

# Personal Protective Equipment:

Use and availability during the COVID-19 pandemic

POLICY AND POSITION STATEMENTS



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## Introduction

Since the beginning of the UK's response to the COVID-19 pandemic, nursing staff from all types of health and care setting have expressed concerns about the supply, distribution and safety of personal protective equipment (PPE). It has been clear that the right PPE is not getting to the health and care staff who needed it at the right time. This puts patients, the public and health and care staff at unnecessary levels of risk.

In response to these concerns, the Royal College of Nursing (RCN) has developed and distributed an online survey amongst nursing staff to establish a baseline assessment of the issues relating to PPE, and to use as the basis for testing the effectiveness of Government policy and employer actions over the coming weeks.

We urge all Governments in the UK, and all organisations providing health and care services to take immediate action to address the issues raised by nursing staff.

## Methodology

The Royal College of Nursing (RCN) developed and distributed an online survey to all RCN members exploring respondent's experiences of personal and protective equipment (PPE) across all settings in health and social care. We are aiming to repeat the survey at regular intervals to assess the changing working environment for our members.

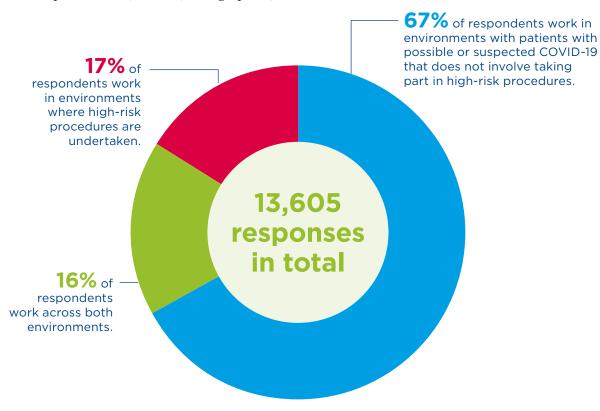
This survey was framed around the UK-wide published guidance on the recommended use of personal protective equipment<sup>1</sup>. We explored how far respondents working in specific settings had access to personal protective equipment and infection control and associated training needed to do their job safely; where PPE had been sourced; any issues experienced with the prescribed PPE; any pressure experienced to reuse single use PPE, or to treat patients without the correct PPE; and how far concerns had been raised or addressed.

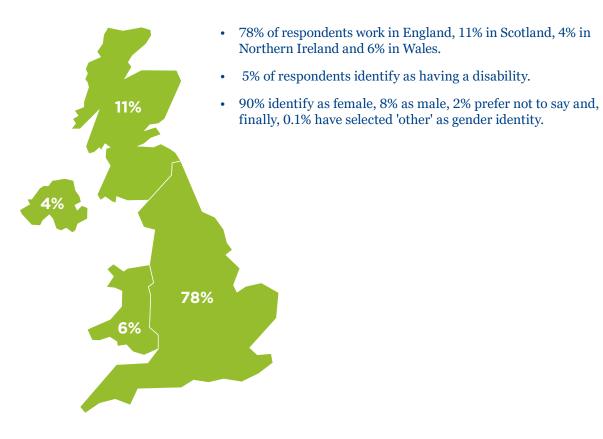
The link to this survey was emailed to all RCN members and publicised through our social media platforms. The survey was open over the Easter Bank Holiday weekend – from Friday 10 April until Monday 13 April 2020.

The majority of questions were closed quantitative with one supplementary open-text question.

In total, 13,605 people responded to the survey.

- 88% are registered nurses/midwives.
- 5% are nursing support workers.
- 1.3% nursing students.
- 0.8% nursing associates.
- 0.2% nursing degree apprentices.
- 4% of respondents selected 'Other', some of these were not nursing professionals (such as allied health practitioners, doctors, radiographers, etc).





Ethnicity	%
Asian/Asian British: Bangladeshi	0.1%
Asian/Asian British: Indian	1.9%
Asian/Asian British: Pakistani	0.2%
Asian/Asian British: other	2.4%
Black/Black British: African	3.6%
Black/Black British: Caribbean	0.8%
Black/Black British: other	0.3%
Chinese	0.3%

Mixed: White and Asian	0.3%
Mixed: White and Black African	0.2%
Mixed: White and Black Caribbean	0.3%
Mixed: other	0.5%
White: British	75.4%
White: Irish	3.3%
White: other	5.1%
Prefer not to say	3.3%
Other (please specify)	2.0%

## Access to standard PPE

11,314 respondents told us they work in environments with patients with confirmed or possible COVID-19, that does not involve taking part in high-risk procedures. According to UK-wide guidance, working in such environments requires the following items of personal protective equipment:

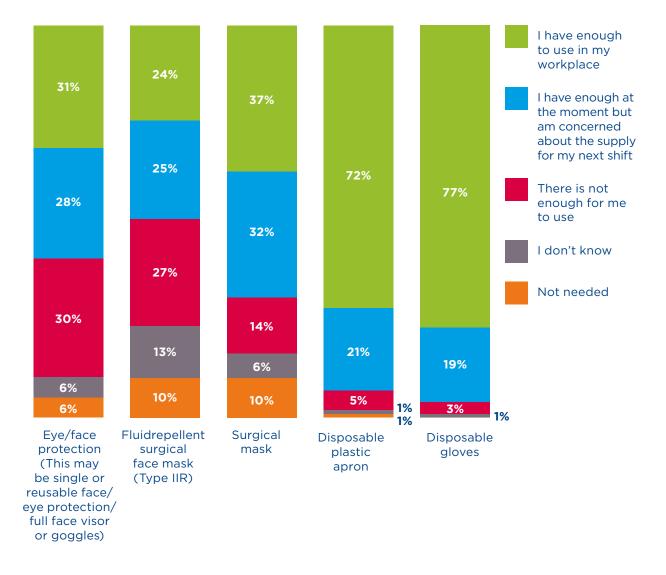
- Eye/face protection. (This may be single or reusable face/eye protection/full face visor or goggles.)
- Fluid-resistant surgical face mask (Type IIR).
- Disposable plastic apron.
- Disposable gloves.

The responses below are from those working in an environment with patients with confirmed or possible COVID-19 who do not take part in high-risk procedures; deliver or assist with aerosolgenerating procedure (AGP); or work in a high-risk area even if not participating/supporting in AGPs, for example, intensive care units or the hot zone of an emergency department.

#### Access to enough supplies of PPE

- 30% of respondents said there is not enough eye/face protection for them to use for the duration of the shift. A further 28% said they have enough now but are concerned for the supply for their next shift.
- More than one in four respondents (27%) said there are not enough fluid-resistant surgical face masks for them to use for the duration of the shift. A quarter of respondents (25%) have enough now but are concerned for the supply for their next shift.
- 14% said they were lacking surgical masks. A third of respondents (32%) said they have enough surgical masks for them to use for the duration of the shift but are concerned for the supply for their next shift.
- Least shortage is with disposable aprons (5%) and gloves (3%).

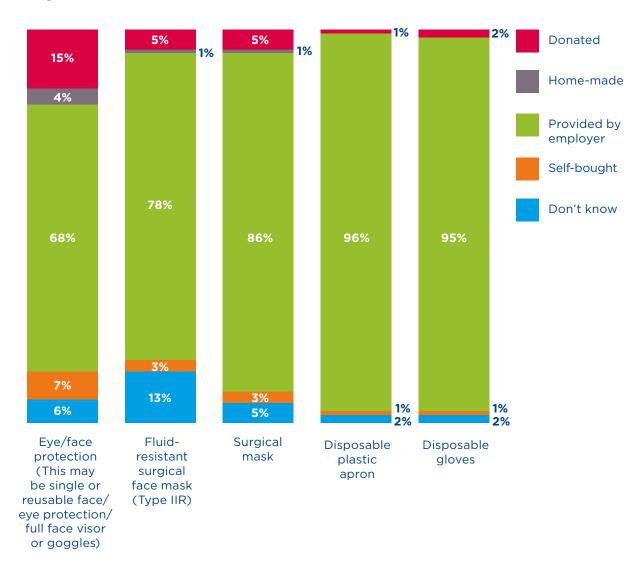
Diagram 1: Do you have enough of the following standard personal protective equipment (PPE) items for the duration of your shift?



#### Where did your standard PPE come from?

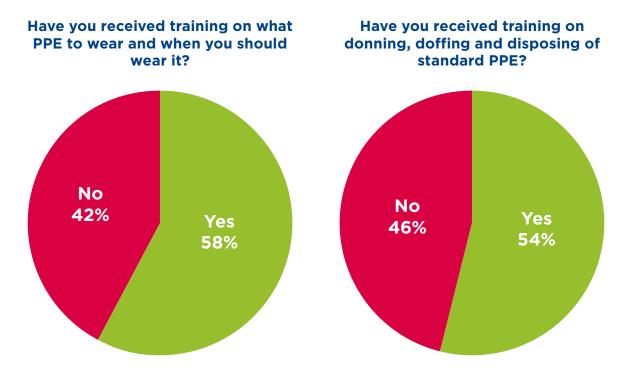
- The majority of PPE was reported to be provided by the employer.
- However, 7% of respondents said they bought their own eye/face protection, and 5% said they made their own eye/face protection. A further 15% reported that their eye/face protection had been donated.
- Respondents reported that 5% of fluid resistant masks and 5% of surgical masks had been donated. Whilst 3% reported that they had bought each of these themselves.

#### Diagram 2



#### Training received/when

- While 58% of respondents reported having training, more than 40% have received no training on what PPE to wear and when to wear it.
- 46% of respondents have not received training on donning, doffing and disposing of standard PPE.
- Where training has been delivered, over 80% has been in the last month.



#### Pressure to reuse equipment

• During this COVID-19 pandemic, 39% of respondents have been asked to re-use single use equipment.

## Working in high-risk environments

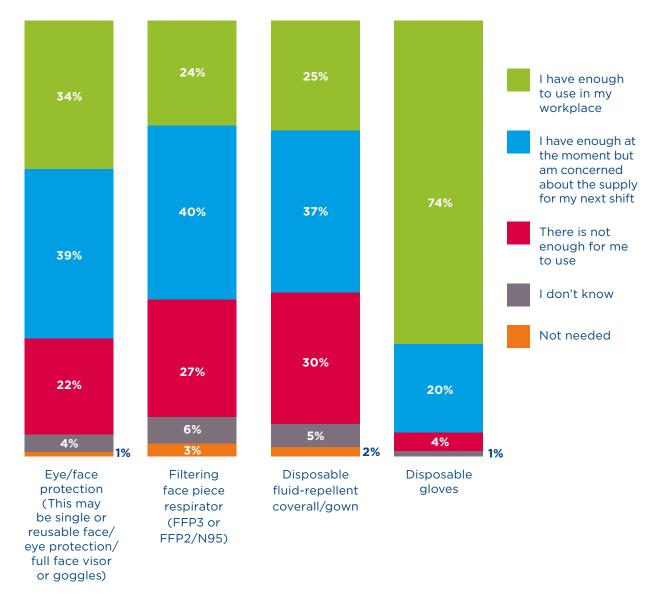
4,446 respondents told us they work in environments where AGPs or other high-risk procedures are undertaken. According to the guidance (see Methodology) working in such environments requires the following items of personal protective equipment:

- Eye/face protection. (This may be single or reusable face/eye protection/full face visor or goggles.)
- Filtering face piece respirator (FFP3 or FFP2/N95).
- · Disposable fluid-repellent coverall/gown.
- · Disposable gloves.

#### Access to enough supplies of PPE

- While 34% of nursing staff reported having sufficient eye/face protection, more than one in five (22%) did not.
- 39% reported being concerned about supplies of eye/face protection not being enough for their next shift. Almost a third (27%) of respondents reported not having enough filtering facepiece respirator (for example, FFP3 or FFP2/N95) for the duration of their shift.
- 40% reported that they had enough but were concerned about not having enough for their next shift Almost a third (30%) reported not to have enough disposable fluid-repellent coverall/gowns for the duration of their shift. In addition, almost 37% were concerned that there would not be enough supply for their next shift.
- Only 4% of respondents reported not to have enough disposable gloves for the duration of their shift.
- Almost 20% were concerned there would not be enough supply for their next shift. Over a third who have equipment are concerned about PPE for their next shift.

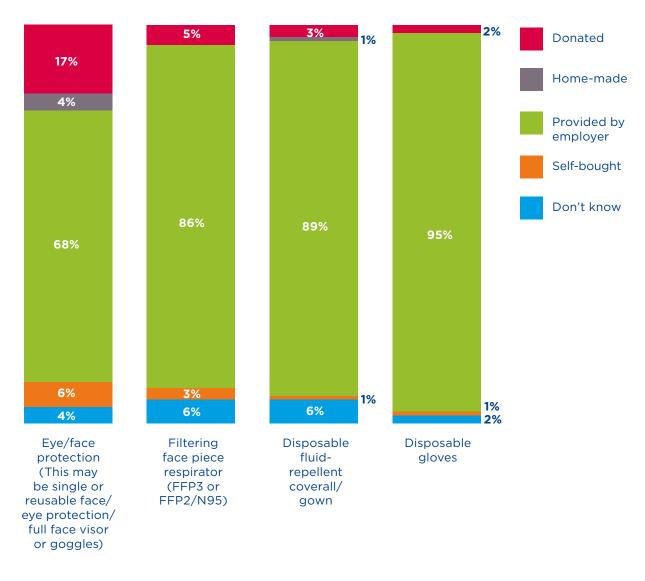
Do you have enough of the following personal protective equipment (PPE) items, as recommended for supporting aerosol-generating procedures (AGPs) or other high-risk procedures, for the duration of your shift?



## Where do supplies of PPE, as recommended for supporting aerosol generating procedures (AGPs) or other high-risk procedures come from?

- While 68% of respondents reported supplies came from their employer, some supplies were donated (17%), self-bought (6%) or home-made (4%).
- 3% reported having bought their own filtering face piece respirator (for example FFP3 or FFP2/N95) and 5% were using donated ones.
- Employers supply at least 86% of the rest of the equipment with nowhere near the numbers of homemade or donated equipment.

## Where did protective equipment (PPE) items, as recommended for supporting aerosol generating procedures (AGPs) or other high-risk procedures, come from?

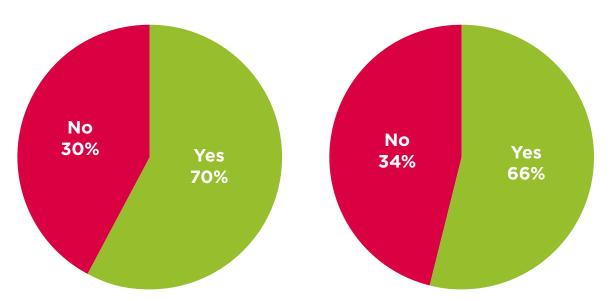


#### Training on correct use of PPE as recommended for supporting aerosolgenerating procedures (AGPs) or other high-risk procedures

- While the majority of those whose work involves taking part in AGPs or other high-risk procedures have received training, 30% of respondents reported not having received training on what PPE to wear and when to use it and 34% reported not having received training on donning, doffing and disposing of PPE.
- Where they had received training, 82% had received it within the last month.
- 34% of those whose work involves taking part in AGPs or other high-risk procedures, reported not having their mask fit-tested.

Have you received training on PPE (as recommended for supporting AGPs or other high-risk procedures) to wear and when you should wear it?

Have you received training on donning, doffing and disposing of PPE (as recommended for supporting AGPs or other high-risk procedures)?



#### Pressure to reuse equipment

• During this COVID-19 pandemic, 51% of respondents have been asked to re-use single use equipment.

## Questions asked of all respondents

These questions were asked to all respondents. Anecdotal evidence from our members revealed that they were concerned with being pressured by their employers to care for confirmed or possible COVID-19 patients without suitable PPE. We wanted to explore the extent to which this was a problem for nursing professionals. We have also received calls about specific issues our members had with using the prescribed PPE equipment, so we wanted to use this survey to explore the range of issues with PPE.

In addition, we wanted to understand how far nursing professionals had access to materials and facilities to help address infection control in their work environments. Finally, we asked the extent to which nursing professionals were able to raise concerns, how they did this and whether these concerns had been addressed.

- Half of respondent said that during this COVID-19 pandemic, they have felt pressure to care for a patient without adequate protection as outlined in the current PPE guidance.
- Almost one in five (18%) of respondents has had issues with supplied PPE due to specific individual needs such as having disabilities, religious and cultural practices, having facial hair or wearing glasses.

We ran analysis of the free text to better understand the main issues relating to the use of PPE.

The overriding issue was related to the use of PPE for those wearing spectacles. Respondents described the protective goggles provided to staff as being self-assembly and flimsy. They did not fit properly over their glasses and left gaps at the sides of their eyes. In addition, the lenses were often scratched, and nurses were being asked to re-use and share goggles. Wearing glasses also resulted in challenges in terms of wearing protective face masks and shields or visors. They fog, or steam up which compromises the nurse's vision whilst carrying out patient care. This was especially challenging when nurses were providing close up personal care or administering injections. Those wearing varifocal glasses also reported difficulties in reading computer screens and notes.

A second issue was around fit testing for FFP2 and FFP3 masks, many respondents report how they were fit tested for one mask, but when these had depleted they were replaced with masks they had not been fit tested for. Some respondents said they had failed the fit test due to having too small a face, wearing a religious hijab or headscarf, or as a result of having a beard. For some with facial hair the option of shaving this was removed due to their religious beliefs. Similarly, removal of the hijab or headscarf was also not possible on religious grounds. These nurses expressed some concern at remaining open to contagion and while some reported receiving hoods, these were in short supply and often had to be shared amongst staff. There was a sense from some of the respondents that PPE masks in particular appeared to be made primarily for men. Tall respondents commented that long gowns were too short for their arms.

Respondents also reported more general issues around PPE. For example, some nurses reported receiving conflicting advice about PPE, citing their organisations adherence to Public Health England (PHE), rather than guidance from the World Health Organization (WHO) on where PPE should be used, and what kind of PPE should be used. In addition, nurses reported receiving conflicting advice from infection control nurses within the same organisation. Some respondents reported being pressured by managers to re-use PPE in clear contravention of the manufacturer's instructions. Others reported how PPE was either non-existent or that it had been locked away as a result of theft, or where it was available, especially in the form of gloves and aprons, these were very flimsy and often tore when being removed from the dispenser.

A further issue reported was the length of time staff were expected to wear full PPE during a shift. Nurses reported having little or no time to take a break, and also expressed concern about not being able to drink when wearing masks, face shields or visors for fear of contaminating the equipment. Some of the respondents reported their fears of being infected with COVID-19 as a result of the issues raised.

#### Do you have access to the following general infection control supplies?

- Around a third of respondents (31%) said they have enough alcohol-based hand rub and disinfectant wipes for cleaning equipment (29%) but are concerned about the supply for the next shift.
- 40% of respondents said there is not enough hand cream for them to use.

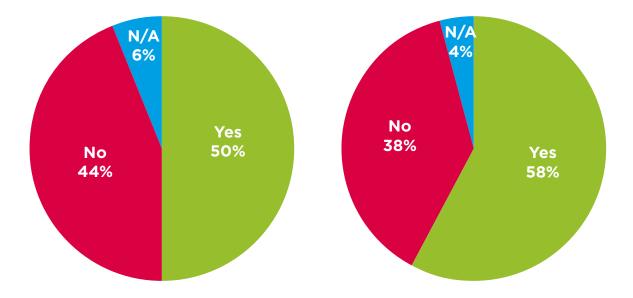
	I have enough to use in my workplace	I have enough at the moment but am concerned about the supply for my next shift	There is not enough for me to use	l don't know	Not needed
Alcohol based hand rub (ABHR)	54%	31%	14%	1%	0%
Hand wash/soap	77%	16%	5%	1%	1%
Clinical waste disposal bag	77%	14%	6%	3%	1%
Detergent/ disinfectant	62%	18%	8%	9%	3%
Disinfectant wipes for equipment cleaning	52%	29%	16%	3%	1%
Hand creams	37%	12%	40%	9%	2%

#### Access to suitable and sufficient washing and changing facilities

- Half of respondents do not have access to suitable and sufficient facilities for changing clothes where they wear a uniform.
- More than half of respondents (58%) do not have access to suitable and sufficient washing facilities.

In your place of work, do you have access to suitable and sufficient facilities for changing clothes where you wear a uniform (segregated/seating/somewhere to store personal clothes)?

In your place of work, do you have access to suitable and sufficient washing facilities, including showers if needed?



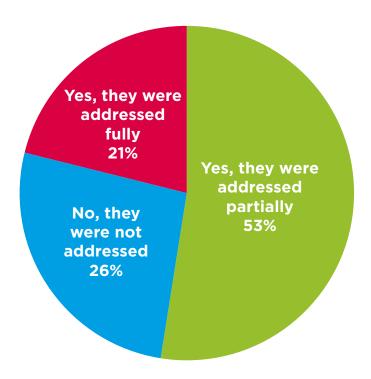
#### PPE concerns raised during the COVID-19 pandemic

- More than two in three (70%) of respondents have raised concerns about PPE during the COVID-19 pandemic.
- Concerns are most likely to be raised with their manager either verbally (91%) and/or in writing (13%).
- 16% of respondents raised it formally with someone more senior (such as the director of nursing).
- Only 4% of respondents have raised concerns via an incident/near miss form.
- Of respondents who raised concerns, only 21% reported that these were fully addressed.
- Over half (53%) reported that their concerns were partially addressed.

#### What method did you use to raise your concerns? Select all that apply

Method	%
Raised it verbally with my manager	91%
Raised it in writing with my manager	13%
Filled in an incident form/near miss form or equivalent	4%
Raised it with the RCN or other trade union workplace representative	4%
Raised it formally with someone more senior (for example, nursing director, managing director, etc)	16%
Raised it with RCN Direct or equivalent	2%

#### Have your concerns been addressed?



## Conclusion

Our findings show that members from similar types of settings and in similar types of roles have reported huge variation in their experiences with accessing PPE. There are still shortages of essential PPE equipment in all settings, particularly face and eye protectors, but also filtering face piece respirators and disposable fluid-repellent coveralls for use in high-risk environments.

Many respondents said that they have been asked to reuse single-use PPE. Reusing PPE which is designed for single-use is not safe, and will not be suitable to provide adequate protection for those using it, and the patients they are caring for. Although a very high proportion of respondents reported that they have raised concerns to their managers, these concerns were not always addressed.

We will continue to monitor the provision of PPE to its members closely and raise concerns on their behalf, and will repeat this survey regularly to ensure that any ongoing issues with PPE are identified and addressed urgently.

rcn.org.uk/covid-19

# Appendix - Personal protective equipment (PPE)

Our members across the UK have been telling us they are unable to access adequate and appropriate personal protective equipment (PPE) for use when caring for patients with possible or confirmed COVID-19. We have developed a survey aiming to explore whether you have access to the correct PPE to allow you to comply with the recommended guidance.

Please fill in this short survey to share your experiences with us. It will take no longer than ten minutes to complete. These results will allow us to understand which issues need to be addressed to ensure you are protected while doing your work, and will inform our lobbying and campaigning in this area.

Your responses are anonymous and if you have any questions about the survey please email: evidence@rcn.org.uk

The survey closes at 11pm on Monday 13 April 2020.

If you need further information on PPE including what you should be provided with depending on the circumstances, please follow this <code>link</code>. In your workplace this guidance should be incorporated into your local infection control policies and procedures to support your role and practice.

Questions marked with a \* must be answered to move on through the survey.

Wh	nere do you mainly work? *
	GP practice
	NHS trust or NHS Board
	Local authority care agency
	Local authority residential home/care home
	Local authority nursing home/care home
	Higher education institution
	Hospice
	Private care agency
	Private residential home/care home
	Private nursing home/care home
	Private community employer
	Private hospital
	Prison
	Police custody
	Social enterprise health care provider
П	Other (please specify):

Wł	nat is your role? *
	Registered nurse/midwife
	Nursing associate
	Nursing degree apprentice
	Nursing support worker (including healthcare support worker, care assistant etc)
	Student nurse
	Other (please specify):
Wł	nich of the scenarios below best describes the type of care you provide? *
	Working in environments with patients with possible or suspected COVID-19 that DOES NOT involve:  - taking part in high-risk procedures  - delivering or assisting with aerosol generating procedure (AGP)  - working in a 'high-risk area' even if not participating/supporting in AGPs , for example, intensive care units or the hot zone of an emergency department.
	Working in environments where high-risk procedures are undertaken, including: - aerosol generating procedures (AGP) in a clinical or community setting - care of a ventilated patient - intensive care units - hot zone of an Emergency Department etc.
	I work across both scenarios

## Standard personal protective equipment (PPE)

Do you have enough of the following standard personal protective equipment (PPE) items for the duration of your shift?  $^\ast$ 

	I have enough to use in my workplace	enough at the moment but am concerned about the supply for my next shift	There is not enough for me to use	I don't know	Not needed
Eye/face protection (This may be single or reusable face/eye protection/full face visor or goggles)					
Fluid repellent surgical face mask (Type IIR)					
Surgical mask					
Disposable plastic apron					
Disposable gloves					
During this Covid-19  ☐ Yes ☐ No ☐ Don't know	pandemic, hav	e you been asked	to re-use single	use equipment?	*
Have you received tra	ining on what	standard PPE to v	vear and when y	ou should wear i	t? *
□ Yes					
□ No					

Wh	nen did you receive	e this trainin	g? *				
	Within the last month						
	Within the last 2	months					
	Within the last 3	months					
	More than 3 mon	iths ago					
Ha	ve you received tra	aining on dor	nning, doffing a	nd disposing	of standard PPI	E? *	
	Yes						
	No						
<b>TA7</b> l-	on did was maaiss	a thia tuaimin	~2 *				
	nen did you receive		g; "				
	Within the last m						
_	Within the last 2						
	Within the last 3						
	More than 3 mon	iths ago					
<b>TA7</b>	nere did your stand	land DDE con	no from? Coloat	all that apply	. *		
VV 1.	iere did your stand	iaiu FFE con	ne monir select		′		
		Donated	Home-made	Provided by employer	Self-bought	Don't know	Not applicable
(Th	e/face protection nis may be single reusable face/eye stection/full face or or goggles)						
	id- resistant pe IIR) surgical sk						
Sur	rgical mask						
Dis apr	sposable plastic on						
Dis	sposable gloves						

## Aerosol generating procedure (AGP) and PPE

Do you have enough of the following personal protective equipment (PPE) items, as recommended for supporting aerosol generating procedures (AGPs) or other high-risk procedures, for the duration of your shift?  $^*$ 

	I have enough to use in my workplace	I have enough at the moment but am concerned about the supply for my next shift	There is not enough for me to use	I don't know	Not needed
Eye/face protection (This may be single or reusable face/eye protection/full face visor or goggles)					
Filtering face piece respirator (FFP3 or FFP2/N95)					
Disposable fluid-repellent coverall/gown					
Disposable gloves					
During this Covid-19  ☐ Yes ☐ No ☐ Don't know	pandemic, hav	e you been asked	to re-use single	use equipment?	
Have you received tra procedures (AGPs) or					sol generating
□ Yes					
□ No					
When did you receive	this training?	*			
☐ Within the last m	onth				
☐ Within the last 2					
☐ Within the last 3					
☐ More than 3 mon	ths ago				

Have you received training on donning, doffing and disposing of PPE, as recommended for supporting aerosol generating procedures (AGPs) or other high-risk procedures? *						
□ Yes						
□ No						
When did you receive	e this trainin	g? *				
☐ Within the last n	nonth					
☐ Within the last 2	months					
☐ Within the last 3	months					
☐ More than 3 mor	nths ago					
Was your filtering fac	ce piece respi	irator mask fit t	ested? *			
□ Yes						
□ No						
Where did your PPE, high-risk procedures				generating proc	edures (AGI	Ps) or other
	Donated	Home-made	Provided by employer	Self-bought	Don't know	Not applicable
Eye/face protection (This may be single or reusable face/eye protection/full face visor or goggles)						
Filtering face piece respirator (FFP3 or FFP2/N95)						
Disposable fluid-repellent coverall/gown						
Disposable gloves						

## **General questions about the use of PPE**

ring this COVID-19 pandemic, have you felt pressured to care for a patient without adequate otection as outlined in the current PPE guidance? *
Yes
No
ve you had any issues with supplied PPE due to specific individual needs, this could be through ving disabilities, religious and cultural practices, having facial hair or wearing glasses etc? *
Yes
No
Don't know

Please tell us what was the issue and how has it impacted on your ability to use PPE?  $^{\ast}$ 

#### **General infection control**

Do you have access to the following general infection control supplies? \*

	I have enough to use in my workplace	I have enough at the moment but am concerned about the supply for my next shift	There is not enough for me to use	I don't know	Not needed
Alcohol based hand rub (ABHR)					
Hand wash/soap					
Clinical waste disposal bag					
Detergent/ disinfectant					
Disinfectant wipes for equipment cleaning					
Hand creams		0			
Changing fa		ccess to suitable a	nd sufficient fac	cilities for changi	ng clothes
where you wear a uni					
□ Yes					
□ No					
□ Not applicable					
In your place of work showers if needed?	, do you have a	ccess to suitable a	nd sufficient wa	shing facilities, i	ncluding
□ Yes					
□ No					
□ Not applicable					

## **Raising concerns**

	ring the COVID-19 pandemic, have you raised any concerns you have had about personal protective sipment (PPE)? $^{\ast}$
	Yes
	No
	I don't have any concerns
Wh	nat method did you use to raise your concerns? Select all that apply *
	Raised it verbally with my manager
	Raised it in writing with my manager
	Filled in an incident form/near miss form or equivalent
	Raised it with the RCN or other trade union workplace representative
	Raised it formally with someone more senior (e.g. Nursing Director, Managing Director, etc.)
	Raised it with RCN Direct or equivalent
Ha	ve your concerns been addressed? *
	Yes, they were addressed fully
	Yes, they were addressed partially
	No, they were not addressed
A	bout you
Wh	tich country do you mainly work in? *
	England
	Northern Ireland
	Scotland
	Wales

Wh	ich region do you mainly work in? *
	Channel Islands
	East Midlands
	Eastern
	Isle of Man
	London
	North West
	Northern
	South East
	South West
	West Midlands
	Yorkshire & The Humber
To	which broad ethnic group do you belong? *
	Asian/Asian British: Bangladeshi
	Asian/Asian British: Indian
	Asian/Asian British: Pakistani
	Asian/Asian British: other
	Black/Black British: African
	Black/Black British: Caribbean
	Black/Black British: other
	Chinese
	Mixed: White and Asian
	Mixed: White and Black African
	Mixed: White and Black Caribbean
	Mixed: other
	White: British
	White: Irish
	White: other
	Prefer not to say
	Other (please specify):

Do yo	ou identify yourself as having a disability? *
	<i>Y</i> es
	No
	Prefer not to say
How	would you describe your gender? *
	Male
□ F	Female
□ F	Prefer not to say

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