'call to arms', described by Sir Gareth Rhys Williams as *"everyone in the country [being] invited to ring in"*[119], created significant operational challenges. As the

[116] INQ000553817_0008.
[117] Paul Webster – 11.03.25(Day 6)/p.138:6-7.
[118] Available in Module 3 as INQ000251650_0001.
[119] Sir Gareth Rhys Williams – 05.03.2025(Day 3)/p.61:22-23.

Inquiry has heard in relation to the more targeted procurement of ventilators, alternative approaches would have been possible and would likely have been more effective[120].

65. The most immediate and significant consequence of the 'call to arms' was that it generated an unmanageable influx of offers, something described by Andy Wood as an *"avalanche"*[121]. Over a 15-week period it resulted in approximately 24,000 - 25,000 offers of widely varying quality, from 15,000 suppliers[122]. This created *"an enormous backlog of offers"*[123], which was *"a huge problem"*[124] for procurement teams who were still in the process of being established and, as outlined above, lacked adequate processes for handling such a surge. As such, Chris Hall told the Inquiry that the untargeted call to arms *"made matters a lot worse"*[125], with Max Cairnduff confirming that it was regrettable and *"not something a commercial person would have done"*[126].

66. Despite Michael Gove and Matt Hancock defending its necessity in a crisis[127], numerous witnesses confirmed that, in future, they would take an alternative approach to such an untargeted 'call to arms'[128]. However, it is critical to highlight that, as outlined in section A, better preparedness would put the UK in a far stronger starting position in relation to PPE.

The High Priority Lane (HPL) eroded public trust

67. The very existence of the HPL is a symptom of deeper systemic failures stemming from the UK's lack of preparedness and the resulting desperate scramble to secure PPE.

68. Multiple witnesses explained that the sheer volume of PPE offers received from the untargeted 'call to arms' led to the development of the HPL in order to manage the *"noise"* created by the high volume of follow-up enquiries[129]. With no clear way to manage these communications, the system became clogged and the HPL was created as a workaround to manage expectations and provide feedback. Max Cairnduff, for example, described how the 'call to arms' led to a situation where *"you're drowning, then you have people chasing you up, then you need a means to deal with people chasing you up or it slows down the whole system, and then you're in this world [of having an HPL]"*[130].

69. While some witnesses stated that it was appropriate to provide senior ministers with feedback on offers they put forward[131], many agreed that doing so diverted crucial staff time and resources

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[120] Sir Gareth Rhys Williams – 05.03.2025(Day 3)/p.61:20-23.
[121] Andy Wood – 06.03.2025(Day 4)/p.169:12-14.
[122] INQ000497031_0010.
[123] Dr Chris Hall – 06.03.2025(Day 4)/p.116:23.
[124] Andy Wood – 06.03.2025(Day 4)/p.169:12-14.
[125] Dr Chris Hall – 06.03.2025(Day 4)/p.115:18.
[126] Max Cairnduff – 06.03.2025(Day 4)/p.14:9-15.
[127] Michael Gove – 10.03.2025(Day 5)/p.151:12-17 and Matt Hancock - 19.03.2025(Day 11)/p.82:21-23.
[128] Darren Blackburn – 06.03.2025(Day 4)/p.82:9-15 and Max Cairnduff – 06.03.2025(Day 4)/p.33:13-16.
[129] Darren Blackburn – 06.03.2025(Day 4)/p.69:3-13.
[130] Max Cairnduff – 06.03.2025(Day 4)/p.46:13-16.
[131] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.48:16-19 and Max Cairnduff – 06.03.2025(Day 4)/p.16:21-24.

from the core task of procuring PPE. Darren Blackburn, for example, confirmed that these two functions competed for staff time, highlighting how *"if you're responding to a request for updates, you're not dealing with the supplier and trying to progress their offer"*[132]. Dr Dame Emily Lawson agreed that it would be desirable for other people to have focused on the need to manage referrers' expectations, rather than those working day and night to procure the PPE[133].

70. The Inquiry has heard several ways in which offers received through the HPL were managed differently to those received via the public route. This includes HPL offers having a dedicated caseworker to *"oversee the case as it went through the process"*, in contrast to non-HPL offers which had multiple hand-offs between caseworkers[134]. In addition, HPL offers were not requested to complete on online pro-forma but would instead have an initial conversation with a caseworker[135]. As confirmed by Chris Hall, offers received via the HPL route tended to reach the technical assurance stage more quickly[136]. It is important that the Inquiry considers this in the context of Max Cairnduff confirming that speed is vital and that the faster an offer can progress through the system, the better its chances of securing a contract[137]. In January 2022 the High Court ruled that use of the HPL to award contracts to two companies was unlawful because it meant they received earlier consideration, which breached the obligation of equal treatment[138]. However, the High Court ruling stated that, due to the volume of products within their offers, the two companies would likely still have been awarded contracts[139].

71. While the Inquiry heard evidence that offers went through the same standards of triage and due diligence regardless of origin, it is beyond doubt that the HPL created the perception among both the public and healthcare workers alike that ministerial contacts were receiving preferential treatment at the expense of other potential suppliers. This was arguably exacerbated by DHSC's initial denial that the HPL existed[140]. This perception has eroded public trust and confidence in procurement processes, something confirmed by numerous witnesses including Dr Dame Emily Lawson[141].

72. Importantly, instead of a well-planned, transparent system capable of handling emergency procurement fairly and efficiently, the UK's lack of preparedness created the chaos from which the HPL emerged. The HPL was not an inevitable necessity, and it is critical that the conditions in

[132] Darren Blackburn – 06.03.2025(Day 4)/p.69:19-23.
[133] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.46:21-p.47:5.
[134] Darren Blackburn – 06.03.2025(Day 4)/p.72:11-18.
[135] Max Cairnduff – 06.03.2025(Day 4)/p.55:13-18.
[136] Dr Chris Hall – 06.03.2025(Day 4)/p.144:11-12.
[137] Max Cairnduff – 06.03.2025(Day 4)/p.48:3-7.
[138] INQ000493415_0002.
[139] INQ000493415_0003.
[140] INQ000527634_0004.
[141] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.42:11-22.

which it became both a consideration and a reality are not allowed to be repeated in future crises.

Mechanisms were implemented to fit the demand for PPE around available supplies

73. In the face of significant PPE shortages, several strategies - three of which are outlined below - were implemented to fit the demand for PPE around the limitations of PPE procurement. Though perhaps intended as an initial pragmatic response to the crisis, these mechanisms did not prioritise staff and patient safety but instead attempted to manage supplies by reducing the demand for specific items of PPE.

74. This systemic approach to managing demand warrants scrutiny and, although the oral evidence presented in Module 5 did not focus on these mechanisms in extensive detail, the BMA strongly urges the Inquiry to closely examine the written and documentary evidence that it has received.

75. Of particular concern to the BMA is that while, due to inadequate preparations, demand management may have been necessitated at the outset of the pandemic, this was not communicated to those at the front line who bore its consequences.

76. A serious consequence of this lack of candour was that flawed IPC guidance prevented the procurement of adequate supplies of FFP3 respirators once supply chains stabilised from the summer of 2020, thereby perpetuating healthcare workers' ongoing lack of protection from an airborne virus. To this day, the IPC cell's stubborn refusal to acknowledge the risks of aerosol transmission and to take appropriate remedial action means staff still do not have access to the PPE they need.

PPE orders were rationed for more than six weeks

77. Despite being on the cusp of a global pandemic and with a legal duty to protect their staff, PPE ordering restrictions were placed on NHS Trusts in England for more than six critical weeks.

78. As described by Paul Webster, *"SCCL tried to manage demand by cancelling down orders"*, between 31 January and 18 March 2020[142]. He explains that this *"imposition of a form of rationing was to prevent the whole business being totally overwhelmed dealing with unprecedented demand"*[143].

79. Nonsensically, a DHSC decision meant that PPE orders were based on a Trust's previous 12 months of business-as-usual demand[144]. Dr Dame Emily Lawson confirmed that *"this is a form of demand management"*[145] and that *"if an order was for more than 150% of what they would*

[142] INQ000492085_0023-0025.
[143] INQ000492085_0025.
[144] Paul Webster – 11.03.25(Day 6)/p.135:9-10.
[145] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.13:7.

normally have ordered pre-pandemic, it was stopped"[146]. This use of historical data to limit orders was not reflective of the increased need for specific types of PPE, such as FFP3 respirators, necessary to protect against an airborne virus such as Covid-19. This demonstrates a complete lack of consideration for the safety of those relying on this lifesaving equipment in the face of a potentially deadly virus.

80. Moreover, the extent of demand control rationing was not communicated to staff because SCCL believed that doing so would have encouraged Trusts to try to circumvent the rationing by placing multiple orders[147]. In fact, on 03 February 2020, the SCCL website was updated to say that *"many of these lines are stockpiled and available to flow into the system"*[148].

81. As recognised by Dr Dame Emily Lawson, Trusts were ordering PPE in order keep their staff and patients safe[149]. In her view, SCCL did not fully appreciate the pressure that Trusts were under and therefore put *"the onus of the problem onto trusts as opposed to the fact that, clearly, the distribution system is starting to fail"*[150]. This is epitomised in an email sent by SCCL to NHS England and DHSC on 15 March 2020 which refers to Trusts ordering greater quantities of PPE than their business-as-usual consumption as evidence of *"bad behaviour"*[151].

IPC guidance was used to manage the demand for Respiratory Protective Equipment (RPE)

82. There is strong evidence that, in the context of RPE shortages, the IPC guidance and policy - which should fundamentally be about safety and saving lives - was utilised as a tool to ration and manage the demand for RPE.

83. Decision makers knew at the outset of the pandemic that, as a coronavirus, Covid-19 had the potential to transmit by aerosol (not solely droplets). It was also well established that FRSMs would not provide adequate protection against airborne transmission. For example:

    a. As the regulator for PPE, it has been the position of the Health and Safety Executive (HSE) since at least 2008 that FFP3s offer the greatest protection from an airborne virus (with a 99% filter efficiency and an assigned protection factor of 20)[152]. The HSE are clear that FRSMs are not PPE, something confirmed in Module 3 during the oral evidence of HSE's Richard Brunt, who told the Inquiry that *"PPE is designed to protect the individual and nobody else. It's personal. The fluid resistant mask is classed as a medical device, not as PPE…So although it may offer some protection, it's not what we would consider PPE"*[153].

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[146] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.13:7-16.
[147] INQ000492085_0024.
[148] INQ000492085_0023.
[149] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.16:9-11.
[150] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.16:14-15 and p.20:5-7.
[151] INQ000533076_0001.
[152] INQ000145893_0012.
[153] Richard Brunt - 12.09.2024(Day 4 of Module 3 hearings)/p.79:3-24.

b. A 2013 paper titled 'Guidance on the use of respiratory and facial protection equipment' and co-authored by, among others, Professor Sir Jonathan Van-Tam and Dr Lisa Ritchie clearly states that the recommended protection for healthcare workers when treating patients with SARS coronavirus was FFP3 respirators[154]. The paper recommends FFP3s *"to be worn until patient is no longer considered infectious"* and expressly does not recommend FRSMs when treating SARS coronavirus[155]. It explicitly states that *"Surgical face masks provide a barrier to splashes and droplets impacting on the wearer's nose, mouth and respiratory tract. They do not provide protection against airborne (aerosol) particles and are not classed as RPE"*[156].

c. Linda Dempster, Head of the IPC cell at the start of the pandemic, recognised that FRSMs did not protect against Covid-19. Minutes of the 'WN-COV Supply Chain Cell' on 06 February 2020 state that *"LD advised that a fluid repellent face mask isn't going to protect against the virus"*[157].

d. On 25 March 2020 an email from Professor Van-Tam in connection with a proposal to order N95 (US and WHO specification respirators) in addition to FFP2 respirators, states, *"If we are later in a situation where* ***if we run out of face filtering pieces in the NHS and healthcare workers suffer harm or refuse to work as a result*** *[emphasis added], no-one will care too much about small differences in technical in filtering efficiency [between N95 and FFP2/3] versus having nothing"*[158].

e. In early April 2020, Professor Sir Jonathan Van-Tam, Professor Sir Chris Whitty and Susan Hopkins were sighted on an email from a coronavirus specialist in Belgium who provided the following advice: *"in this emergency situation, we must do the utmost to protect all front-line workers potentially exposed to the virus…It must also be understood that aerosol transmission means workers need FFP2 for effective protection. The surgical masks are not protective enough, but they do have a place"*[159].

84. There is clear evidence that senior decision makers knew in early 2020 that the PPE stockpiles were lacking in FFP3 respirators, and that there would be a worldwide shortage with no means of procuring sufficient numbers for many months. For example:

a. An email from Professor Van-Tam on 23 January 2020 raises concerns about the potential shortages of FFP3 in the circumstances of a pandemic surge[160]. Professor Van-Tam states that, if the volume of Covid-19 infections resulted in patients being admitted to

[154] Published by the Inquiry in Modules 2 and 3 as INQ000130561_0005.
[155] Published by the Inquiry in Modules 2 and 3 as INQ000130561_0005.
[156] Published by the Inquiry in Modules 2 and 3 as INQ000130561_0003.
[157] INQ000339268_0011.
[158] Available in Module 3 as INQ000151644_0001.
[159] INQ000454404_0003.
[160] INQ000151353_0001.

"standard ward settings", the UK *"would need to draw down pandemic PPE stockpiles. These are configured for influenza and largely depend on SFMs [Surgical Face Masks] for most healthcare, and FFP3 respirators (requiring fit-testing) for ICUs and specific AGPs [Aerosol Generating Procedures] in non-ICU settings.* ***The historical HSE statutory position is that maximum level RPE is required. This was neither affordable nor practical for pandemic stockpiling. The difference between PH/clinicians and HSE's statutory viewpoint have to my knowledge never been resolved*** *[emphasis added]. Whilst I recognise surge is a long way off and I very much hope we never get there, but I think this needs very careful handling".*

b. On 27 February 2020, as indicated in HSE's timeline analysis for RPE, it was clear that the 'Just in Time' contracts for FFP3s were *"no longer available"*[161]. Similarly, a note on 29 February 2020 indicates *"pressure on [the] FFP3 situation"*[162].

c. An email on 12 March 2020 highlighted to decision-makers that stocks of FFP3s were running low in all UK nations, with just 10,000 in Wales, 99,000 in Northern Ireland, 113,000 in Scotland and 1,500,000 in England[163].

d. A 25 March 2020 email from Professor Van-Tam to colleagues at PHE, NHS England, the Cabinet Office, DHSC, NHS Supply Chain and HSE noting that they should *"bear in mind that FFP3 will be incredibly difficult to source at volume for at least 12 months"*[164].

85. Given this knowledge, decision makers should have had the courage to candidly explain to healthcare workers that the country simply did not have sufficient quantities of the equipment needed to keep them safe, that equipment would be rationed to the highest risk settings and procedures, and that everything possible was being done to procure adequate supplies.

86. However, this candour and explanation was not provided, and instead the UK-wide IPC guidance and policy was used to reduce the level of protection afforded to staff, placing them at significant risk of infection, death and Long Covid.

a. On 13 March 2020, changes were made to the IPC guidance to downgrade the PPE recommended for routine care of patients with Covid-19, limiting the use of FFP3 to ICU settings and Aerosol Generating Procedures (AGPs) only[165].

b. This downgrade was six days before NERVTAG declassified Covid-19 as a High Consequence Infectious Disease (HCID) on 19 March 2020. In Module 3 the Inquiry's experts Dr Shin, Professor Gould and Dr Warne confirmed that the downgrade of PPE and the declassification as a HCID are two separate issues, stating *"it was entirely*

[161] Available in Module 3 as INQ000269725_0001.
[162] Available in Module 3 as INQ000269725_0001.
[163] INQ000551495_0003.
[164] Available in Module 3 as INQ000151644_0001.
[165] Published by the Inquiry in Module 3 as INQ000410867_0120 and INQ000502072_0001.

possible to declassify Covid-19 as a HCID and retain the need for enhanced PPE measures"[166].

c. However, as seen in a 13 March 2020 email[167] and accompanying letter[168] sent to Professor Van-Tam by the Chair of the Advisory Committee on Dangerous Pathogens (ACDP), it appears that, in reality, the two issues were both being considered against the same contextual backdrop of enabling Covid-19 to be managed in general healthcare settings. These 13 March 2020 communications state the ACDP's unanimous view that Covid-19 should not be classed as a HCID, to which Professor Van-Tam replies that "*this [is] exceptionally pragmatic advice that I know will be of huge importance to NHS resilience…given the exigencies of the service, can we assume this a working solution as of now?"*[169]. As such, they indicate that, while Covid-19 was not formally declassified as a HCID until 19 March 2020, decisions were made under this assumption from at least 13 March 2020.

d. Similarly, minutes from the 'WN-COV Supply Chain Cell' further demonstrate how closely the two issues were being considered. The minutes from 03 March 2020, 16 days before the formal declassification as a HCID, state that *"DW advised they do have some concerns around supporting the volume of demand for FFP3 that will be required [by the community swabbing programme]...SK advised the sage [sic] are meeting this afternoon, and they are going to look at a proposal to downgrade this from a high consequence infectious disease and if that decision is taken that will be very helpful around what PPE is required"*[170].

87. If IPC guidance were purely about safety, this downgrade of PPE in the face of a potentially deadly virus would not make sense. Instead, the evidence suggests that this policy change was influenced by supply constraints. Evidence for this includes the following:

a. On 01 February 2020 Dr Lisa Ritchie, Head of the IPC Cell, sent an email to NHS Scotland stating that RPE would initially be used, but if Covid-19 led to sustained community transmission then FFP3s would be reserved for ICUs and AGPs, and FRSMs would be used for normal ward settings. In the same email chain, James Miller from NHS Scotland states that *"there is little point in guidance for a product that the country can't access"*[171].

[166] Published by the Inquiry in Module 3 as INQ000474282_0064.
[167] Available in Module 2 as INQ000151594_001-002.
[168] Published by the Inquiry in Module 2 as INQ000115534_0001.
[169] Available in Module 2 as INQ000151594_0001.
[170] INQ000339268_0067.
[171] INQ000291635_001-003.

b. On 11 February 2020, minutes from the 'WN-COV Supply Chain Cell' state that Gaynor Evans from NHS England *"advised if we stand-down the FFP3 to the fluid resistant masks that will have a huge impact on stock and provisions"*[172].

c. On 03 March 2020, an email sent to Professor Van-Tam and Dr Lisa Ritchie highlights concerns that *"The virus is classed as a HCID so at present it doesn't make too much difference to IPC, staff are wearing respirators all the time anyway…**the issue will come if we get overwhelmed with cases and can't cope with the level of PPE required (supply, staff who are trained)** [emphasis added] or run out of isolation rooms. We might then need to identify high risk procedures to help mitigate these and obviously AGPs fit the bill here"*[173].

d. On 04 March 2020, minutes from the IPC cell, in relation to an update on the PPE supply chain, include comments that a *"pragmatic approach [to the use of FFP3] may differ"*[174].

e. On 20 March 2020, an email from Professor Van-Tam called for *"a proportional plan for sensible prioritised use of what PPE we have and can get. In other words, given the science, given the reality of stocks, how can this be prioritised in the most sensible, risk-stratified way"*[175].

f. The role played by limited FFP3 availability in the development of the IPC guidance was confirmed by Laura Imrie, a member of the IPC cell, who gave evidence in Module 3 that *"If we wrote guidance as a precautionary principle to put everybody into FFP3 then not only would they have had a large amount of the workforce that couldn't comply with the guidance, and therefore couldn't come to work, we would also have had high risk areas…that might have been left without the FFP3s…there was at the beginning of the pandemic a very quick and a rapid stocktake of what stock we held and what was required, and from my understanding that would have made it really difficult to supply the FFP3s to ITU units and other areas we deemed high risk"*[176].

g. A report produced on 29 March 2020 on behalf of DHSC estimated that the UK had 10 weeks of FFP3 stock remaining and that *"demand will burn down existing stock"*. Crucially, this observation is accompanied by a recommended action to *"reduce demand [of FFP3] with policy"*[177].

88. Healthcare workers should not have to bear the consequences of poor pre-pandemic planning, nor should their protection have been compromised in an effort to fit demand around supplies.

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[172] INQ000339268_0020.
[173] Available in Module 2 as INQ000151533_0002.
[174] Published by the Inquiry in Module 3 as INQ000398198_0002.
[175] Available in Module 3 as INQ000381179_001.
[176] Laura Imrie - 05.11.2024(Day 26 of Module 3 hearings)/p.149:17–p.150:8.
[177] INQ000339131_0003.

The use of the IPC guidance in this way fundamentally breached their trust in the systems designed to protect them.

a. Frontline staff were fully aware that a FRSM would not protect them from Covid-19. As one doctor told the BMA, *"We knew this was an illness that was transmitted via aerosol particles, however the PPE guidance was based not on safety, but rather the lack of preparedness. False platitudes of staff safety were peddled out, when in fact staff were left at higher risk"*.

b. As outlined in the witness statement of Daniel Mortimer, a survey conducted by the NHS Confederation in April 2020 highlights how staff *"appreciate the truth and would have been, and would still be, much more accepting of a truthful approach: 'this is what you should have, this is what we actually have which is considerably less but do your best until we can upgrade to what you should have'"*[178]. Similar oral evidence was given by Dr Barry Jones in Module 3, who explained that healthcare staff were aware of global PPE shortages and would have understood if decision-makers had said *"we can't give you the best possible masks but…when we have enough masks we will provide them to you, as soon as possible, and we're working day and night to get them for you"*[179].

89. By limiting the use of FFP3 to discrete settings of ICU and for AGPs, the flawed IPC guidance prevented the future procurement of adequate stocks of RPE. Jonathan Marron explained that *"The Department stopped procuring PPE when it was confident it had sufficient opportunities to progress to make contracts to create a four-month supply stockpile for each type of PPE"*, and that FFP3 procurement was stopped on 30 June 2020[180]. However, this level of FFP3 stock was based on the flawed assumption that FFP3 was only required in ICU settings and for AGPs, meaning the opportunity to procure adequate stocks of FFP3 prior to the second wave was lost.

PPE demand modelling was based on 'actual usage' of PPE

90. Rather than being based on evidence of safety, PPE demand modelling, and therefore procurement, was adjusted to reflect the *"actual usage"* of PPE consumption rates[181].

91. The initial context of acute shortages will undoubtedly have led staff to ration their own use of PPE. Rosemary Gallagher, for example, highlighted how knowledge of shortages meant that staff were very sparing in their use of PPE because they did not want to run down stocks for colleagues[182]. This was confirmed by both Lord Deighton, who stated that *"people were rationing their actual utilisation"*[183], and Dr Dame Emily Lawson, who described how PPE shortages *"might*

[178] INQ000513763_0037.
[179] Dr Barry Jones – 12.09.2024(Day 4 of the Module 3 hearings)/p.42:18-24.
[180] INQ000528391_0190-0191.
[181] INQ000533281_0020.
[182] Rosemary Gallagher – 18.03.2025(Day 10)/p.41:15-23.
[183] Lord Deighton – 18.03.2025(Day 10)/p.88:24-p.89:2.

cause you…to not wear the mask for long enough because you're like 'Well I might need it again tomorrow', and then you potentially have people compromising themselves"[184].

92. Given that 'actual usage' of RPE was being rationed and managed down through the IPC guidance, it was irrational to use this level of usage as a measure of future demand, and doing so created a self-fulfilling prophecy of shortages.

Summary of the BMA's concerns in relation to PPE supplies and the IPC guidance

93. The BMA has consistently highlighted the above concerns throughout its engagement as a core participant, including in Modules 1, 2, 3, and now 5, and the evidence in support of its position has been strengthened and supported throughout the Inquiry's proceedings. The BMA takes this final opportunity to state its position, as follows:

    a. It was known from the very outset of the pandemic that Covid-19 had the potential to transmit by the airborne route.

    b. It is the longstanding scientific position in the UK that a FRSM does not protect against aerosol transmission, and that RPE is required for this protection.

    c. Deficiencies in pre-pandemic planning led to inadequate supplies of RPE within the UK's stockpiles. Alongside this, global supply chain disruption and a lack of domestic manufacturing meant the UK faced an inability to obtain RPE in the volumes needed.

    d. A precautionary approach should have been adopted from the outset, however the decision to recommend FRSMs to health and care workers providing close care to patients with confirmed or suspected Covid-19 was not based on science and safety but was instead influenced by a shortage of equipment.

    e. Decision-makers should have been candid with health and care workers about the risks they were being asked to assume, and that every effort was being made to obtain the equipment they needed at the earliest opportunity. This open communication did not happen.

    f. By limiting the use of FFP3 to the discrete settings of ICUs and for AGPs, the flawed IPC guidance prevented the future procurement of adequate stocks of RPE for the second wave and beyond.

    g. Some Inquiry witnesses have continued to rely on flawed theories for why the IPC cell failed, and continues to fail, to recommend FFP3s for staff working with Covid-19 patients. These flawed theories and 'after the event' justifications do not stand up to scrutiny and are contrary to a precautionary approach.

[184] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.8:24-p.9:3.

h. In Module 3 the Inquiry received an enormous amount of evidence about the serious consequences of this flawed approach, including in relation to acute infection, Long Covid and death. A large number of staff and patients continue to suffer with Long Covid and have been left unable to work or even carry out daily activities.

i. Covid-19 is still circulating, and staff still do not have access to adequate PPE. The opt-in approach to FFP3 adopted by Scotland and Wales, whereby staff *"may choose to wear"* a FFP3 if they have concerns[185] , does not guarantee that staff will be protected, leads to unacceptable local variation and places the burden on the individual worker to raise concerns. The BMA is therefore calling for the IPC guidance in all four nations to be urgently updated to recommend FPP3 or equivalent protection for the routine care of patients with or suspected to have Covid-19.

j. A commitment to frontline safety must be central to future pandemic preparedness, with policy decisions taking a precautionary approach driven by protection rather than supply constraints.

D. The impacts of these failures on staff and patients

94. The procurement and distribution failings outlined in this statement had significant and ongoing impacts for both staff and patients. PPE, tests, ventilators and oxygen are all lifelines, providing critical supplies and protections for the enormous number of people who work in the UK's health and care systems and who rely on these systems for care.

The failings of inadequate PPE supplies had profound impacts for both staff and patients

There were critical shortages of PPE across all health and care settings

95. As a result of the procurement and distribution failures outlined above, the UK experienced critical shortages of PPE across all health and care settings. Daniel Mortimer, for example, emphasised in oral evidence that *"every part of the health service, as well as our colleagues in social care, were reporting a lack of PPE…[including] GP surgeries, community settings, mental health services"*[186].

96. Evidence from Module 3 demonstrated that during April 2020 national PPE supplies were down to a matter of days and at one point came within 6 or 7 hours of running out[187]. This evidence was reiterated within Module 5 and was the case across all four nations of the UK, with supplies in Scotland, for example, reaching as low as having only one day of FFP3 respirators, 2 days of

[185] Available in Module 3 as INQ000410969_0022.
[186] Daniel Mortimer – 18.03.2025(Day 10)/p.5:1-9.
[187] Professor Hopkins - 18.09.2024(Day 7 of Module 3 hearings)/p.124:24 and Matt Hancock - 21.11.24(Day 36 of Module 3 hearings)/p.124:8-9.

visors and 0.3 days of long-sleeved gowns available[188]. Indeed, PPE shortages were so severe that the UK Government had to produce shortages guidance, and the BMA produced guidance on rights and moral obligations if staff did not feel adequately protected[189].

97. These extreme shortages meant health and care staff were forced to go to extraordinary lengths to try and source it themselves. This includes staff wearing makeshift items out of bin bags, ski-masks, swimming goggles or cagoules, while others purchased it from DIY stores[190]. As one doctor told the BMA, *"we made our own, and bought our own when we could find any, we depended on friends sourcing FFP3 masks, my son's school 3D printing visors"*[191].

Shortages continued beyond April 2020

98. Although some witnesses have suggested that PPE shortages were largely resolved by the end of April 2020[192], the Inquiry has received evidence that they persisted for far longer than this.

99. A survey undertaken by the RCN on 11 May 2020, for example, found that more standard and high-risk PPE items were being donated, home-made or self-bought compared to their previous survey on 13 April 2020, while around 40% of respondents were still being asked to reuse single-use PPE[193].

100. Similarly, a BMA survey found that by 18 June 2020 around 1 in 5 doctors working in an AGP area still did not have access to adequate supplies of the RPE required by the IPC guidance[194]. This chimes with Dr Dame Emily Lawson who noted that, until June 2020, the success rate for procured items of PPE arriving into the UK remained low[195].

101. Further, in the Inquiry's survey of NHS Trusts in England, the first wave was commonly cited as the main period of difficulty, however the second wave (September 2020) was also cited as a difficult time to obtain key equipment including PPE[196]. Similarly, BMA surveys show that doctors continued to report inadequate PPE supplies until at least December 2020, by which date the percentage of respondents reporting adequate supplies was only 79% for FRSMs, 68% for eye protection and 38% for long-sleeved disposable gowns[197].

102. Although the UK ended up with an excess of PPE overall, and officials were instructed to stop ordering PPE in June 2020[198], this does not mean that frontline staff received the PPE they

[188] CTI opening oral statement – 03.03.2025(Day 1)/p.55:17-21.
[189] INQ000562457_0042-0043.
[190] INQ000553817_0017-0018, INQ000475580_0007, INQ000562457_0043 and Professor Fong - 26.09.2024(Day 12 of Module 3 hearings)/p.41:3-6.
[191] INQ000118474_0018.
[192] Max Cairnduff – 06.03.2025(Day 4)/p.9:8-12.
[193] INQ000328873_0004-0005.
[194] INQ000562457_0019.
[195] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.61:18-20.
[196] INQ000565789_0008.
[197] INQ000562457_0022.
[198] Published by the Inquiry in Module 2 as INQ000144792_0071.

needed and, as outlined above, they were in fact still reporting critical shortages of PPE for a large proportion of the pandemic. In particular, as outlined in paragraphs 82-89, levels of FFP3 stock were based on flawed IPC guidance which stated that FFP3 was only required in ICU settings and for AGPs, rather than for all staff providing close contact care for patients with confirmed or suspected Covid-19. As such, staff in all four nations continued to have insufficient access to the RPE needed to protect them from an airborne virus.

There is an unhelpful dichotomy about the cause of PPE shortages

103. Some witnesses maintain that at a national level the UK did not run out of PPE and that the problems related to distribution rather than the overall quantity[199]. It is the BMA's firm belief that, if a healthcare worker who needs PPE does not have it readily available, then this is a PPE shortage, regardless of whether the problem relates to distribution or stock quantity.

104. It is clear from the evidence received by the Inquiry that PPE shortages stemmed from both supply *and* distribution. It is insufficient to concentrate solely on national stock levels if frontline staff do not have the PPE they need, when they need it. As described by Professor Manners-Bell, *"in supply chain terms, not getting the PPE to the right place means a critical supply chain failure. You may not have bothered to have had those goods in the first place if you're not able to get them to where they're needed at the right time, to the right people"*[200].

105. It is important for the Inquiry's recommendations to avoid being drawn into this unhelpful dichotomy and instead ensure both problems are addressed so that in a future pandemic or health emergency staff have access to this vital protection.

Staff received faulty and low-quality PPE

106. In addition to severe shortages, staff also received PPE that was faulty, low quality and not fit for purpose. The survey commissioned by the Inquiry of NHS Trusts in England, for example, found evidence that quality was a major concern, including descriptions of wires protruding from face masks, ear loops that were abrasive, gown sleeves that consistently tore and a dead cockroach inside ostensibly sterile packaging[201]. In one example a Trust told the Inquiry that *"despite numerous complaints, the gowns were continually pushed to the Trust leaving us with a stock of theatre gowns that clinical teams had no confidence in"*[202].

107. Similarly, Rosemary Gallagher described how frontline staff raised concerns about PPE material degrading, particularly mask nose bands, with *"some really quite distressing incidents of respiratory irritation where they were inhaling the fibres from these degraded masks"*[203].

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[199] Scottish Government opening oral statement – 03.03.2025(Day 1)/p.122:12-12 and Welsh Government opening oral statement – 03.03.2025(Day 1)/p.135:4-5.
[200] Professor Manners-Bell – 10.03.2025(Day 5)/p.11:22-p.12:2.
[201] INQ000565789_0006.
[202] INQ000565789_0006.
[203] Rosemary Gallagher – 18.03.2025(Day 10)/p.37:1-3.

108. In March 2020, it was identified that FFP3 respirators produced by Cardinal Health were failing to achieve successful fit testing and a decision was made by DHSC not to further distribute these products[204]. However the BMA received reports that these items continued to be in circulation as late as June 2020, with some Trusts in England experiencing 100% failure rates of fit testing for these products[205].

109. As outlined by Graham Russell from the Office for Product Safety and Standards, items of PPE are regulated by either the Medicines and Healthcare products Regulatory Agency (MHRA) or the HSE, depending on the specific product in question[206]. Alongside this, a 'notified body' carries out testing of a PPE product to ensure it complies with the health and safety requirements before it can be put on the market[207]. Graham Russell highlighted that, when the pandemic began, regulators faced *"enormous challenges"* in trying to ensure the safety of PPE[208]. He explained that notified bodies did not have the capacity to cope with the sudden change in demand, saying *"it's capital intensive, it's highly skilled, you can't simply say 'let's do 100 times as much as we did yesterday'"*[209].

110. The Inquiry heard that the British Safety Industry Federation (BSIF) raised concerns with the HSE that the market was *"awash with non-compliant respiratory protective equipment"*, and that BSIF were very concerned about fraudulent certificates being used[210]. Similarly, Graham Russell confirmed that *"there is no data on how many items of non-compliant PPE were available on the market in the UK"*[211].

111. It is critical for the Inquiry to establish how faulty PPE ended up reaching frontline staff, and for steps to be taken to ensure this does not happen in a future emergency.

This lack of protection had severe consequences for physical and mental health

112. The shortages of PPE, combined with its inadequacy to safeguard against aerosol transmission, left healthcare staff and patients exposed to unnecessary harm. It resulted in high levels of infections amongst staff, with evidence in Module 2 indicating that during the first wave health and social care staff were six times more likely to be infected than the general population[212].

[204] INQ000562457_0049-0050.
[205] INQ000097855_0001.
[206] Graham Russell – 12.03.2025(Day 7)/p.43:4-25.
[207] Graham Russell – 12.03.2025(Day 7)/p.49:4-15.
[208] Graham Russell – 12.03.2025(Day 7)/p.56:21.
[209] Graham Russell – 12.03.2025(Day 7)/p.56:5-7.
[210] Graham Russell – 12.03.2025(Day 7)/p.75:17-24.
[211] Graham Russell – 12.03.2025(Day 7)/p.76:17-p.77:7.
[212] Published by the Inquiry in Module 2 as INQ000271363.

113. Tragically, over 800 healthcare workers died in England and Wales alone[213], including over 50 doctors[214]. As described in the witness statement of Max Cairnduff, *"we were acutely aware that doctors and nurses were dying for lack of PPE"*[215]. Moreover, significant numbers of patients died as a result of nosocomial infection. Estimates published in May 2021 based on data from NHS England indicate that up to 8,700 patients died after catching Covid-19 in English hospitals[216], although the figure is likely to be far higher. Jeremy Hunt, former chair of the Health Select Committee, indicated in 2021 that the committee believed around 20-40% of people who died from Covid-19 acquired their infection in hospital[217].

114. Large numbers of staff and patients developed Long Covid and continue to experience the effects on their personal and professional lives. The most recently available ONS data (April 2024) estimated that over 2m people were experiencing Long Covid in England and Scotland alone [218], while the latest occupational data (March 2023) estimated that the prevalence of Long Covid was around 50% higher in those working in healthcare compared to the general population[219]. In a BMA survey of doctors with Long Covid in January 2023, over half of respondents said that carrying out daily activities has become difficult or not possible, while nearly 1 in 5 said they were left unable to work[220]. Importantly, 54% of respondents said that they acquired Covid-19 during the first wave of the pandemic, which coincided with the most severe shortages of PPE. Of these, 77% believe that they contracted Covid-19 in the workplace[221].

115. In addition to these severe impacts on physical health, staff faced significant mental health challenges arising from the shortages and inadequacy of PPE.

116. As outlined in surveys conducted by the BMA and RCN[222], staff faced enormous pressure to continue providing care without adequate protection. They quickly recognised the potential risks to their lives, leading some to take out additional life insurance or update their wills[223]. As the

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[213] ONS - Deaths involving coronavirus (COVID-19) among health and social care workers (those aged 20 to 64 years), England and Wales, deaths registered, 9 March 2020 to 28 February 2022. Table 1. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/adhocs/14379deathsinvolvingcoronaviruscovid19amonghealthandsocialcareworkersthoseaged20to64yearsenglandandwalesdeathsregistered9march2020to28february2022

[214] INQ000397279_0002-0003.

[215] INQ000536351_0035.

[216] Available in Module 3 as INQ000130586_0004.

[217] Available in Module 3 as INQ000300455_0003.

[218] ONS – 'Self-reported coronavirus (COVID-19) infections and associated symptoms, England and Scotland' (April 2024). Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/articles/selfreportedcoronaviruscovid19infectionsandassociatedsymptomsenglandandscotland/november2023tomarch2024

[219] ONS - 'Prevalence of ongoing symptoms following coronavirus (Covid-19) infection in the UK' (30 March 2023). Tables 1 and 4. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/alldatarelatingtoprevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk

[220] Available in Module 3 as INQ000373375_0002.

[221] Available in Module 3 as INQ000373375_0010.

[222] INQ000553817_0005 and INQ000562457_0018.

[223] Published by the Inquiry in Module 3 as INQ000477304_0091.

Inquiry heard in Module 3, staff were terrified about passing infections to family members and went to extreme lengths to avoid this[224]. Staff still struggle now to live with the elements of risk that they exposed family members to during the pandemic, as a result of being unprotected at work.

117. In oral evidence Daniel Mortimer described how staff experienced a *"profound anxiety"* throughout the pandemic, rooted in an understanding of the risks they were placing themselves in by caring for patients without sufficient protection[225]. They had *"a lack of confidence both in the supply but also in the guidance"*, which *"only magnified that anxiety"*[226]. This emotional impact was similarly described by Dr Dame Emily Lawson, who noted how *"if you can only see two boxes of masks…you don't feel safe"*[227].

118. The experience of receiving PPE with multiple expiry stickers layered on top of each other, with a lack of communication about any retesting process, was deeply traumatic for the staff receiving this PPE and undermined their trust in the items they were provided with. As one doctor told the BMA, *"I did not feel protected at all. The supplied Type 2A masks had two expiry date stickers on top of each other and on top of the original date...As a GP, I felt very much that I was on my own"*.

119. These experiences, rooted in the failures of PPE procurement, resulted in healthcare staff feeling like *"lambs to the slaughter"* or *"cannon fodder"*[228].

The impact of PPE procurement failings was far from equal

120. The failings of inadequate PPE supplies were not experienced equally. Access to PPE varied widely between healthcare settings, with primary, community and social care facing particular challenges with keeping staff and patients safe. Importantly, access also varied *within* healthcare settings, with evidence in Module 3 indicating that outsourced healthcare staff experienced greater delays in receiving PPE compared to those who were directly employed[229].

121. Further, differences occurred along a number of demographic lines with female and ethnic minority staff experiencing disproportionate difficulties in accessing well-fitting RPE. For example:

    a. BMA surveys indicated that ethnic minority doctors more commonly experienced PPE shortages, had higher rates of failing a fit test, felt pressure to work in environments without sufficient PPE and felt fearful about speaking out about safety issues they were

[224] Professor Fong - 26.09.2024(Day 12 of Module 3 hearings)/p.38:9-11, Mark Tilley – 01.10.2024(Day 14 of Module 3 hearings), p.27:14-18, Professor Rowan - 01.10.2024(Day 14 of Module 3 hearings)/p.122:7-15 and INQ000399526_0005.
[225] Daniel Mortimer – 18.03.2025(Day 10)/p.13:4-7.
[226] Daniel Mortimer – 18.03.2025(Day 10)/p.12:14-17.
[227] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.8:2-24.
[228] INQ000475580_0008.
[229] Published by the Inquiry in Module 3 as INQ000477577_0013-0014.

concerned about[230]. These survey findings indicate that female doctors also struggled to find well-fitting masks due to the gender bias in PPE design and reported slightly higher rates of failing a fit test[231].

b. In the survey of NHS Trusts commissioned by the Inquiry, Trusts flagged the issues of PPE fit for staff with specific requirements including those who wore headscarves and beards[232].

c. The witness statement of Professor Moonesinghe described research undertaken at one hospital during the pandemic which found that the likelihood for RPE fit test success was significantly higher in men and those of white ethnicity[233].

d. The February 2020 retesting of FFP3s in the Welsh stockpile found that 50% of the FFP3 models failed face-fit testing, which is attributed to many of the models being too big for female staff[234].

122. Many witnesses agreed that these disparities are not acceptable and need to be improved[235]. As clearly articulated by the Federation of Ethnic Minority Healthcare Organisations (FEMHO) in their opening oral statement, this situation is *"simply unacceptable in today's society"*[236].

123. However, shockingly, some witnesses suggested that this problem was not known about prior to the pandemic. Dr Dame Emily Lawson, for example, stated that decision-makers started to become aware of these issues in May 2020[237]. She confirmed that this knowledge was not incorporated into procurement until October 2020, five months later, as a result of waiting for the outcome of further research which was undertaken between June and October 2020[238]. Similarly, Paul Webster stated that *"at the time there wasn't that recognition that the size was going to be the issue that it clearly became later on"*[239].

124. It is important to stress that this was not the case; inequalities in the fit of RPE were in fact known about for many years prior to the pandemic and therefore could, and should, have been incorporated into procurement during Covid-19.

a. While the proportion of staff using RPE in healthcare settings prior to Covid-19 was relatively small, it *was* still used in these settings and therefore not entirely new

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[230] INQ000562457_0016.
[231] INQ000562457_0017.
[232] INQ000565789_0008.
[233] INQ000518349_0044.
[234] Available at: https://www.whatdotheyknow.com/request/do_12_testing_of_ffp3_past_expir/response/2680873/attach/14/SMTL%20Surgical%20Material%20Testing%20Lab%20Report.pdf (pages 8 and 12).
[235] Max Cairnduff – 06.03.2025(Day 4)/p.63:16-17 and Paul Webster – 11.03.25(Day 6)/p.139:11-16.
[236] FEMHO opening oral statement – 03.03.2025(Day 1)/p.102:13-14.
[237] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.64:17-21.
[238] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.80:7-13.
[239] Paul Webster – 11.03.25(Day 6)/p.137:23-25.

equipment for this environment. Moreover, RPE had been widely used by staff in other industries for many years.

b. Guidance from the HSE published in 2013 highlighted that one size of respiratory protection will not fit all shapes and sizes, and that *"differences are even more significant between men, women, and people of different ethnicity"*, followed by the explicit warning that *"if the RPE does not fit, it will **not** protect the wearer"*[240].

c. Similarly, in 2017 a report by the Trades Union Congress (TUC) raised concerns that *"the use of a 'standard' US male face shape in the manufacture of RPE means that it does not fit most women as well as a lot of men from black and minority ethnic groups or with facial hair"*[241].

125. In addition, some witnesses have implied that well-fitting RPE is a matter of preference[242]. As the Inquiry is aware from the evidence in Module 3, this is not simply a preference but a matter fundamental to safety. The witness statement of the HSE, for example, is clear that *"the performance of tight-fitting facepieces depends on achieving a good contact between the wearer's skin and the face seal of the facepiece; inadequate fit can reduce the protection provided and lead to immediate or long-term ill-health, or can even put the RPE wearer's life in danger"*[243]. In Module 5, Jonathan Marron similarly emphasised the need for FFP3s to have a tight seal[244].

126. Further, some witnesses have attempted to downplay the way in which this issue intersects with structural inequalities. Dr Dame Emily Lawson, for example, suggested that problems with RPE fit stemmed from these items being provided to a large number of people, within which there will be a variety of face shapes, saying that *"it's much more related to individual face shape than it is to everything else"*[245]. This argument notably fails to recognise the ways in which the manufacture of RPE is fundamentally rooted in inequality. Despite around 77% of the healthcare workforce being women[246] and around 24% being from an ethnic minority background[247], the manufacture of RPE is modelled on the median face shape of an adult white male[248].

127. The Inquiry heard evidence that there have been some improvements in this area, including the PPE stockpiles containing a wider range of items than they did previously[249]. In addition, since June 2022 some staff in England have had their electronic staff record updated with

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[240] Available at: https://www.fit2fit.org/wp-content/uploads/2019/05/hsg53_respiratory_protective_equipment_at_work.pdf
[241] Available at: https://www.tuc.org.uk/sites/default/files/PPEandwomenguidance.pdf
[242] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.66:21-23.
[243] Published by the Inquiry in Module 3 as INQ000347822_0065.
[244] Jonathan Marron – 05.03.2025(Day 3)/p.211:8-9.
[245] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.81:21-22.
[246] INQ000397278_0001 and Dr Barry Jones – 12.09.2024(Day 4 of Module 3 hearings)/p.40:2-4.
[247] FEMHO opening oral statement – 03.03.2025(Day 1)/p.99:5-6.
[248] Available in Module 3 as INQ000215526_0002.
[249] Jonathan Marron – 05.03.2025(Day 3)/p.214:9-10.

information on the types of RPE which fit that individual[250], while in Scotland a greater number of staff have also been fit-tested[251]. These changes are positive steps, however it is crucial to ensure that they are applied to staff in all nations and across all health and care settings (not only secondary care), including temporary, outsourced, agency and non-clinical staff.

128. Fundamentally, the Inquiry's Module 1 report concluded that pandemic planning did not properly consider inequalities and had too narrow a view of vulnerability[252]. The issues outlined above are glaring examples of the ways in which these same failures manifested within the procurement of PPE. It is vital that the Inquiry's recommendations in this module ensure that future procurement tackles these inequalities head-on.

A lack of testing impacted on infection control and workforce availability

129. As a result of supply issues and a pre-pandemic lack of testing capacity there was an initial lack of testing in most community and healthcare settings[253], which became more critical as the virus began circulating more widely. As described by Helen Whately, *"Our pride at being the first to produce an accurate test was quickly overtaken by frustration at the limited number of tests and what felt like a slow ramp up in production"*[254].

130. Dr Beverley Jandziol, who was deployed to DHSC to support the setting up of Covid-19 testing, described how certain characteristics of PCR tests, including in some cases the need for over 50 materials per test, made them a challenge to scale up[255]. As such, Dr Jandziol told the Inquiry that PCR tests were *"never designed to be scaled up to the hundreds of thousands"*[256].

131. This initial lack of capacity meant that, at first, tests were limited to strict criteria such as recent travel to specified countries, and for patients entering intensive care. Being unable to test incoming patients meant that healthcare staff were likely in contact with symptomatic and asymptomatic Covid-positive patients without adequate PPE, thereby increasing their risk of infection, Long Covid and death. As one doctor told the BMA, *"There was a delay in allowing testing of all patients with possible COVID symptoms. I was seeing patients in A&E and being told I could not test them because they had not travelled to relevant countries. When testing was later allowed some of these patients unsurprisingly ended up testing positive. I saw these patients with no PPE due to hospital rules around when PPE was allowed to be worn"*[257].

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[250] Dr Dame Emily Lawson – 11.03.2025(Day 6)/p.80:13-16.
[251] Caroline Lamb – 24.03.2025(Day13)/p.87:25-p.88:22.
[252] UK Covid-19 Inquiry Module 1 report 'The resilience and preparedness of the United Kingdom', p.3, p.59 and p.73.
[253] INQ000562457_0096.
[254] INQ000535015_0003.
[255] Dr Beverley Jandziol – 13.03.2025(Day 8)/p.122:13-18.
[256] Dr Beverley Jandziol – 13.03.2025(Day 8)/p.123:8-9.
[257] INQ000118474_0016.

132. Delays in accessing tests and receiving results also exacerbated workforce shortages because staff were required to self-isolate, often meaning they were unable to work[258].

Localised ventilator shortages meant staff were forced to use substandard and unfamiliar alternatives

133. The Inquiry received evidence that, as a result of the inadequate preparations outlined in paragraphs 17-21, staff and patients did not have access to the ventilators they needed, at the point they needed them, particularly in the first wave.

134. Localised shortages meant that anaesthesia machines and transport ventilators, which are only designed to be used for a few hours at a time, were repurposed and substituted for intensive care ventilators. This practice was recognised by Chris Stirling, who described it as *"relatively common at the time, and clearly not optimal"*[259]. As noted by Professor Moonesinghe, at the start of the pandemic the UK was in a situation where *"anything better than a human bagging oxygen into a patient would have been acceptable"*[260]. Further, ventilator equipment was one of the most often cited concerns raised by NHS Trusts in England in their response to a survey undertaken by the Inquiry[261].

135. Witnesses acknowledged that having to procure large numbers of ventilators at speed resulted in varying quality and suitability[262]. As noted by Chris Stirling, it meant *"we had to supply other devices that were not necessarily as fully functional"*[263]. Some of these ventilators were not fit for purpose and, as in the case of the Shangrila 510 ventilators, had to be recalled. Sandwell and West Birmingham Hospitals NHS Trust described how the Shangrila 510 ventilators were *"unusable as supplied"*, as they would cease to function without warning and were not able to vary the supply of oxygen to patients[264]. This posed a significant risk of patient harm, including death[265]. The Trust had limited information to work with and invested significant time trying to modify the ventilators to make them usable, before they were eventually recalled[266].

136. Staff received ventilators that they were not familiar with using, which created difficulties when providing care in the midst of a crisis. Cambridge University Hospitals NHS Foundation Trust, for example, raised concerns that staff had to train themselves in how to use the new devices with minimal training materials, made even more challenging because *"many of the devices and*

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[258] INQ000562457_0097.
[259] Chris Stirling – 17.03.2025(Day 9)/p.54:8.
[260] INQ000518349_0014.
[261] INQ000565789_0005.
[262] Chris Stirling – 17.03.2025(Day 9)/p.45:19-p.46:15, Matthew Style – 17.03.2025(Day 9)/p.104:2-7 and INQ000518349_0031.
[263] Chris Stirling – 17.03.2025(Day 9)/p.46:6-7.
[264] INQ000520831_0004-0005.
[265] INQ000508296_001.
[266] INQ000520831_0004.

consumables came from China, and the instructions for use and associated documentation were accordingly in Chinese"[267].

137. The issues outlined above had an impact on patient care. Professor Moonesinghe described how, in providing care to ventilated patients, clinicians are trained to optimise oxygen and carbon dioxide levels without causing further damage to the lungs, however doing so requires more *"sophisticated"* ventilators than those supplied during the pandemic, which were *"a pragmatic specification"*[268]. She reflects that the overall outcome of procurement during the pandemic *"was not sufficient to enable healthcare workers [to] meet the same standards of care afforded to patients treated during…pre-pandemic conditions"*[269].

138. Further, as explained by Lord Agnew, ventilator availability played a role in whether ambulances could be sent to certain hospitals because *"there was no point sending them off to a hospital that only had, say, ten ventilators"*[270]. Similarly, the Inquiry received evidence in Module 3 that ventilator capacity contributed to decisions to transfer patients between hospitals, with Professor Fong providing the example of a hospital in which three patients required a ventilator but the capacity to provide this was not available, ultimately resulting in 17 critically ill patients being transferred elsewhere[271]. As outlined in paragraph 20, ventilator capacity cannot be considered in isolation from the availability of critical care beds and the capacity of staff to undertake ventilation safely.

139. In addition to impacting patient care, localised ventilator shortages and the use of unfamiliar, substandard alternatives, caused additional stress, anxiety and risked moral injury for staff during an already highly stressful period[272]. The evidence of Sandell and West Birmingham Hospital NHS Trust, for example, highlighted significant staff anxiety about when, or if, ventilators would be supplied[273], while staff at the Royal Surrey NHS Foundation Trust reported receiving ventilators which had not been appropriately relabelled as being suitable for clinical use[274]. As described by Professor Moonesinghe, *"the psychological trauma associated with treating surging numbers of Covid patients, with a high mortality and out of many healthcare workers' usual scope of practice, would have been compounded by the stress of using unfamiliar equipment and/or equipment…below usual standards"*[275].

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[267] INQ000536367_0006.
[268] Professor Moonesinghe – 17.03.2025(Day 9)/p.144:11-p.145:5.
[269] INQ000518349_0041.
[270] Lord Agnew of Oulton – 18.03.2025(Day 10)/p.123:14-18.
[271] Published by the Inquiry in Module 3 as INQ000474327_0019-0020.
[272] INQ000562457_0083.
[273] INQ000520831_0003.
[274] Chris Stirling – 17.03.2025(Day 9)/p.43:2-p.44:12.
[275] INQ000518349_0052.

Oxygen infrastructure posed a critical threat to patient care and exacerbated staff distress

140. As outlined in paragraphs 22-24, there was a very real risk of a sudden loss of oxygen pressure due to ageing hospital estates not being able to cope with the strain placed upon their oxygen pipework[276].

141. This posed a critical threat to patient care. As Professor Moonesinghe described, if overall oxygen demand through wall outlets exceeded system capacity, patients could stop receiving oxygen which would be highly dangerous and potentially fatal[277].

142. Following an alert issued by NHS England on 30 March 2020[278], and as the Inquiry received evidence of from Professor Banfield[279], healthcare staff were required to perform physics calculations of oxygen flow through pipes to determine whether more oxygen could be delivered without wall outlets exceeding capacity. This further exacerbated staff stress and anxiety at an already challenging time.

143. To reduce this risk, there was a pre-emptive rationing of oxygen by reducing the target oxygen saturation levels deemed appropriate for patients. For example, on 09 April 2020 NHS England issued guidance to lower target oxygen saturation levels from the normal 94-98% to 90-94%[280].

144. The Inquiry received evidence of several instances in which the limitations of oxygen infrastructure necessitated the transfer of patients[281]. For example, as outlined by Amanda Pritchard, issues with oxygen infrastructure running at full capacity led to the declaration of a critical incident at Watford General Hospital in early April 2020, with 60 ambulances diverted and several patients transferred elsewhere[282].

145. This environment was incredibly distressing for both staff and patients. In Module 3 the Inquiry heard from Professor Fong who recounted hospital visits in which oxygen panel alarms were *"constantly"* sounding, describing how *"the oxygen alarms are going off, the chief operating officer is trying to troubleshoot that with the estate's manager. It is genuinely the closest I have ever seen a hospital to a state of collapse"*[283]. The impact of both providing and receiving care in this environment, something exacerbated by inadequate oxygen infrastructure, cannot be overstated.

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[276] Julian Kelly – 11.03.2025(Day 6)/p.167:18-p.168:3.
[277] INQ000518349_0034.
[278] INQ000518349_0036.
[279] INQ000562457_0094.
[280] Julian Kelly – 11.03.2025(Day 6)/p.167:10-16.
[281] INQ000518349_0047.
[282] INQ000409251_0194.
[283] Professor Fong – 26.09.2024(Day 12 of Module 3 hearings)/p.7:22-24 and p.38:14-18.

Recommendations

146. The Inquiry has received a number of suggestions for how procurement and distribution can be improved. On behalf of the staff and patients who faced the consequences of these failings during Covid-19, and who continue to experience these impacts today, the BMA is clear that any recommendations made by the Inquiry must leave no room for uncertainty or failure during a time of crisis.

147. Based on the issues outlined in this closing statement, the BMA specifically proposes the following recommendations:

a. The UK's pandemic preparedness needs to take a precautionary approach to the procurement, supply and use of PPE and other equipment. This includes having much larger stockpiles of PPE, with a wider range of items suitable for a broad range of pathogens. The stockpiles need to be properly maintained and their contents need to reflect the diversity of the workforce. Moreover, staff records should record the best fitting RPE for all staff across all health and care settings (not only those working in secondary care), including temporary, outsourced, agency and non-clinical staff.

b. There needs to be a fundamental change to the UK's reliance on 'Just in Time' contracts. This includes stronger links with manufacturers in a diverse range of countries, and domestic manufacturing capability which can be rapidly stood up as soon as required.

c. There needs to be a plan to swiftly distribute large quantities of key equipment to all UK health and care settings in an emergency, including primary, community and social care.

d. The IPC guidance across all four nations needs to be urgently updated to reflect the aerosol transmission of Covid-19 by recommending FFP3 or equivalent protection for the routine care of patients with or suspected to have Covid-19. In future pandemics, IPC guidance should take a precautionary approach to ensure maximum protection for staff and patients.

e. There needs to be improvement in the information available to decision-makers during a crisis, including comprehensive inventory management systems. As previously highlighted, the Inquiry has received conflicting information about the extent to which this problem has been resolved within NHS Supply Chain.

f. Product specifications and procurement processes need to incorporate frontline clinical input from the outset, with mechanisms to facilitate further timely input during an emergency.

g. Emergency procurement processes need to be reformed to ensure that, in times of crisis, the procurement principles of transparency, competitiveness, efficiency and accountability continue to be maintained. A future pandemic will likely put strain on any procurement

system, however significantly better preparations – such as those outlined in this statement - will help to prevent the circumstances in which future decision-makers may disregard these principles.

h. There need to be significant improvements to NHS estates in all four nations, starting with a transparent and independently audited national review of the condition of primary and secondary care estates and urgent funding to make improvements. This includes ensuring there is adequate ventilation, and that oxygen infrastructure is fit for a pandemic.

i. Steps must be taken to ensure that in a future pandemic, healthcare staff have access to the vital equipment they need to protect lives. This includes ensuring a sufficient ventilator supply, alongside the beds and staff capacity needed to support their use in a pandemic. Improvements to healthcare equipment cannot be made in isolation from the capacity to use these items.

j. Public health systems need to have the capacity to rapidly scale up testing and contact tracing during a future pandemic. This needs to be properly funded and incorporated into preparedness structures.

k. There is an urgent need to restore the trust of both the public and healthcare workers. Trust has been severely damaged by failings in PPE provision, by the IPC guidance being used as a tool to ration access to PPE, by perceptions of preferential treatment through the High Priority Lane, and by a lack of transparency surrounding the competitiveness of government contracts.

148. For the Inquiry's recommendations to be effective at protecting staff and patients, it is vital that the organisations responsible for implementing them are properly funded. Not doing so risks the same failures being repeated again, at great cost to physical and mental health.

1 May 2025