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Adherence to protective measures among healthcare workers in the UK: a cross-sectional study

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Handling editor Kirsty Challen

► Additional supplemental material is published online only. To view, please visit the journal online (http://dx.doi.org/10.1136/emermed-2021-211454).

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Received 16 March 2021
Accepted 10 November 2021
Published Online First 30 November 2021

ABSTRACT

Background Healthcare workers (HCWs) are frontline responders to emergency infectious disease outbreaks such as COVID-19. To avoid the rapid spread of disease, adherence to protective measures is paramount. We investigated rates of correct use of personal protective equipment (PPE), hand hygiene and physical distancing in UK HCWs who had been to their workplace at the start of the COVID-19 pandemic and factors associated with adherence.

Methods We used an online cross-sectional survey of 1035 UK healthcare professionals (data collected 12–16 June 2020). We excluded those who had not been to their workplace in the previous 6 weeks, leaving us with a sample size of 831. Respondents were asked about their use of PPE, hand hygiene and physical distancing in the workplace. Frequency of uptake was reported descriptively; adjusted logistic regressions were used to separately investigate factors associated with adherence to use of PPE, maintaining good hand hygiene and physical distancing from colleagues.

Results Adherence to personal protective measures was suboptimal (PPE use: 80.0%, 95% CI 77.3 to 82.8; hand hygiene: 67.8%, 95% CI 64.6 to 71.0; coming into close contact with colleagues: 74.7%, 95% CI 71.7 to 77.7). Adherence to PPE use was associated with having received training about health and safety in the workplace for COVID-19, greater perceived social pressure to adopt the behaviour and availability of PPE. Non-adherence was associated with fatalism about COVID-19 and greater perceived difficulty of adopting protective measures. Workplace design using markings to facilitate distancing was associated with adherence to physical distancing.

Conclusions Uptake of personal protective behaviours among UK HCWs at the start of the pandemic was variable. Factors associated with adherence provide insight into ways to support HCWs to adopt personal protective behaviours, such as ensuring that adequate PPE is available and designing workplaces to facilitate physical distancing.

Key messages

What is already known on this subject

- Two rapid reviews have identified rates of, and factors associated with, adherence to use of personal protective equipment (PPE) among healthcare workers, but most studies included investigated infectious diseases other than COVID-19 (eg, H1N1 pandemic influenza, seasonal influenza, severe acute respiratory syndrome, Middle East respiratory syndrome or tuberculosis).
- Data investigating rates of uptake and factors associated with hand hygiene and physical distancing among healthcare workers during infectious disease outbreaks are also lacking.
- Rates of adherence to personal protective behaviours among healthcare workers in the UK at the start of the COVID-19 pandemic and factors associated with adherence are unknown.

What this study adds

- In this survey of UK healthcare workers, adherence to personal protective measures was variable (PPE use: 80.0%; hand hygiene: 67.8%; physical distancing: 25.3%) among those who had been to their place of work in the last 6 weeks (n=831).
- Adherence to protective measures was associated with having received health and safety training and perceiving social pressure to adopt the behaviour. Greater perceived safety from COVID-19 in the workplace was also associated with adherence. Non-adherence was associated with fatalism for catching COVID-19 and greater perceived difficulty of adopting protective measures.
- Training that targets factors associated with adherence, clear environmental cues and promoting an organisational culture of adherence may help improve adherence to personal protective behaviours in healthcare workers.

INTRODUCTION

To mitigate the spread of COVID-19, protective measures have been recommended in health and social care settings. These include use of personal protective equipment (PPE), good hand hygiene and physical distancing.[1–3] However, these measures are not effective if healthcare workers (HCWs) do not or cannot adhere to them. There are few studies investigating uptake of personal protective behaviours (PPBs) among HCWs. Most available literature is from before the COVID-19 pandemic and does not report rates of uptake, instead reviewing factors associated with uptake.[4–6] One systematic review has estimated median compliance rates to hand hygiene in hospitals at 40%, although this review is now outdated, including studies published before 1 January 2009.[7] The COVID-19 pandemic has led to an intense and sustained information campaign across the whole of society aimed

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To cite: Smith LE, Serfioti D, Weston D, *et al*. *Emerg Med J* 2022;**39**:100–105.

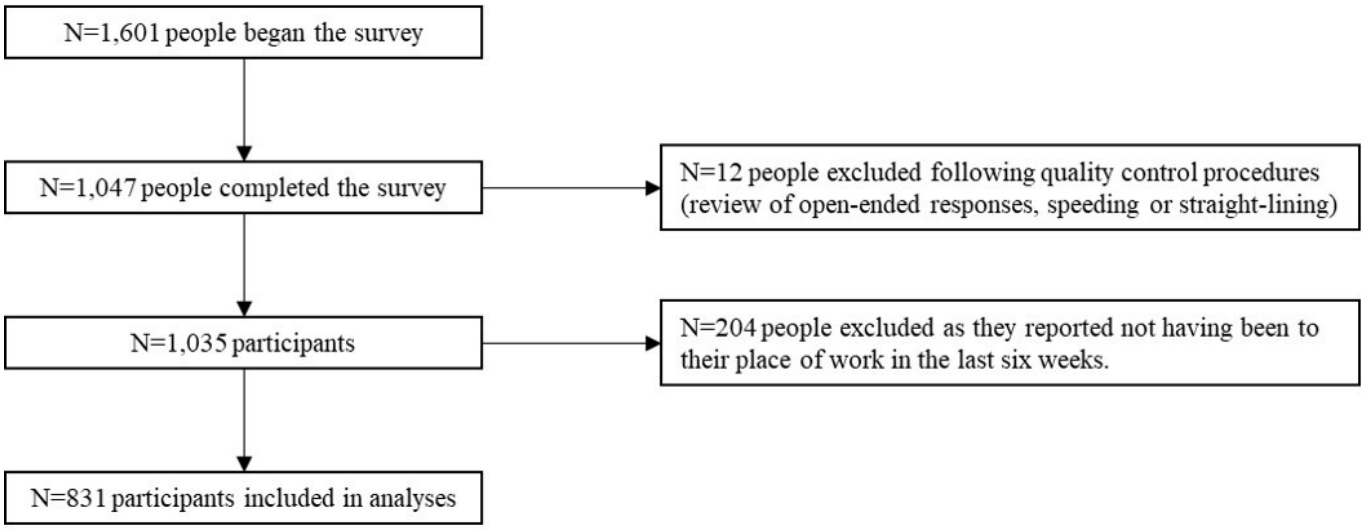

Figure 1 Flow chart of participants.

at improving rates of wearing a face covering in many settings and maintaining good hand hygiene. This has been accompanied by more specific workplace campaigns targeted at HCWs. It is unknown whether this has influenced rates of uptake of protective behaviours or whether factors previously identified as being associated with uptake of protective behaviours among HCWs remain relevant given the society-wide changes that have been seen.

We conducted a cross-sectional survey of UK healthcare professionals at the start of the COVID-19 pandemic to determine their use of PPE, good hand hygiene and physical distancing in the workplace, and to investigate factors associated with adherence.

METHOD

We commissioned the market research company YouGov to carry out this cross-sectional survey, between 12 and 16 June 2020.

Participants were recruited from YouGov's online research panel (n=800 000+ UK adults) and were eligible if they were 18 years or older, lived in the UK and worked in the healthcare sector (self-reported) (figure 1). For this study, we excluded participants who reported that they had not been to their place of work in the last 6 weeks. Quota sampling was used, based on occupational group with targets set to reflect the NHS staff survey. Through an automated sampling process, YouGov's survey management software sets controls so that the respondents who are in a quota that has already been met are prevented from taking part. Participants were reimbursed in points (equivalent to approximately 50 p) redeemable as cash, gift vouchers or charitable donations.

Study materials

We carried out telephone interviews with five clinical and administrative staff working in healthcare settings to inform survey questions. Full quantitative survey questions are available in the supplementary materials. Participants were only invited to complete survey materials if they had previously reported to the market research company that they worked in the healthcare sector.

We asked participants about their use of PPE (mask, gloves, apron or gown and face or eye protection); hand washing behaviour; and whether they had been in close contact with a colleague (within 2 m for 15 min or more or direct physical contact) the most recent time they were at work.

Participants were asked about their workplace environment; perceived risk of COVID-19; whether they had had COVID-19; perceived effectiveness of PPBs; perceived social pressure to adopt PPBs (thinking colleagues took PPBs seriously and would notice if you did not adopt them); and perceived safety from COVID-19. We also asked participants about how credible they perceived information from the NHS about PPE to be using an adapted form of the Meyer Credibility Index.[8]

Participants also reported their personal and occupational characteristics and whether they or a member of their household had recently experienced COVID-19 symptoms.

Analysis

We aimed to recruit 1000 HCWs to give a 95% CI of plus or minus 3% for the prevalence estimate for each survey item.

Descriptive statistics are reported as means and SDs (continuous data) or frequencies and percentages (categorical data).

A series of logistic regressions determined univariable associations for: (A) total adherence to the use of PPE, (B) hand washing when needed at work and (C) close contact with colleagues at work. We investigated associations with personal and occupational characteristics, work environment and psychological and situational factors. A second set of logistic regressions determined multivariable associations for between our three outcomes and personal and occupational characteristics, work environment, and psychological and situational factors, controlling for personal and occupational characteristics (sex, age, region of place of work, sector, work setting and face-to-face contact with patients or service users).

Data were weighted by occupation group in the NHS workforce.

Due to the large number of analyses run on each outcome (up to 30), we applied a Bonferroni correction to our results ($p \leq 0.002$). Only results of adjusted analyses reaching significance are reported narratively. Unadjusted results are reported in tables; results not reaching significance are reported in the supplementary materials.

RESULTS

Among the 1035 HCWs who responded, 831 had been to their workplace in the previous 6 weeks. Most study participants were

Table 1 Participant characteristics

Characteristic	% (N)
Sex	
Male	28.1 (233)
Female	71.9 (598)
Age	
18–34 years	10.5 (87)
35–44 years	21.0 (174)
45–54 years	30.6 (255)
55+ years	37.9 (315)
Region of place of work	
North East	4.7 (39)
North West	12.3 (102)
Yorkshire and the Humber	8.2 (68)
East Midlands	6.8 (57)
West Midlands	7.4 (62)
East of England	6.3 (53)
London	8.3 (69)
South East	13.6 (113)
South West	10.9 (90)
Wales	6.2 (52)
Scotland	13.1 (109)
Northern Ireland	2.2 (18)
Sector	
Private	22.7 (189)
Public	77.3 (643)
Occupational group	
Allied health professionals/healthcare scientists/scientific and technical, public health/health improvement, commissioning managers/support staff, wider healthcare team (including admin and clerical, HR, finance, IT, facilities and maintenance), general management and other occupational group	50.6 (326)
Medical and dental, ambulance, registered nurses and midwives, nursing or healthcare assistants and social care	49.4 (317)
Work setting	
Pharmacy, dentist, opticians, clinical commissioning group, mental health trust/service, community services, local authority, school, university and other	27.4 (228)
NHS hospital, private hospital/ clinic, General Practice (GP) surgery/ health centre, walk-in centre, ambulance trust/service and care home	72.6 (603)
Face-to-face contact with patients/service users	
No	17.3 (144)
Yes, occasionally	15.7 (131)_
Yes, frequently	67.0 (557)
Frequency of contact with patients with COVID-19 or staff who worked closely with patients with COVID-19	
I am never in contact myself with patients who have COVID-19 or anyone who has regular contact with patients who have COVID-19	34.0 (282)
I am never in contact myself with patients who have COVID-19 but work closely with staff who have regular contact with patients who have COVID-19	16.5 (137)
I am rarely in contact myself with patients who have COVID-19	18.8 (156)
I am sometimes in contact myself with patients who have COVID-19	20.4 (170)
I am often in contact myself with patients who have COVID-19	10.3 (86)
Had, or currently have, COVID-19	
Think have not had COVID-19 and do not have it now	78.2 (567)
Think have had COVID-19 or have it now	21.8 (158)
Symptoms of COVID-19 in household	
None present	96.5 (790)
Present	3.5 (28)
PPE	
Did not completely adhere to use of PPE	20.0 (166)
Completely adherent to use of PPE	80.0 (665)
Hand hygiene	
Did not wash their hands every time needed	32.2 (268)
Washed their hands every time needed	67.8 (564)
Physical distancing	
Were not in close contact with colleagues in the workplace	25.3 (210)
Were in close contact with colleagues in the workplace	74.7 (621)

PPE, personal protective equipment.

female, worked in the public sector and worked in a clinical setting (table 1).

Personal protective equipment

Among participants, 80.0% (n=665, 95% CI 77.3 to 82.8) reported completely adhering to use of PPE the most recent time they were at work. Factors independently associated with complete adherence were older age; having been given all the correct PPE needed to do one's job; having enough information about what PPE to use and when to use it; receiving adequate health and safety training at work during the COVID-19 pandemic; thinking that colleagues take PPE and social distancing seriously; and feeling safe from COVID-19 at work (table 2).

Complete adherence was reported most frequently among participants who stated that they were never in contact with patients with COVID-19 or with staff who had close contact with patients who had COVID-19 (89. 7%). Poorer adherence was significantly associated with 'often', 'sometimes' or 'rarely' being in contact with patients with COVID-19. Poorer adherence was reported by those agreeing that wearing PPE makes it difficult to do one's job; thinking there is no point bothering with PPE or social distancing if you have a lot of contact with patients with COVID-19; thinking that you will probably catch COVID-19 anyway no matter what you do; and being angry about the way PPE had been given out to you or other HCWs (table 2).

Hand hygiene

Two-thirds of participants (67.8%, n=564, 95% CI 64.6 to 71.0) reported washing their hands 'every time [they] needed to' the most recent time they were at work. No personal, environmental, psychological or situational factors were significantly associated with hand hygiene (online supplemental materials).

Physical distancing

Three-quarters of participants (74.7%, n=621, 95% CI 71.7 to 77.7) reported having come into close contact with a colleague the most recent time they were at work. Factors independently associated with this outcome were working in the public sector; greater perceived difficulty of physical distancing in the workplace; thinking that there is no point bothering with PPE or social distancing if you have a lot of contact with patients with COVID-19; and being aware of others in your workplace who had been seriously ill from COVID-19 (table 3).

Close contact was less likely to be reported among those who stated their workplace was designed to make it easy for them to stay 2 m away from other people; they had received adequate health and safety training at work during the COVID-19

Table 2 Factors associated with adherence to use of PPE in the workplace

Participant characteristics	Did not completely adhere to use of PPE n=166, n (%)	Completely adherent to use of PPE n=665, n (%)	OR (95% CI) for complete adherence to use of PPE	Adjusted OR (95% CI)* for complete adherence to use of PPE
Age				
18–34 years	31 (35.6)	56 (64.4)	Reference	Reference
35–44 years	39 (22.4)	135 (77.6)	1.94 (1.11 to 3.41)	1.69 (0.92 to 3.09)
45–54 years	46 (18.0)	209 (82.0)	2.55 (1.49 to 4.39)†	2.00 (1.12 to 3.58)
55 years and over	49 (15.6)	266 (84.4)	3.03 (1.78 to 5.16)†	2.64 (1.49 to 4.66)†
Face-to-face contact with patients/service users ‡				
No	4 (2.8)	140 (97.2)	Reference	Reference
Yes, occasionally	13 (9.9)	118 (90.1)	0.25 (0.08 to 0.80)	0.25 (0.08 to 0.81)
Yes, frequently	150 (26.9)	407 (73.1)	0.07 (0.03 to 0.21)†	0.07 (0.02 to 0.21)†
Frequency of contact with patients with COVID-19 or staff who worked closely with patients with COVID-19 ‡				
I am never in contact myself with patients who have COVID-19 or anyone who has regular contact with patients who have COVID-19	29 (10.3)	253 (89.7)	Reference	Reference
I am never in contact myself with patients who have COVID-19 but work closely with staff who have regular contact with patients who have COVID-19	21 (15.3)	116 (84.7)	0.63 (0.34 to 1.15)	0.37 (0.19 to 0.74)
I am rarely in contact myself with patients who have COVID-19	44 (28.0)	113 (72.0)	0.30 (0.18 to 0.50)†	0.36 (0.20 to 0.63)†
I am sometimes in contact myself with patients who have COVID-19	49 (28.8)	113 (72.0)	0.28 (0.17 to 0.47)†	0.43 (0.25 to 0.77)
I am often in contact myself with patients who have COVID-19	23 (27.1)	62 (72.9)	0.31 (0.17 to 0.57)†	0.55 (0.28 to 1.10)
I have received adequate training in my workplace for the purposes of health and safety during the COVID-19 pandemic (ie, correct use of PPE and social distancing), mean (±SD)§	3.30 (±1.22)	3.59 (±1.16)	1.22 (1.06 to 1.41)	1.33 (1.14 to 1.55)†
I am given all the correct PPE that I need to do my job safely, mean (±SD)§	3.45 (±1.20)	3.82 (±1.06)	1.34 (1.15 to 1.55)†	1.38 (1.18 to 1.63)†
I have enough information about which PPE to use and when to use it, mean (±SD)§	3.82 (±1.02)	4.03 (±0.93)	1.24 (1.05 to 1.47)	1.37 (1.13 to 1.66)†
It does not really matter what I do, I will probably catch COVID-19 anyway, mean (±SD)§	2.84 (±1.00)	2.48 (±0.95)	0.68 (0.58 to 0.81)†	0.71 (0.59 to 0.86)†
I am angry about the way PPE has been given out to me or other HCWs, mean (±SD)§	3.31 (±1.30)	2.93 (±1.24)	0.79 (0.69 to 0.90)†	0.78 (0.68 to 0.91)†
I feel safe from COVID-19 at work, mean (±SD)§	2.69 (±1.01)	3.12 (±1.05)	1.47 (1.25 to 1.74)†	1.50 (1.25 to 1.80)†
There is no point bothering with PPE around colleagues or social distancing if you already have a lot of contact with COVID-19 patients, mean (±SD)§	2.21 (±1.03)	1.83 (±0.88)	0.66 (0.56 to 0.79)†	0.67 (0.56 to 0.81)†
My colleagues seem to take PPE and social distancing seriously, mean (±SD)§	3.36 (±1.12)	3.75 (±1.02)	1.41 (1.20 to 1.65)†	1.48 (1.24 to 1.77)†
Wearing PPE makes it hard for me to do my job properly, mean (±SD)§	3.68 (±1.05)	3.11 (±1.09)	0.61 (0.51 to 0.72)†	0.64 (0.54 to 0.77)†

For continuous variables, where N is the same as the column heading, it is not reported in individual cells.
*Adjusting for sex, age, region of place of work, sector, work setting and face-to-face contact with patients or service users.
†P≤0.002 (applying Bonferroni correction).
‡The number of valid cases in the table is different from the total count due to the use of weighted data and rounding errors.
§Five-point scale: 1=strongly disagree to 5=strongly agree.
HCWs, healthcare workers; PPE, personal protective equipment.

pandemic; their workplace had clear markings to help them stay 2 m away from other people; thinking that social distancing around colleagues at work was an effective way of preventing the spread of COVID-19; that their colleagues would notice if they did not maintain social distancing; feeling safe from COVID-19 at work; and perceiving information from the NHS about PPE to be more credible (table 3).

DISCUSSION

Adherence to PPBs among HCWs in the first wave of the COVID-19 pandemic was imperfect. Given our use of self-report measures, these estimates of adherence are likely overestimates. Factors associated with complete adherence to PPE and physical distancing included having received training about health and safety in the workplace for COVID-19 and greater perceived social pressure to adopt protective behaviours. Non-adherence was associated with thinking there was 'no point' bothering with PPE or social distancing if you had a lot of contact with patients with COVID-19 (fatalism) and greater perceived difficulty of using the measures (including thinking PPBs made it difficult to do your job). Availability of PPE, workplace design to facilitate distancing and greater perceived information sufficiency were also associated with adopting individual PPBs. Factors associated with adoption of PPBs in our study were similar to those identified by two recent rapid reviews of HCW adherence to infection control measures in which most studies were conducted on infectious disease outbreaks other than COVID-19. These reviews also found that wearing PPE was associated with having

Table 3 Factors associated with close contact in the workplace

Participant characteristics	Were not in close contact with colleagues in the workplace (n=210)	Were in close contact with colleagues in the workplace (n=621)	OR (95% CI) for being in close contact with a colleague	Adjusted OR (95% CI)* for being in close contact with a colleague
Sector †				
Private	74 (39.2)	115 (60.8)	Reference	Reference
Public	137 (21.3)	506 (78.7)	2.39 (1.69 to 3.38)‡	2.43 (1.66 to 3.56)‡
My workplace has clear markings which help me stay 2 m away from other people, mean (±SD)§	3.10 (±1.34)	2.51 (±1.24)	0.70 (0.62 to 0.79)‡	0.71 (0.62 to 0.80)‡
I have received adequate training in my workplace for the purposes of health and safety during the COVID-19 pandemic (ie, correct use of PPE and social distancing), mean (±SD)§	3.88 (±1.05)	3.42 (±1.20)	0.69 (0.60 to 0.80)‡	0.69 (0.59 to 0.81)‡
The way my workplace is designed makes it easy for me to stay 2 m away from other people, mean (±SD)§	3.09 (±1.23)	2.04 (±1.08)	0.49 (0.42 to 0.56)‡	0.49 (0.42 to 0.57)‡
Perceived ease of physical distancing in the workplace, mean (±SD) (range 0 (most easy) to 30 (most difficult))	12.68 (±5.99)	18.28 (±5.99)	1.16 (1.13 to 1.20)‡	1.16 (1.12 to 1.20)‡
Perceived credibility of information from the NHS about PPE, mean (±SD) (range 4 (lowest) to 20 (highest))	13.44 (±2.20)(n=185)	12.61 (±2.34)(n=558)	0.85 (0.79 to 0.92)‡	0.88 (0.82 to 0.95)‡
As far as I'm aware, there are people from my workplace who have been seriously ill with COVID-19, mean (±SD)§	2.91 (±1.47)	3.45 (±1.32)	1.33 (1.19 to 1.49)‡	1.22 (1.07 to 1.38)‡
I feel safe from COVID-19 at work, mean (±SD)§	3.37 (±0.97)	2.92 (±1.06)	0.65 (0.55 to 0.76)‡	0.67 (0.57 to 0.80)‡
There is no point bothering with PPE around colleagues or social distancing if you already have a lot of contact with COVID-19 patients, mean (±SD)§	1.65 (±0.82)	1.99 (±0.94)	1.59 (1.31 to 1.93)‡	1.52 (1.24 to 1.87)‡
Social distancing around colleagues at work is an effective way to protect against COVID-19, mean (±SD)§	4.11 (±0.75)	3.68 (±0.89)	0.52 (0.42 to 0.65)‡	0.56 (0.45 to 0.69)‡
If I don't maintain social distancing at work, my colleagues will notice, mean (±SD)§	3.92 (±0.96)	3.31 (±1.08)	0.55 (0.46 to 0.65)‡	0.57 (0.47 to 0.68)‡

For continuous variables, where N is the same as the column heading, it is not reported in individual cells.
*Adjusting for sex, age, region of place of work, sector, work setting and face-to-face contact with patients or service users.
†The number of valid cases in the table is different from the total count due to the use of weighted data and rounding errors.
‡P≤0.002 (applying Bonferroni correction).
§Five-point scale: 1=strongly disagree to 5=strongly agree.
PPE, personal protective equipment.

an organisational culture that encourages adherence, while non-adherence was associated with shortages of PPE, inadequate guidance, perceived negative impact of adhering (eg, impairing ability to communicate with patients) and seeing other colleagues not adhering to PPE.[4 5]

Contrary to previous findings,[5] participants who reported more patient contact were less likely to fully adhere to use of PPE. This may be a function of the greater number of times that PPE was necessary—allowing more opportunities for non-adherence. While not previously investigated with reference to PPBs in HCWs, we found that anger about how PPE had been distributed was associated with incomplete adherence. Participants who were angrier about distribution of PPE may have had more patient contact and been more fatalistic about COVID-19, themselves both directly associated with reduced adherence. However, this post hoc explanation is speculative and should be taken with caution.

This study has several limitations. Rates of adherence should be viewed cautiously due to use of self-report data, which may be influenced by recall and social desirability bias. The study design precludes determination of whether respondents were truly representative of the wider HCW population. However, associations within the data still provide useful insights.[9] This study used cross-sectional data, limiting ability to infer causation. We gathered only limited sociodemographic data from participants, due to space constraints in the survey limiting the ability to determine representativeness of survey respondents to the NHS workforce. As we used quota sampling, it is misleading to calculate response rate (as once certain quotas (eg, based on age or sex) have been filled, respondents with these characteristics are prevented from completing the survey). Rates of completion and exclusion based on quality control procedures are typical for this method of data collection.

CONCLUSION

Uptake of PPBs at the start of the COVID-19 pandemic among UK HCWs was suboptimal. Factors associated with adopting PPBs included having an organisational culture of adopting PPBs, adequate availability of resources and having a workplace design that facilitated adherence. Contrary to previous research, we found that participants with more regular contact with confirmed cases were less likely to fully adhere to PPE. This is likely a function of the greater frequency with which PPE is necessary with higher patient contact. Our results identify factors that could be targeted to increase uptake of PPBs among HCWs and highlight the need to support HCWs with frequent contact with COVID-19 cases to fully adhere.

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Contributors The study was conceptualised by NG and GJR. LES completed all analyses, using data from YouGov Plc. All authors contributed to, and approved, the final manuscript. For any enquiries about the data in this report, please contact King's College London.

Funding LS, DW, NG and GJR are supported by the National Institute for Health Research Health Protection Research Unit (NIHR HPRU) in Emergency Preparedness and Response, a partnership between the UK Health Security Agency, King's College London and the University of East Anglia. DW is also supported by the NIHR HPRU in Behaviour Change and Evaluation, a partnership between the UK Health Security Agency and the University of Bristol.

Disclaimer The views expressed are those of the authors and not necessarily those of the NIHR, UK Health Security Agency or the Department of Health and Social Care.

Patient consent for publication Not applicable.

Ethics approval Ethical approval was granted by the King's College London Research Ethics Committee (reference: LRS-19/20–19184).

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available on reasonable request.

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Supplementary materials. Non-significant results

Table of non-significant adjusted results ($p \leq 0.002$) for PPE analyses.

Participant characteristics	Level	Did not completely adhere to use of PPE n=166, n (%)	Completely adherent to use of PPE n=665, n (%)	Odds ratio (95% CI) for complete adherence to use of PPE	Adjusted odds ratio (95% CI)† for complete adherence to use of PPE
Sex	Male	48 (20.6)	185 (79.4)	Reference	Reference
	Female	118 (19.7)	480 (80.3)	1.06 (0.73 to 1.54)	1.16 (0.77 to 1.74)
Region of place of work ‡	North East	9 (23.1)	30 (76.9)	Reference	Reference
	North West	22 (21.6)	80 (78.4)	1.05 (0.43 to 2.54)	1.12 (0.44 to 2.86)
	Yorkshire and the Humber	11 (16.2)	57 (83.8)	1.51 (0.56 to 4.08)	1.77 (0.63 to 5.02)
	East Midlands	8 (14.0)	49 (86.0)	1.80 (0.62 to 5.22)	1.78 (0.58 to 5.45)
	West Midlands	13 (21.0)	49 (79.0)	1.08 (0.41 to 2.85)	0.98 (0.35 to 2.74)
	East of England	17 (32.1)	36 (67.9)	0.62 (0.24 to 1.59)	0.75 (0.28 to 2.04)
	London	15 (21.7)	54 (78.3)	1.01 (0.39 to 2.59)	0.89 (0.33 to 2.45)
	South East	27 (23.9)	86 (76.1)	0.93 (0.39 to 2.21)	0.86 (0.34 to 2.16)
	South West	13 (14.4)	77 (85.6)	1.73 (0.66 to 4.49)	1.71 (0.63 to 4.68)
	Wales	13 (25.0)	39 (75.0)	0.86 (0.32 to 2.28)	0.76 (0.27 to 2.17)
	Scotland	14 (13.0)	94 (87.0)	1.93 (0.75 to 4.92)	2.12 (0.80 to 5.67)
	Northern Ireland	5 (26.3)	14 (73.7)	0.86 (0.23 to 3.17)	0.99 (0.25 to 3.87)
Sector ‡	Private	43 (22.8)	146 (77.2)	Reference	Reference
	Public	123 (19.1)	520 (80.9)	1.24 (0.84 to 1.84)	1.10 (0.71 to 1.69)
Work setting ‡	Pharmacy, dentist, opticians, clinical commissioning group, mental health trust/service, community services, local authority, school, university, other	36 (15.8)	192 (84.2)	Reference	Reference
	NHS hospital, private hospital/ clinic, GP surgery/health centre, walk-in centre, ambulance trust/service, care home	130 (21.6)	473 (78.4)	0.69 (0.46 to 1.03)	0.70 (0.45 to 1.08)
Occupational group ‡	Allied health professionals/healthcare scientists/scientific and technical, public health/health improvement, commissioning managers/support staff, wider healthcare team (including admin & clerical, HR, finance, IT, facilities and maintenance), general management, other occupational group	48 (14.8)	277 (85.2)	Reference	Reference
	Medical and dental, ambulance, registered nurses and midwives, nursing or healthcare assistants, social care	75 (23.7)	242 (76.3)	0.56 (0.38 to 0.84)	0.74 (0.46 to 1.18)

Perceived risk of COVID-19 to me personally	5-point scale, 1=no risk at all to 5=major risk	N=164, M=3.32, SD=1.01	N=661, M=3.22, SD=0.95	0.90 (0.75 to 1.07)	0.95 (0.78 to 1.15)
Perceived risk of COVID-19 to people in the UK	5-point scale, 1=no risk at all to 5=major risk	N=165, M=3.76, SD=0.86	N=663, M=3.83, SD=0.82	1.10 (0.90 to 1.35)	1.18 (0.95 to 1.48)
Had, or currently have, COVID-19	Think have not had COVID-19 and do not have it now	109 (19.2)	459 (80.8)	Reference	Reference
	Think have had COVID-19 or have it now	42 (26.6)	116 (73.4)	0.66 (0.44 to 1.00)	0.73 (0.47 to 1.15)
Symptoms of COVID-19 in household ‡	None present	157 (19.9)	633 (80.1)	Reference	Reference
	Present	5 (17.9)	23 (82.1)	1.11 (0.42 to 2.94)	1.42 (0.51 to 3.96)
Perceived credibility of information from the NHS about PPE	Range 4 (lowest) to 20 (highest)	N=152, M=12.24, SD=2.25	N=592, M=12.97, SD=2.33	1.14 (1.06 to 1.24)*	1.13 (1.04 to 1.23)
If I was going to catch COVID-19, I would have done by now	5-point scale, 1=strongly disagree to 5=strongly agree	M=2.63, SD=1.18	M=2.53, SD=1.05	0.92 (0.78 to 1.07)	0.91 (0.77 to 1.08)
I am worried that if I don't take care, I might pass COVID-19 to my friends or family	5-point scale, 1=strongly disagree to 5=strongly agree	M=4.04, SD=0.96	M=3.98, SD=0.89	0.92 (0.76 to 1.12)	1.00 (0.81 to 1.22)
Perceived effectiveness of PPE	Range 3 (lowest) to 15 (highest)	M=9.38, SD=2.47	M=9.94, SD=2.37	1.10 (1.03 to 1.18)	1.07 (0.99 to 1.15)
If I don't wear the right PPE at work, my colleagues will notice	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.82, SD=1.02	M=3.94, SD=0.98	1.12 (0.94 to 1.32)	1.27 (1.05 to 1.53)
If I don't wear the right PPE at work, I will probably catch COVID-19	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.37, SD=0.98	M=3.35, SD=0.99	0.98 (0.82 to 1.16)	1.16 (0.96 to 1.40)
As far as I'm aware, there are people from my workplace who have been seriously ill with COVID-19	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.48, SD=1.32	M=3.27, SD=1.39	0.89 (0.79 to 1.01)	0.93 (0.80 to 1.07)
COVID-19 would be a serious illness for me	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.21, SD=1.05	M=3.38, SD=1.05	1.16 (0.98 to 1.36)	1.09 (0.91 to 1.31)
My line manager seems to take PPE and social distancing seriously	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.64, SD=1.15	M=3.9, SD=1.05	1.23 (1.06 to 1.43)	1.24 (1.05 to 1.47)

*$p \leq 0.002$ (applying Bonferroni correction)

† Adjusting for sex, age, region of place of work, sector, work setting, and face-to-face contact with patients or service users.

‡ The number of valid cases in the table is different from the total count due to the use of weighted data and rounding errors.

For continuous variables, where N is the same as the column heading, it is not reported in individual cells.

Table of non-significant adjusted results ($p \leq 0.002$) for hand hygiene analyses.

Participant characteristics	Level	Did not wash their hands every time needed (n=268)	Washed their hands every time needed (n=564)	Odds ratio (95% CI) for washing hands every time needed	Adjusted odds ratio (95% CI)† for washing hands every time needed
Sex	Male	75 (32.2)	158 (67.8)	Reference	Reference
	Female	193 (32.3)	405 (67.7)	1.00 (0.72 to 1.38)	0.92 (0.66 to 1.29)
Age ‡	18 to 34 years	31 (35.6)	56 (64.4)	Reference	Reference
	35 to 44 years	54 (31.0)	120 (69.0)	1.24 (0.72 to 2.13)	1.35 (0.77 to 2.36)
	45 to 54 years	83 (32.7)	171 (67.3)	1.15 (0.69 to 1.92)	1.26 (0.74 to 2.13)
	55 years and over	99 (31.4)	216 (68.6)	1.22 (0.74 to 2.00)	1.29 (0.77 to 2.16)
Region of place of work ‡	North East	15 (38.5)	24 (61.5)	Reference	Reference
	North West	34 (33.3)	68 (66.7)	1.22 (0.57 to 2.62)	1.31 (0.60 to 2.84)
	Yorkshire and the Humber	25 (36.8)	43 (63.2)	1.06 (0.47 to 2.39)	1.10 (0.48 to 2.51)
	East Midlands	17 (29.8)	40 (70.2)	1.39 (0.59 to 3.29)	1.34 (0.56 to 3.19)
	West Midlands	21 (33.9)	41 (66.1)	1.16 (0.50 to 2.68)	1.21 (0.52 to 2.81)
	East of England	20 (37.7)	33 (62.3)	1.02 (0.44 to 2.41)	1.11 (0.47 to 2.63)
	London	18 (26.1)	51 (73.9)	1.74 (0.75 to 4.05)	1.78 (0.76 to 4.19)
	South East	22 (19.5)	91 (80.5)	2.45 (1.11 to 5.44)	2.53 (1.13 to 5.66)
	South West	27 (29.7)	64 (70.3)	1.43 (0.65 to 3.15)	1.51 (0.67 to 3.36)
	Wales	17 (32.7)	35 (67.3)	1.22 (0.51 to 2.90)	1.24 (0.51 to 2.98)
	Scotland	46 (42.2)	63 (57.8)	0.83 (0.39 to 1.76)	0.87 (0.41 to 1.87)
	Northern Ireland	8 (44.4)	10 (55.6)	0.82 (0.26 to 2.54)	0.86 (0.27 to 2.70)
Sector ‡	Private	77 (40.7)	112 (59.3)	Reference	Reference
	Public	191 (29.7)	452 (70.3)	1.62 (1.15 to 2.26)	1.50 (1.04 to 2.15)
Place of work ‡	Pharmacy, dentist, opticians, clinical commissioning group, mental health trust/service, community services, local authority, school, university, other	84 (36.8)	114 (63.2)	Reference	Reference
	NHS hospital, private hospital/ clinic, GP surgery/health centre, walk-in centre, ambulance trust/service, care home	184 (30.5)	420 (69.5)	1.33 (0.97 to 1.83)	1.23 (0.88 to 1.72)
Face-to-face contact with patients/service users ‡	No	34 (23.6)	110 (76.4)	Reference	Reference
	Yes, occasionally	41 (31.3)	90 (68.7)	0.67 (0.39 to 1.15)	0.71 (0.41 to 1.23)
	Yes, frequently	193 (34.6)	364 (65.4)	0.58 (0.38 to 0.89)	0.68 (0.44 to 1.05)
Occupational group ‡	Allied health professionals/healthcare scientists/scientific and technical, public health/health improvement, commissioning managers/support staff, wider healthcare team (including admin & clerical, HR, finance, IT, facilities and maintenance), general management, other occupational group	91 (27.9)	235 (72.1)	Reference	Reference

	Medical and dental, ambulance, registered nurses and midwives, nursing or healthcare assistants, social care	100 (31.5)	217 (68.5)	0.84 (0.60 to 1.17)	0.97 (0.66 to 1.43)
Frequency of contact with patients with COVID-19, or staff who worked closely with patients with COVID-19 ‡	I am never in contact myself with patients who have COVID-19 or anyone who has regular contact with patients who have COVID-19	88 (31.2)	194 (68.8)	Reference	Reference
	I am never in contact myself with patients who have COVID-19 but work closely with staff who have regular contact with patients who have COVID-19	32 (23.4)	105 (76.6)	1.49 (0.93 to 2.38)	1.23 (0.75 to 2.01)
	I am rarely in contact myself with patients who have COVID-19	48 (30.8)	108 (69.2)	1.01 (0.66 to 1.54)	0.96 (0.61 to 1.51)
	I am sometimes in contact myself with patients who have COVID-19	69 (40.6)	101 (59.4)	0.67 (0.45 to 0.99)	0.63 (0.40 to 0.99)
	I am often in contact myself with patients who have COVID-19	30 (34.9)	56 (65.1)	0.86 (0.52 to 1.44)	0.73 (0.41 to 1.29)
There are facilities at my workplace available that make it easy to wash my hands when I get to work	5-point scale, 1=strongly disagree to 5=strongly agree	M=4.14, SD=0.96	M=4.34, SD=0.85	1.27 (1.08 to 1.48)	1.29 (1.09 to 1.53)
I have received adequate training in my workplace for the purposes of health and safety during the COVID-19 pandemic (i.e., correct use of PPE and social distancing)	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.50, SD=1.18	M=3.55, SD=1.18	1.03 (0.91 to 1.17)	1.07 (0.94 to 1.21)
In the past week, I have found a sink at my workplace where I couldn't wash my hands because it was broken	No	228 (31.5)	496 (68.5)	Reference	Reference
	Yes	16 (39.0)	25 (61.0)	0.72 (0.38 to 1.36)	0.71 (0.36 to 1.37)
In the past week, I have found a sink at my workplace with no soap or paper towels or a gel dispenser which was empty	No	182 (32.0)	386 (68.0)	Reference	Reference
	Yes	61 (31.1)	135 (68.9)	1.05 (0.74 to 1.49)	0.99 (0.68 to 1.44)
Perceived risk of COVID-19 to me personally	5-point scale, 1=no risk at all to 5=major risk	N=265, M=3.35, SD=0.99	N=560, M=3.19, SD=0.94	0.84 (0.72 to 0.98)	0.88 (0.75 to 1.03)
Perceived risk of COVID-19 to people in the UK	5-point scale, 1=no risk at all to 5=major risk	N=266, M=3.87, SD=0.83	N=563, M=3.79, SD=0.83	0.89 (0.75 to 1.07)	0.91 (0.76 to 1.10)
Had, or currently have, COVID-19 ‡	Think have not had COVID-19 and do not have it now	181 (31.9)	386 (68.1)	Reference	Reference
	Think have had COVID-19 or have it now	51 (32.5)	106 (67.5)	0.97 (0.66 to 1.41)	0.90 (0.61 to 1.34)
Symptoms of COVID-19 in household ‡	None present	254 (32.1)	537 (67.9)	Reference	Reference
	Present	9 (32.1)	19 (67.9)	1.00 (0.45 to 2.23)	0.97 (0.42 to 2.23)
Perceived credibility of information from the NHS about PPE	Range 4 (lowest) to 20 (highest)	N=247, M=12.67, SD=2.41	N=497, M=12.89, SD=2.29	1.04 (0.98 to 1.11)	1.05 (0.98 to 1.13)
It doesn't really matter what I do, I will probably catch COVID-19 anyway	5-point scale, 1=strongly disagree to 5=strongly agree	M=2.58, SD=0.97	M=2.54, SD=0.97	0.96 (0.82 to 1.11)	0.92 (0.79 to 1.08)
If I was going to catch COVID-19, I would have done by now	5-point scale, 1=strongly disagree to 5=strongly agree	M=2.58, SD=1.07	M=2.54, SD=1.08	0.96 (0.84 to 1.10)	0.97 (0.84 to 1.11)

I am worried that if I don't take care, I might pass COVID-19 to my friends or family	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.91, SD=0.97	M=4.04, SD=0.87	1.17 (1.00 to 1.37)	1.18 (1.00 to 1.39)
As far as I'm aware, there are people from my workplace who have been seriously ill with COVID-19	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.23, SD=1.39	M=3.35, SD=1.38	1.07 (0.96 to 1.19)	1.01 (0.90 to 1.14)
COVID-19 would be a serious illness for me	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.38, SD=1.06	M=3.32, SD=1.04	0.95 (0.82 to 1.09)	0.97 (0.84 to 1.12)
I feel safe from COVID-19 at work	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.02, SD=1.04	M=3.04, SD=1.06	1.02 (0.89 to 1.17)	1.02 (0.88 to 1.18)

*$p \leq 0.002$ (applying Bonferroni correction)

† Adjusting for sex, age, region of place of work, sector, work setting, and face-to-face contact with patients or service users.

‡ The number of valid cases in the table is different from the total count due to the use of weighted data and rounding errors.

For continuous variables, where N is the same as the column heading, it is not reported in individual cells.

Table of non-significant adjusted results ($p \leq 0.002$) for close contact in the workplace analyses.

Participant characteristics	Level	Were not in close contact with colleagues in the workplace (n=210)	Were in close contact with colleagues in the workplace (n=621)	Odds ratio (95% CI) for being in close contact with a colleague	Adjusted odds ratio (95% CI)† for being in close contact with a colleague
Sex	Male	63 (27.0)	170 (73.0)	Reference	Reference
	Female	147 (24.6)	451 (75.4)	1.13 (0.80 to 1.59)	0.94 (0.66 to 1.36)
Age	18 to 34 years	14 (17.2)	72 (82.8)	Reference	Reference
	35 to 44 years	35 (20.1)	139 (79.9)	0.86 (0.44 to 1.67)	0.97 (0.49 to 1.94)
	45 to 54 years	72 (28.2)	183 (71.8)	0.55 (0.30 to 1.02)	0.63 (0.34 to 1.20)
	55 years and over	88 (27.9)	227 (72.1)	0.55 (0.30 to 1.01)	0.66 (0.36 to 1.24)
Region of place of work ‡	North East	8 (20.5)	31 (79.5)	Reference	Reference
	North West	28 (27.5)	74 (72.5)	0.64 (0.26 to 1.59)	0.66 (0.26 to 1.67)
	Yorkshire and the Humber	21 (30.9)	47 (69.1)	0.53 (0.21 to 1.37)	0.47 (0.18 to 1.25)
	East Midlands	13 (22.8)	44 (77.2)	0.85 (0.31 to 2.34)	0.79 (0.28 to 2.24)
	West Midlands	16 (25.8)	46 (74.2)	0.71 (0.27 to 1.89)	0.81 (0.29 to 2.23)
	East of England	13 (24.5)	40 (75.5)	0.73 (0.27 to 2.00)	0.69 (0.25 to 1.96)
	London	18 (26.5)	50 (73.5)	0.66 (0.26 to 1.72)	0.71 (0.26 to 1.90)
	South East	25 (22.1)	88 (77.9)	0.84 (0.34 to 2.07)	0.87 (0.34 to 2.22)
	South West	21 (23.3)	69 (76.7)	0.79 (0.31 to 1.99)	0.85 (0.32 to 2.21)
	Wales	10 (19.2)	42 (80.8)	0.99 (0.35 to 2.81)	1.06 (0.36 to 3.11)
	Scotland	33 (30.6)	75 (69.4)	0.55 (0.23 to 1.34)	0.56 (0.22 to 1.41)
	Northern Ireland	4 (21.1)	15 (78.9)	0.97 (0.24 to 3.91)	0.90 (0.22 to 3.72)
Place of work ‡	Pharmacy, dentist, opticians, clinical commissioning group, mental health trust/service, community services, local authority, school, university, other	81 (35.4)	148 (64.6)	Reference	Reference
	NHS hospital, private hospital/ clinic, GP surgery/health centre, walk-in centre, ambulance trust/service, care home	130 (21.6)	473 (78.4)	1.99 (1.43 to 2.78)*	1.65 (1.16 to 2.35)
Face-to-face contact with patients/service users ‡	No	40 (28.0)	103 (72.0)	Reference	Reference
	Yes, occasionally	45 (34.4)	86 (65.6)	0.76 (0.45 to 1.26)	0.82 (0.48 to 1.39)
	Yes, frequently	125 (22.5)	431 (77.5)	1.35 (0.89 to 2.04)	1.68 (1.08 to 2.62)
Occupational group ‡	Allied health professionals/healthcare scientists/scientific and technical, public health/health improvement, commissioning managers/support staff, wider healthcare team (including admin & clerical, HR, finance, IT,	78 (24.0)	247 (76.0)	Reference	Reference

	facilities and maintenance), general management, other occupational group				
	Medical and dental, ambulance, registered nurses and midwives, nursing or healthcare assistants, social care	58 (18.3)	259 (81.7)	1.40 (0.96 to 2.05)	1.50 (0.96 to 2.35)
Frequency of contact with patients with COVID-19, or staff who worked closely with patients with COVID-19 ‡	I am never in contact myself with patients who have COVID-19 or anyone who has regular contact with patients who have COVID-19	100 (35.5)	182 (64.5)	Reference	Reference
	I am never in contact myself with patients who have COVID-19 but work closely with staff who have regular contact with patients who have COVID-19	31 (22.6)	106 (77.4)	1.90 (1.19 to 3.04)	1.68 (1.02 to 2.77)
	I am rarely in contact myself with patients who have COVID-19	35 (22.4)	121 (77.6)	1.90 (1.21 to 2.97)	1.59 (0.98 to 2.57)
	I am sometimes in contact myself with patients who have COVID-19	33 (19.4)	137 (80.6)	2.30 (1.46 to 3.61)*	1.61 (0.96 to 2.67)
	I am often in contact myself with patients who have COVID-19	11 (12.8)	75 (87.2)	3.74 (1.90 to 7.36)*	2.43 (1.17 to 5.05)
Perceived risk of COVID-19 to me personally	5-point scale, 1=no risk at all to 5=major risk	N=209, M=3.20, SD=0.90	N=616, M=3.25, SD=0.98	1.06 (0.90 to 1.25)	1.06 (0.89 to 1.27)
Perceived risk of COVID-19 to people in the UK	5-point scale, 1=no risk at all to 5=major risk	M=3.85, SD=0.82	N=618, M=3.80, SD=0.83	0.93 (0.77 to 1.13)	0.90 (0.74 to 1.10)
Had, or currently have, COVID-19	Think have not had COVID-19 and do not have it now	152 (26.8)	416 (73.2)	Reference	Reference
	Think have had COVID-19 or have it now	32 (20.3)	126 (79.7)	1.43 (0.93 to 2.21)	1.21 (0.77 to 1.90)
Symptoms of COVID-19 in household ‡	None present	202 (25.6)	588 (74.4)	Reference	Reference
	Present	3 (10.7)	25 (89.3)	2.77 (0.84 to 9.05)	2.25 (0.67 to 7.61)
It doesn't really matter what I do, I will probably catch COVID-19 anyway	5-point scale, 1=strongly disagree to 5=strongly agree	M=2.40, SD=0.98	M=2.61, SD=0.96	1.26 (1.06 to 1.49)	1.16 (0.97 to 1.39)
If I was going to catch COVID-19, I would have done by now	5-point scale, 1=strongly disagree to 5=strongly agree	M=2.46, SD=1.06	M=2.58, SD=1.08	1.12 (0.96 to 1.30)	1.17 (1.00 to 1.38)
I am worried that if I don't take care, I might pass COVID-19 to my friends or family	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.97, SD=0.91	M=4.00, SD=0.91	1.04 (0.88 to 1.24)	0.97 (0.81 to 1.16)
COVID-19 would be a serious illness for me	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.47, SD=0.96	M=3.30, SD=1.07	0.85 (0.73 to 0.99)	0.92 (0.78 to 1.09)
If I don't maintain social distancing at work, I will probably catch COVID-19	5-point scale, 1=strongly disagree to 5=strongly agree	M=3.28, SD=0.90	M=3.09, SD=0.91	0.79 (0.67 to 0.95)	0.79 (0.66 to 0.95)

*$p \leq 0.002$ (applying Bonferroni correction)

† Adjusting for sex, age, region of place of work, sector, work setting, and face-to-face contact with patients or service users.

‡ The number of valid cases in the table is different from the total count due to the use of weighted data and rounding errors.

For continuous variables, where N is the same as the column heading, it is not reported in individual cells.

Supplementary materials. Recoding of variables

We created a single binary variable indicating whether participants fully adhered to wearing PPE (mask, gloves, apron or gown and eye or face protection) or not. For these items, we coded people who wore items of PPE even when they did not need to as adherent.

We created a binary variable indicating whether participants had been in close contact with a colleague while at work.

We recoded whether people thought they had had COVID-19 or thought they had it now into, and presence of household symptoms into separate binary variables. Presence of symptoms was defined as a participant reporting that they had experienced cough, a high temperature / fever, or loss or change to their sense of smell or taste in the last seven days, or if a member of their household had experienced cough, a high temperature / fever, or loss or change to their sense of smell or taste in the last fourteen days. Under UK guidance at the time, either of these events should have resulted in the participant being required to not leave their home at all for a minimum of seven days.

We recoded perceived ease of maintaining physical distancing in different situations in the workplace and effectiveness of wearing PPE (face mask and gloves around patients, and face mask around colleagues) into separate continuous variables.

For all variables, unless stated otherwise, we coded answers of "don't know" as missing data.

Supplementary materials. Survey

Just to remind you – this survey is completely anonymous and there is no way that anyone will be able to identify which answers you provided or who you are. Please be honest in your answers!

#base: NHS staff only
[Q] {single} In the NHS how would you describe your occupational group? Hover over each for more detail.
<1> Allied Health Professionals / Healthcare Scientists / Scientific and Technical
<2> Medical and Dental
<3> Ambulance
<4> Public Health / Health Improvement
<5> Commissioning managers / support staff
<6> Registered Nurses and Midwives
<7> Nursing or Healthcare Assistants
<8> Social Care
<9> Wider Healthcare Team (inc. admin & clerical, HR, finance, IT, facilities and maintenance)
<10> Other General Management
<11> Other occupational group

[Q] {single} And which one of the following best describes your job role / position?
<1> Dental hygienist
<2> Dentist
<3> General practice doctor
<4> Hospital doctor
<5> Surgeon
<6> Medical related scientific services
<7> Pharmacist
<8> Radiographer
<9> Psychologist
<10> Mental health worker
<11> Occupational therapist
<12> Dietitian / Nutritionist
<13> Optometrist / Optician
<14> Orthoptist
<15> Physiotherapist
<16> Podiatrist
<17> Nurse
<18> Midwife
<19> Therapist
<20> Complementary medicine
<21> Ambulance Driver
<22> Paramedic
<23> Lab Technician
<24> Pharmacy Technician

<25> Scientist
<26> Analyst
<27> Medical Secretary
<28> Practice Manager
<29> Advice worker
<30> Youth worker
<31> Support Worker
<32> Counselling and psychotherapy
<33> Social Worker
<34> Care worker
<35> Fitness Instructor
<36> Health Care Assistant
<37> Health Visitor
<95 fixed> Other role

[Q] {single} Which, if any, of the following BEST describes where you work?
<1>NHS hospital
<2>Private hospital/ clinic
<3>GP surgery/ health centre
<4>Walk-in centre
<5>Ambulance trust/ service
<6>Pharmacy
<7>Dentist
<8>Opticians
<13> Clinical commissioning group
<14> Mental health trust / service
<9>Care home
<10>Community services
<11>Local Authority
<101>School
<102>University
<12>Other [Organisation_type_other] {open}

[Q] {single} Do you have face-to-face contact with patients / service users as part of your job?
<1>Yes, frequently
<2>Yes, occasionally
<3>No

Q3. What is your occupational group? (If Non-clinical for Q2 – single code)

1. Administrative and Clerical
2. Catering Services
3. Chaplaincy
4. Clinical Support
5. Domestic Services
6. Estates Services
7. Finance
8. Healthcare Scientists (laboratory, technician)
9. Human Resources

10. IT Support
11. Management
12. Research / Academic

Q1. To what extent, if at all, do you think the coronavirus (COVID-19) poses a risk to:

SCALE:

1. Major risk
2. Significant risk
3. Moderate risk
4. Minor risk
5. No risk at all
6. Don't know

STATEMENTS:

- People in the UK?
- You personally?

Q2. In the past **seven days**, which, if any, of the following symptoms have you experienced? Please select all that apply. [Multicode]

1. A new, continuous cough
2. High temperature / fever
3. Shortness of breath / difficulties breathing
4. Runny or blocked nose
5. Aches and pains
6. Chest pain
7. Chills / shivering
8. Sore throat
9. Diarrhoea
10. Headache
11. Stomach-ache
12. Feeling tired or having low energy
13. Loss or change to your sense of smell or taste
14. None of these
15. Don't know

Q3. In the past **fourteen days**, which, if any, of the following symptoms has **someone else in your household** experienced? Please select all that apply. [Multicode]

1. A new, continuous cough
2. High temperature / fever
3. Shortness of breath / difficulty breathing
4. Runny or blocked nose
5. Aches and pains
6. Chest pain
7. Chills / shivering
8. Sore throat
9. Diarrhoea

10. Headache
11. Stomach-ache
12. Feeling tired or having low energy
13. Loss or change to your sense of smell or taste
14. None of these
15. Don't know

Q4. In the past **twenty-four hours**, how many times, if at all, have you left your home for each of the following reasons? Please type your answers in the boxes below. [Record number 0-50 for each item]

1. To go to the shops, mainly for groceries, toiletries or medicine
2. To go to the shops, mainly for other items
3. For exercise
4. To go to work
5. To help someone else (e.g. delivered medicine or done their shopping for them)
6. To meet friends or family who do not live with you
7. Other
8. Not applicable – I have not left my home in the past 24 hours

Q5. In the past **twenty-four hours**, have you been to visit a friend or family member who does not live with you, and been inside their home?

1. Yes
2. No

Q7. Which of the following best describes whether or not you have had, or currently have, COVID-19? [Single code]

1. I have definitely had it, or definitely have it now
2. I have probably had it, or probably have it now
3. I have probably not had it, and probably don't have it now
4. I have definitely not had it, and definitely don't have it now
5. Don't know

Just to remind you once again – this survey is completely anonymous and there is no way that anyone will be able to identify which answers you provided or who you are. We would very much appreciate you providing truthful responses.

Q8. Which of the following best applies to you, at work? [single code]

1. I am never in contact myself with patients who have COVID-19 or anyone who has regular contact with patients who have COVID-19
2. I am never in contact myself with patients who have COVID-19 but work closely with staff who have regular contact with patients who have COVID-19
3. I am rarely in contact myself with patients who have COVID-19
4. I am sometimes in contact myself with patients who have COVID-19
5. I am often in contact myself with patients who have COVID-19

Q9. Thinking about the most recent time you were at work, which of the following best applied? In this question, by 'mask' we mean a standard face mask, **not** a N95/FFP2/FPP3 mask. [single code]

1. I was supposed to wear a mask, and I managed to wear it every time I was meant to
2. I was supposed to wear a mask, but I didn't manage to wear it every time I was meant to
3. I wasn't supposed to wear a mask, but I wore one anyway
4. I wasn't supposed to wear a mask, and I did not wear one
5. Not applicable – I have not physically been to work over the last six weeks

#base: excluding those who have not physically been to work over the last six weeks

Q10. Thinking about the most recent time you were at work, which of the following best applied? [single code]

1. I was supposed to wear gloves, and I managed to wear them every time I was meant to
2. I was supposed to wear gloves, but I didn't manage to wear them every time I was meant to
3. I wasn't supposed to wear gloves, but I wore them anyway
4. I wasn't supposed to wear gloves, and I did not wear them

#base: excluding those who have not physically been to work over the last six weeks

Q11. Thinking about the most recent time you were at work, which of the following best applied? [single code]

1. I was supposed to wear an apron or gown, and I managed to wear one every time I was meant to
2. I was supposed to wear an apron or gown, but I didn't manage to wear one every time I was meant to
3. I wasn't supposed to wear an apron or gown, but I wore one anyway
4. I wasn't supposed to wear an apron or gown, and I did not wear one

#base: excluding those who have not physically been to work over the last six weeks

Q12. Thinking about the most recent time you were at work, which of the following best applied? [single code]

1. I was supposed to wear face or eye protection (other than a mask), and I managed to wear it every time I was meant to
2. I was supposed to wear face or eye protection (other than a mask), but I didn't manage to wear it every time I was meant to

3. I wasn't supposed to wear face or eye protection (other than a mask), but I wore it anyway
4. I wasn't supposed to wear face or eye protection (other than a mask), and I did not wear it

#base: excluding those who have not physically been to work over the last six weeks

Q13. Thinking about the most recent time you were at work which, if any, of the following applied? [multicode]

1. I managed to wash my hands with soap and water for 20 seconds or apply hand gel as soon as I got to work
2. I managed to wash my hands with soap and water for 20 seconds or apply hand gel every time I needed to while I was at work
3. I managed to wash my hands with soap and water for 20 seconds or apply hand gel before eating at work
4. I managed to wash my hands with soap and water for 20 seconds or apply hand gel as soon as I got home
5. I had a shower before leaving work or as soon as I got home
6. None of these applied

#base: excluding those who have not physically been to work over the last six weeks

Q14. We are interested in how easy or difficult it is for people to maintain social distancing at work. For these questions, we are interested in whether you were near to someone else who works in the health sector. By near, we mean **within 2 meters for 15 minutes or more**. Thinking about the most recent time you were at work, which of these, if any applied? [Multicode]

1. I was near to someone else during a team meeting
2. I was near to someone else on a ward/unit/clinical area when not wearing PPE
3. I was near to someone else in a break room, cafe or canteen
4. I near to someone else in a corridor
5. I had direct physical contact with someone else (e.g. a hug, handshake, pat on the back)
6. None of these applied to me

#base: excluding those who have not physically been to work over the last six weeks

Q15. For each of the following statements, please indicate the extent to which you agree or disagree.

SCALE:

1. Strongly agree
2. Agree

3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

STATEMENTS: [Randomise order - single code for each]

- It doesn't really matter what I do, I will probably catch COVID-19 anyway
- If I was going to catch COVID-19, I would have done by now
- I am worried that if I don't take care, I might pass COVID-19 to my friends or family
- Wearing an ordinary surgical face mask around patients is an effective way to protect against COVID-19
- Wearing gloves around patients is an effective way to protect against COVID-19
- Social distancing around colleagues at work is an effective way to protect against COVID-19
- Wearing an ordinary surgical face mask around colleagues is an effective way to protect myself against COVID-19
- If I don't wear the right PPE at work, my colleagues will notice
- If I don't maintain social distancing at work, my colleagues will notice
- If I don't wear the right PPE at work, I will probably catch COVID-19
- If I don't maintain social distancing at work, I will probably catch COVID-19
- As far as I'm aware, there are people from my workplace who have been seriously ill with COVID-19
- I am angry about the way PPE has been given out to me or other healthcare workers
- COVID-19 would be a serious illness for me
- I feel safe from COVID-19 at home
- I feel safe from COVID-19 at work
- I feel safe from COVID-19 when out and about
- There is no point bothering with PPE around colleagues or social distancing if you already have a lot of contact with COVID-19 patients
- My colleagues seem to take PPE and social distancing seriously
- My line manager seems to take PPE and social distancing seriously
- Wearing PPE makes it hard for me to do my job properly

#base: excluding those who have not physically been to work over the last six weeks

Q16. For each of the following statements, please indicate the extent to which you agree or disagree. [Randomise order - single code for each – Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree]

1. There are facilities at my workplace available that make it easy to wash my hands when I get to work
2. My workplace has clear markings which help me stay 2 meters away from other people
3. I have received adequate training in my workplace for the purposes of health and safety during the COVID-19 pandemic (i.e., correct use of PPE and social distancing)
4. I am given all the correct personal protective equipment that I need to do my job safely

5. I have enough information about which personal protective equipment to use and when to use it
6. The way my workplace is designed makes it easy for me to stay 2 meters away from other people

#base: excluding those who have not physically been to work over the last six weeks

Q16a. For the following two statements, please indicate whether this has occurred at your workplace in the past week. [Yes, this has occurred; No, this has not occurred; Don't know / Not applicable – I have not been to my workplace in the past week]

1. In the past week, I have found a sink at my workplace where I couldn't wash my hands because it was broken
2. In the past week, I have found a sink at my workplace with no soap or paper towels or a gel dispenser which was empty

#base: excluding those who have not physically been to work over the last six weeks

Q17To what extent do you think it is easy or difficult to keep 2m (3 steps) away from other people in the following situations at your workplace?

SCALE:

1. Very easy
2. Somewhat easy
3. Neither easy nor difficult
4. Somewhat difficult
5. Very difficult
6. Not applicable

STATEMENTS:

- Eating in canteens
- During rest breaks
- When saying hello or goodbye to colleagues
- When carrying out work that **does not** involve patient contact
- When carrying out work that **does** involve patient contact
- When moving from area to area (e.g. in corridors)

Q18. For each of the following statements, please indicate the extent to which you agree or disagree.

SCALE:

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Disagree strongly

6. Don't know

STATEMENTS:

- Information from the NHS about PPE can be trusted
- Information from the NHS about PPE is accurate
- Information from the NHS about PPE tells the whole story
- Information from the NHS about PPE is biased or one-sided

Q19. In which one of the following ways would you most **prefer** to get updates related to PPE (e.g. how to use, availability etc.)? [single code]

1. Team meetings at your workplace
2. Email circulars from your work
3. Your line manager
4. The NHS website
5. The PHE website
6. Your NHS trust / work website
7. Posters or leaflets at work
8. From the infection prevention and control team
9. Other (please write in)