Personal Protective Equipment, ethnic minorities, and occupational risk in Emergency Departments during the COVID-19 pandemic

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Contents

Introduction .................................................................................................................................................. 3

Why PPE is important? ........................................................................................................................... 3

Policy timeline ............................................................................................................................................ 4

Literature Review ....................................................................................................................................... 5

Findings and discussion .......................................................................................................................... 6

Key findings and figures .......................................................................................................................... 6

Risk assessments ....................................................................................................................................... 7

Wearing PPE ............................................................................................................................................... 8

Access to adequate PPE .......................................................................................................................... 10

Raising concerns about shortages ......................................................................................................... 13

Surveys conducted by other organisations ............................................................................................ 13

Conclusions ............................................................................................................................................... 14

Recommendations ..................................................................................................................................... 15

Annex – methodology and limitations ..................................................................................................... 16
Introduction
In May 2020, RCEM ran a survey to better understand the experiences of its Members and Fellows during the first wave of the coronavirus pandemic. The survey revealed ethnic minority disparities in access to Personal Protective Equipment (PPE). In October 2020, the co-chairs of the newly formed Equity, Diversity, and Inclusion Committee decided to explore this topic in more detail to understand what is driving the disparities in access to appropriate PPE. A second survey was administered in December to look at this topic in more detail and to understand what was driving the unequal access to appropriate PPE.

Although access to and supply of PPE is no longer a major concern at this stage of the pandemic, these issues are expected to resurface now there has been a further increase in COVID-19 infection rate and two new variants of the virus have been identified. Given the diverse nature of the Emergency Medicine specialty, ensuring our ethnic minority members receive adequate occupational protection from coronavirus is a matter of great concern to RCEM. It is vital we act now to understand why there were ethnic disparities in accessing PPE to ensure Black, Asian and minority ethnic (BAME) staff are protected at work as we move into the third wave of this pandemic.

This paper outlines the disparities highlighted from the RCEM survey and other surveys, reviews the existing research on ethnic minority disparities in access to PPE, and suggests recommendations to improve equity moving forward.

Why PPE is important?
A study from April 2020 showed that two thirds of healthcare workers who died in the first wave of the pandemic were from BAME backgrounds. Tim Cook, professor of anaesthesia at the Royal United Hospital Bath and the University of Bristol looked at the deaths of 106 healthcare workers, 63% of whom were from an ethnic minority background, and they reported their findings in the Health Service Journal.

When analysing the specialties that have experienced workforce deaths, it is notable that they have been comparatively low in anaesthetists and intensive care doctors despite being among the highest risk groups of all healthcare workers. The reason for these groups being near absent from the data was unknown, the researchers said, but it could partly be because of the rigorous use of PPE and the associated practices among staff in these specialties.1

It is now very well evidenced that ethnic minorities have a higher risk of mortality for deaths involving coronavirus. The Office for National Statistics (ONS) has looked at coronavirus deaths in detail and found that death rates for most ethnic minorities are higher when compared to white ethnic groups. After accounting for geographical, social, and economic factors, the gap lessens but there remains a significant ethnic background difference in mortality.2

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1 We use the term ‘Black, Asian and minority ethnic’ for practical reasons. We acknowledge the limitations of this phrase and recognise the diverse and heterogeneous experiences of people across and within different ethnic groups. For more information, please see our position statement regarding ethnicity terminology here.
A prospective study (awaiting peer review) of risk factors associated with seroprevalence of COVID-19 antibodies in healthcare workers at a large teaching hospital in the UK revealed that overall, there was significantly higher seroprevalence in all BAME staff compared to White staff, and to a greater extent in Black and Asian staff specifically.4

### Policy timeline

In response to higher BAME staff death rates, NHS England instructed local leaders to carry out risk assessments for all staff as a precautionary measure in April.5 NHS England then sent further clear instructions to employers on their duty to carry out risk assessments with a recommendation that they should risk-assess staff who are at potentially greater risk and make appropriate arrangements accordingly.6

In June, local leaders were ordered to complete risk assessments for all staff at risk of COVID within the next month due to concerns that some were not acting fast enough.7 Compliance was flagged as an issue; for example, several NHS trusts in the South West had completed less than a third of their coronavirus risk assessments for BAME staff.

In July, the Government provided funding to support the UK Research Study into Ethnicity and COVID-19 outcomes in healthcare workers (UKREACH) which will calculate the risk of catching and dying from coronavirus for ethnic minority staff. A stakeholder group is helping the researchers to carry out the research and provide ‘evidence to policymakers so that decisions can be made in near real time’.8

In September, the Department of Health and Social Care published a PPE strategy for England.9 The goal of the strategy was to understand demand, develop a resilient and diverse supply chain, and build up stockpiles of PPE. The strategy referenced the difficulties faced by women and BAME groups in using appropriate PPE:

> “We are listening to the reported practical difficulties with the use of some PPE experienced by women and Black, Asian and Minority Ethnic (BAME) individuals, amongst others, and are taking action to make sure user needs are adequately addressed in future provisions of PPE.”

The strategy outlined a new project led by NHSE/I and the Deputy Chief Nursing Officer to gather robust data and take action on this issue. No further details on this project, including completion time were provided in the PPE strategy.

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5 British Medical Journal (2020) COVID19: NHS bosses told to assess risk to ethnic minority staff who may be at greater risk. Available [here](#).
7 HSJ (2020) Trusts ordered to publish progress on BAME covid assessments. Available [here](#).
8 National Institute for Health Research (2020) Multimillion investment in new research projects to investigate higher COVID-19 risk among certain ethnic groups. Available [here](#).
Additionally, the FFP3 fit-testing project reviewed data from over 5000 participants from diverse backgrounds. Using this information, NHSE/I’s project is working with manufacturers to design FFP3 respirator masks to improve mask fit. Phase two of this project focuses on quality of fit-testing and training in Trusts. The DHSC’s Face Mask Category Team has also published a catalogue of 16 different FFP3 masks from 10 manufacturers/suppliers that are available from the DHSC PPE Programme in September, and they are aiming to make a further 8 types available over the next two months. Following this, they are communicating with NHS Trusts to ensure that Trusts are receiving the masks of their choice, with the aim of minimising the need for further fit testing by supplying appropriate masks for the staff who make up each Trust. Moreover, a Fit Testing Programme has been set up in England, which is comprised of 160 fit testers, who will work with Trusts to enable staff to be accredited to use a wider range of masks.

NHS Trusts must comply with Public Health England, Health Safety Executive and Coronavirus Infection Prevention and Control Guidance that requires staff to undergo training that is compliant with legal requirements and the record of training must be maintained. A Board Assurance Framework has been developed to support providers to effectively self-assess their compliance. Compliance will be monitored by NHS Trust Boards and submitted at the request of the Care Quality Commission.

In October 2020, the Cabinet Office Race Disparity Unit published a quarterly report on progress to address COVID-19 health inequalities. It claimed that as of 31st July, almost all ethnic minority staff in NHS Trusts had individual risk assessments completed and mitigated steps agreed. In addition, the report indicated that the Department of Health and Social Care (DHSC) is conducting a cross-departmental review of inequalities and PPE to ensure the demand model reflects the different combinations and size of equipment required to meet different user needs.

**Literature Review**

In June, Public Health England published a rapid review of literature and stakeholder feedback to examine how BAME groups are affected by COVID-19 infection rates. The report also examined protection of BAME staff working in frontline roles in health and social care. Although the report did not go into detail, the analysis from the stakeholder review found that racism and poor experiences at work (such as bullying and harassment) mean that BAME staff are less likely to speak up when they have concerns about PPE and risk. Others flagged that BAME front line workers were sometimes given substandard quality or inadequate PPE given the nature of their roles and the risk of exposure. Numerous examples were given of staff not able to access appropriate PPE to protect themselves adequately in line with national guidance and being afraid to speak up about this:

“Requests for risk assessments or additional PPE by BAME workers are more likely to be refused, or whether those requests are less likely to be made because of fear of adverse treatment.”

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10 Cabinet Office (2020) Quarterly report on progress to address covid-19 health inequalities. Available [here](#).
11 Public Health England (2020) Beyond the data: understanding the impact of covid-19 on BAME groups. Available [here](#).
The British Medical Association’s submission to Public Health England’s review into the disparities of risk and outcomes of COVID-19 highlighted the need for action to be taken to ensure healthcare workers were protected in the workplace. The BMA cited concerns from BAME staff about not being properly risk assessed, deployments to patient-facing roles, workplace culture issues (such as bullying), and the supply of PPE.\(^\text{12}\)

Alongside issues of unequal access, the BMA cited equality concerns relating to ethnicity and the design and supply of PPE. Sikh and Muslim doctors may wear beards for religious reasons and the BMA reported difficulties these doctors face in getting access to PPE equipment that meets their needs if they fail fit tests (e.g. alternative respirators like PAPR hoods). For example, a survey respondent reported:

> “I am the only Muslim anaesthetist with a beard in my department… I am being forced to shave my beard due to unavailability of hood masks with respirator, and a bearded doctor can’t pass a fit mask test.”

Risk assessments may be failing to capture the occupational risks faced by ethnic minority staff. Roger Kline, the author of the Snowy White Peaks of the NHS, has criticised risk assessments for failing to tackle a key cause of dangerous occupational exposure to coronavirus: the racialised patterns of staff treatment.\(^\text{13}\) In Emergency Medicine, we know that BAME staff may be disproportionately represented among lower-graded frontline staff who might generally be at greater risk. NHSE data shows that only 7% of senior managers are from BAME background. As a result, minority ethnic groups are systemically over-represented at lower level of NHS grade hierarchy, working in the shadow of snowy white peaks.\(^\text{14}\)

In addition, agency staff also include larger numbers of BAME staff who reported poorer experiences with PPE and how they were deployed\(^\text{15}\) in the pandemic, and this may not have been picked up by senior management in the NHS, as they are less likely to come from diverse backgrounds.\(^\text{16}\) Kline critiques the adequacy of risk assessments and explains that the best Trusts view BAME staff safety as a corporate risk – so this is underpinned by accountability as a result:

> “The best trusts ensure that health risk assessments and workforce treatment risks assessments complement each other and are underpinned by relentless scrutiny by the board”

### Findings and discussion

#### Key findings and figures

- 29% of survey respondents disclosed that they had not been risk-assessed by their Trust. Despite the Cabinet Office Race Disparity Unit asserting that almost all ethnic minorities had received a risk assessment by 31\(^\text{st}\) July 2020, 19% of BAME respondents reported that they had not.

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12 British Medical Association (2020) PHE review into the disparities of risk and outcome of COVID19 ethnic minority groups. Available here.

13 HSJ (2020) NHS response to BME staff deaths was late and lopsided. Available here.


15 HSJ (2020) NHS response to BME staff deaths was late and lopsided. Available here.

• Two key themes arose amongst respondents when explaining their dissatisfaction with risk assessments: the inadequacy of the risk assessments and the lack of consideration for ethnic differences.
• Both white and BAME respondents reported similar rates regarding whether they had received training in how to use PPE – yet a slightly higher percentage of BAME respondents revealed that they had not received any PPE training.
• Significantly more BAME respondents reported that they failed fit testing for PPE: almost half (48%) of BAME respondents claimed that they failed fit testing either ‘very often’, ‘often’, or ‘sometimes’, compared to only 37% of white respondents.
• More BAME respondents lacked access to adequate PPE and were more likely to come into clinical contact with suspected or confirmed COVID-19 cases where they had no adequate PPE – 19% of white respondents compared to 31% of BAME respondents in December 2020.
• Most respondents would feel either supported or neutral if they were to raise concerns of PPE shortages, with white respondents only feeling marginally more supported/neutral (90%) than BAME respondents (88%).

Risk assessments
Examining aggregated results, we can see that despite repeated calls to ensure all staff are risk assessed, Chart 1 reveals 29% of survey respondents revealed they have not been risk assessed by their Trust. Breaking down the results by disability and ethnicity, we find that 28% of respondents with a disability and 19% of BAME respondents also indicated they have not been risk assessed by their Trust. Given the disparities in risk and outcome for ethnic minority staff are now well evidenced, we argue that this is unacceptable, and that all ethnic minority staff should be risk assessed, with ethnicity identified as a risk factor.

Chart 1 – Risk assessments (December 2020)

The survey also asked respondents who were risk assessed whether they were happy with the outcome. The vast majority of respondents responded that were happy;
however, a small disparity between BAME and white respondents was identified in the group who expressed that they were unhappy with the outcome of their risk assessment: a slightly higher proportion of BAME respondents indicated they were not happy. In addition, when examining disability and ethnicity, we also found that although the sample sizes were small, the percentages of respondents who were not happy with their risk assessment were similar.

The survey asked staff who expressed dissatisfaction with the risk assessment to explain why. Two themes emerge from the comments: the inadequacy of risk assessments and the lack of consideration of ethnicity as a risk factor. The strongest theme identified consistently throughout the responses of BAME staff was that risk assessments were largely conducted as a box-ticking exercise, with no real guidance offered to staff to minimise occupational risk.

“A paper exercise was done but no proper follow-up meeting or guidance was offered. It felt like a tick box exercise to satisfy the legal requirement and provide indemnity to the trust rather than real interest in the well-being of the staff. Hugely disappointing but not surprising, considering how the NHS and its administration treats minorities."

“Tick box exercise with no real interpretation of the results. No weighting to the risks with no guidance for line managers to take action on.”

“Only risk assessed after CQC came down hard on Trusts... Nothing tangible before.”

“The risk assessment was completely online and simply asked us to risk assess ourselves, only to contact them separately if we had concerns. The previous trust I worked in did assessments one to one which allowed staff to really discuss any issues that might exist.”

Risk assessments are there to protect staff working in an environment that may cause significant risks to their health. Treating such an important aspect of protecting staff as a box-ticking exercise can cost lives during a pandemic. In line with the comments made by Roger Kline, given the inconsistent way risk assessments are deployed, we believe it is imperative that the policies and processes around risk assessing staff - ethnic minority staff in particular - are scrutinised heavily by NHS boards to ensure they are adequately capturing risk and protecting staff from occupational exposure to COVID-19. The CQC should undoubtedly play an important role in enforcing this.

**Wearing PPE**

Chart 2: May 2020 and December 2020 survey results on PPE training.

<table>
<thead>
<tr>
<th>Have you had training in the use of PPE?</th>
<th>May 2020</th>
<th>December 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>BAME</td>
<td>White</td>
</tr>
<tr>
<td>Yes</td>
<td>91%</td>
<td>85%</td>
</tr>
<tr>
<td>No</td>
<td>9%</td>
<td>15%</td>
</tr>
</tbody>
</table>
As the chart above demonstrates, the RCEM survey undertaken in May revealed that a larger proportion of BAME respondents had not received training in the use of PPE than white respondents. However, examining the results of the follow-up survey shows that this proportion slightly increased among white respondents and decreased with BAME respondents, almost erasing the disparity between the two groups.

Healthcare professionals and frontline workers remain susceptible to the virus. At its most basic, training in the correct use of PPE is to protect employees from exposure, and to understand what areas and what instances will require certain PPE. However, when asked if they felt that they currently had the PPE they needed to wear for managing patients with COVID-19, 7% of white respondents answered that they were not sure, compared to 12% of BAME respondents. Training in the correct use of PPE is essential and a crucial step for all staff to keep staff and patients safe to protect them against virus exposure.

As delineated previously in this report, the available data shows that rigorous and correct use of PPE is positively correlated with a decrease in the occurrence of death. Moreover, given the increased risk we know that coronavirus poses for BAME staff, Trusts should strive to ensure all clinical staff – especially those from BAME backgrounds – are appropriately trained and confident in the correct use of PPE before they are allowed to enter a patient's room.¹⁷

Further concerning results reveal that BAME respondents were more likely to fail fit testing as the graph below exhibits. As evidence has repeatedly indicated, the healthcare system is structurally biased and one way this manifests is through the manufacturing of respiratory PPE, which has been designed to be worn on white men.¹⁸ Although men are generally at higher risk of death from COVID-19 than women, it is concerning that young female healthcare staff are reported to have double the COVID-19-related mortality rate compared with age-matched females in the general population.¹⁹ Therefore, it can be argued that inadequate and ill-fitting PPE for women has contributed towards this disproportionate mortality rate.

It is also possible that staff from minority ethnic groups, with higher mortality and morbidity risks from COVID-19, are also at higher risk of failing fit tests because of different facial geometry.\textsuperscript{20, 21} A study by the Association of Anaesthetists found that higher initial fit-pass rates were found in white staff (90\%) compared with Asian staff (84\%). Particularly low initial fit-pass rates were reported in Asian female staff, with a reported mean of 60\%.\textsuperscript{22} While poorly fitting PPE is not the only factor, these disparities are tragically reflected in the fact that 64\% staff deaths have been BAME and disproportionately female.

The lessons to be learned from the COVID-19 pandemic are not simply about maintaining adequate stocks of PPE, but also about tackling systemic discrimination to protect staff, who may feel pressured to work with poorly-fitting and inadequate PPE. This responsibility lies with healthcare institutions and public bodies who can exert their purchasing power to influence the manufacturers of PPE. All people working in healthcare have the right to adequate PPE and to work in an environment free from systemic discrimination.\textsuperscript{23}

**Access to adequate PPE**

During the first wave of the coronavirus pandemic – when there were acute shortages of PPE – the media reported numerous stories of doctors working without


The May survey results revealed concerning ethnic disparities, with 42% of BAME respondents reporting they had experienced episodes where they lacked access to PPE when having clinical contact with suspected or confirmed COVID-19 patients, in comparison to 24% of white respondents.

Chart 4 – lacking access to PPE during clinical contact with suspected or confirmed COVID-19 patients (May & December 2020)

We asked our membership the same question in December and found that there was a large reduction in the proportion of BAME staff who reported lacking PPE during clinical contact with suspected or confirmed COVID-19 patients. This is perhaps reflective of the increased supplies of PPE now available.

As a result of the PPE shortages in the first wave, there were accounts of staff improvising and making their own PPE to keep themselves safe at work. In May, we found a concerning disparity between white and BAME staff who reported having clinical contact with suspected or confirmed cases of COVID-19 when they could not use adequate PPE. The number of BAME staff who reported that they had clinical contact with COVID-19 patients where they could not use adequate PPE was nearly double that of white staff. This is alarming considering the risk to ethnic minority staff.

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The December survey asked respondents the same question. Although a lower overall proportion of staff indicated they had clinical contact with COVID-19 patients without adequate protection, a disparity between white and BAME respondents still exists. There was a 12-percentage point difference between white and BAME respondents, with higher numbers of BAME staff indicating clinical contact without adequate protection. Although there are now plentiful supplies of PPE, there are clearly issues with accessing PPE that provides adequate protection for staff working with suspected or confirmed COVID-19 patients.

Powered air purifying respirator (PAPR) hoods are often used by staff who require high level PPE who fail fit testing. As discussed earlier, BAME staff are more likely to fail their fit testing so may prefer or require the use of PAPR hoods. Anecdotally there appears to be issues with the supply and availability of these hoods. A third of BAME respondents indicated they preferred or required PAPR hoods, in comparison to only 15% of white respondents. Alarmingly, when asked whether the PAPR hoods were available, over half of BAME and white respondents indicated they were not, with a higher number of white participants reporting they were not available when required.

Chart 6 – PAPR hoods: preference and availability (December 2020)

<table>
<thead>
<tr>
<th>Do you prefer or require the use of PAPR hoods?</th>
<th>White</th>
<th>BAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>15%</td>
<td>33%</td>
</tr>
<tr>
<td>No</td>
<td>85%</td>
<td>67%</td>
</tr>
</tbody>
</table>

Are they available when you need them?

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>BAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>39%</td>
<td>48%</td>
</tr>
<tr>
<td>No</td>
<td>61%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Raising concerns about shortages

As discussed in the literature review, PHE found that BAME staff were less likely to raise concerns about PPE shortages due to fear of adverse consequences. Our survey asked respondents how supported they would feel in raising concerns about PPE shortages.

Chart 7 – raising concerns about PPE shortages (December 2020)

Our findings reveal that most staff members would feel supported raising concerns about PPE shortages, with only small proportions of staff feeling unsupported. When examining the ethnic breakdown, only a small difference exists between white respondents who would feel supported and unsupported (11%) and BAME respondents (12%).

Surveys conducted by other organisations

In May, ITV News surveyed over 2,000 Black, Asian, and minority ethnic healthcare workers to examine why more of their ethnic minority colleagues were disproportionately affected by coronavirus. The survey was distributed directly through medical organisation and leading Black, Asian, and minority ethnic medical groups. 60% said a lack of PPE was a factor in the disproportionate death toll.26

A UK wide survey conducted by the Royal College of Nursing (RCN) at the end of May found that BAME nursing staff were more likely to lack access to PPE compared to their White colleagues.27 Of BAME survey respondents working in high-risk environments, such as intensive care or critical care units:

- Only 43% had adequate equipment for eye and face protection, in contrast to two thirds (66%) of white British nursing staff. 37% did not have enough fluid-repellent gowns to use during their shift, compared with 19% of white British

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staff. More than half (53%) had been asked to re-use single-use PPE compared with 42% of white British respondents.

- The survey also revealed issues with using PPE. BAME respondents reported that PPE was less likely to fit them (46%) in comparison to White respondents (38%).

The survey explored the issue of fit testing for filtering face piece respirators (FFP3 or FFP2/N95). Of those who are required to wear these masks, there was a substantial variation in responses:

- Only half of BAME respondents (49%) said they had been adequately fit-tested for the filtering face piece respirators, whereas almost three-quarters of White respondents had been adequately fit-tested (74%).

In June, a BMA survey of around 7500 doctors found that ethnic minority groups were more likely to feel pressured into treating patients without proper PPE (7% versus 2.5% of their colleagues).28

Another survey carried out in June by GM journal surveyed just over 200 clinicians from ethnic minority backgrounds. The survey found that only 38% of respondents had been risk stratified and inadequate risk stratification was emphasised by many respondents.29

Conclusions

Although disparities in access to appropriate PPE for ethnic minority staff is a well evidenced problem, little action has been taken to improve this. Our survey results from both May and December 2020 reveal concerning trends surrounding the adequacy and deployment of risk assessments to protect ethnic minority staff. While supplies of PPE are no longer a concern, disparities still exist in terms of accessing appropriate PPE for ethnic minority staff. Though the DHSC and NHSE have taken steps to understand ethnic disparities regarding PPE, these endeavours have largely focused on conducting reviews of the current system. While the DHSC has implemented a strategy to create a model that is representative of all people’s needs, our December 2020 survey results reveal that, despite there being some improvement for BAME staff since May 2020, there has still not been enough action taken to eradicate issues regarding PPE for hospital staff of all ethnicities. Moreover, disparities still exist for BAME staff regarding fit testing and clinical contact with COVID-19 patients without appropriate PPE.

There is an urgent need to act fast – at the time of writing, Emergency Departments are facing unprecedented challenges in terms of managing crowding and the risk of undifferentiated patients in their departments. Without access to adequate PPE, ethnic minority staff are being placed under greater danger due to the increased risk of transmission of the virus. The coronavirus vaccine will help to solve some of the issues caused by PPE. However, if administering the vaccine relies heavily on risk assessments that have been deemed inadequate by a disproportionate number of ethnic minority staff and considered a ‘tick box’ exercise rather than accurately

recording the additional risks experienced by BAME hospital staff, then there is a possibility that ethnic minority staff who – despite the higher risk of mortality from coronavirus – will further lose out.

**Recommendations**

**NHS England and devolved equivalents**

1. Include ethnicity as an independent risk factor for all staff and develop culturally appropriate risk assessments, accounting for racialised patterns of occupational risk for ethnic minority staff.

**Senior NHS management:**

1. Monitor the racialised patterns of staff occupational risk and act quickly on any concerns raised by staff members.
2. Ensure all staff, including agency staff, working in Emergency Departments are risk assessed through a face-to-face review and both the staff member and senior management understand and mitigate the risks posed to staff.
3. Report numbers of disabled and BAME staff risk assessments completed, and percentages of total risk assessments completed in the whole Trust in your Board Assurance Framework for analysis to ensure board-level scrutiny and oversight.
4. Ensure all staff members have clear information regarding access to appropriate PPE. Responsibility for PPE must be clear so staff know who to raise concerns to.

**Trust boards:**

1. The unequal treatment of BAME staff during the coronavirus pandemic must be viewed as a corporate risk. NHS Trust Boards must rigorously scrutinise the Trust’s policies around occupational risk and ensure adequate processes are in place to support ethnic minority staff.

**Regulators**

1. Ensure Trusts are approaching risk assessments appropriately and are risk assessing all staff working in Emergency Departments, including agency workers.

**RCEM**

1. RCEM’s Infection Prevention and Control Best Practice Guidance\(^{30}\) does not cover the shortcomings in risk assessments for staff or disparities in access to appropriate PPE. The guidance must be updated to reflect the findings of this report.

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Annex – methodology and limitations
The first survey was administered in May and collected a total of 1,167 responses from Emergency Medicine clinicians across the UK. The survey included general questions about Covid-19, testing, PPE, how clinicians felt their Emergency Department was set up, and mental health. The second survey was administered in December and examined risk assessments and PPE in more detail. A total of 780 members and fellows of the College responded to the second survey.

The surveys were conducted online and rolled out through a series of emails sent to members and fellows. To boost the sample size, we employed a snowball sampling technique whereby we asked members to inform their networks about the survey. As both surveys contain self-selected samples, we have been cautious not to make generalisations about the results. However, we believe this does not downplay the importance of the findings of these surveys – there are clearly disparities in occupational risk faced by ethnic minorities in the NHS – and this is well evidenced in the supplementary research provided in this paper.