

At least 23 nationalities among NHS staff killed by covid

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A unique analysis of data on 203 publicly reported deaths of health and social care workers from covid-19, shows a significant over-representation of BAME individuals. This is the third article in a series produced by Lesa Kearney, Simon Lennane, Ella Woodman, Emira Kursumovic and Tim Cook

Covid-19 continues to dominate media reports, in particular around the disparity in mortality rates with over-representation of people from black, Asian or minority ethnic populations. Sadly, deaths of health and social care workers continue to be reported daily, and our dataset of reported cases now exceeds 200 deaths.

We have updated our analysis to explore whether patterns have changed as case numbers increase.

As before, our dataset is collated from media/social media reports of deaths from covid-19 of health and social care workers in the UK. Those falling outside these categories, or who are retired workers or on long-term leave, were excluded.

As many media reports were clearly compiled from the same source, cases were considered confirmed after two separate reports, at least one being from a traditional media source. All reports are in the public domain and no privileged medical information was sought. We have included confirmed cases reported up to 11 May, 2020.

Findings

We identified and confirmed 203 deaths and excluded 18. All individuals were believed to have been working prior to their illness. Cases continue to be reported more than a month after a death, sometimes following a funeral or remembrance service, so it is likely that the dataset is incomplete.

Among all reported deaths, 193 (95 per cent) involved staff working in patient-facing roles. Ninety-five (47 per cent) were female and 108 (53 per cent) male. Amongst 164 whose age was reported, the median was 56 years with 26 per cent under 50 years and 7 per cent aged 70 years or over. Eighty-six per cent of cases were from England, 7 per cent from Wales, 7 per cent from Scotland and 0.5 per cent from Northern Ireland.

Within England, 48 per cent of deaths were from London and the South East, 16 per cent from the North West and 9 per cent from the West Midlands. Deaths by date and region are shown in the below figure. One hundred and sixty-six (82 per cent) worked in the NHS, 35 (15 per cent) in the social care sector and two (1 per cent) in dental practice. In the social care sector, males accounted for 37 per cent.

Cumulative health and social care deaths, by geographical region

Ethnicity was described for (199) 98 per cent of cases: 125 (63 per cent) individuals were from a BAME population. Region of birth is reported for 81 per cent. Ethnicity and country of birth is shown in tables 1 and 2. Thirty-six Filipinos died, 19 of whom were nurses.

Where known, 36 per cent of individuals from BAME populations were from London, 16 per cent from the South East, 12 per cent from the North West, 11 per cent from the West Midlands. The dataset includes a minimum of 102 (50 per cent) migrants from at least 27 different countries, but as migrant status was rarely identified for white staff this is likely to be an underestimate.

There were 63 (32 per cent) nurses and midwives, 50 (23 per cent) health support workers, 32 (16 per cent) doctors and dentists, 25 (12 per cent) allied health professionals (none of whom were physiotherapists), and five (2 per cent) ambulance and transport staff.

Infrastructure supporting staff accounted for 28 (14 per cent) deaths – most of whom had patient-facing roles in transport, portering and domiciliary care. Nurses and healthcare assistants made up the largest number of deaths in all settings.

The characteristics of the 166 NHS staff are presented in table 3, with comparator populations included where possible. Deaths were commonest in men and in older staff. The 166 NHS deaths amount to 0.61 per cent of all hospital deaths reported up to 11 May. Overall, 75 per cent of NHS deaths were amongst staff working in a hospital setting.

Eighteen (11 per cent) individuals worked in a mental health setting, while mental health staff account for 18 per cent of NHS staff.

Among 32 doctors and dentists, there were 11 physicians, eight surgeons, seven GPs, one psychiatrist and one dentist and four whose specialty was not stated. Among the physicians there were two cardiologists, two emergency physicians, two care of the elderly physicians and five from five other specialties.

All eight surgeons had different specialties. Median age was 61 and only three were under 50 years while nine were over 65 years. Thirty (94 per cent) were male and 30 (94 per cent) were from a BAME population. No death of an anaesthetist or intensive care doctor was reported.

Table 1: Role of health and social care staff who have died of covid-19 classified by ethnicity and gender. BAME = Black and minority ethnic. Note as ethnicity was not always known we report percentage of individuals with known ethnicity.

Role	Total	Known BAME deaths	% BAME*	% Male
Nurses and midwives	63	48	76	38
Doctors and dentists	32	30	94	94
Health support staff	50	28	56	34
Infrastructure staff	28	10	35	57
Allied health professionals	25	7	28	64
Ambulance and transport	5	2	40	100
Total - All Roles	203	125	63	53

Table 2: Most common countries of birth for BAME individuals working in health and social care who died during the covid-19 pandemic.

Country of origin	Total n
Philippines	36
Zimbabwe	10
India	9
Nigeria	7
Pakistan	6
Sudan	4
Malawi	3
Egypt	3
Ghana	3
Other	18

Table 3. Characteristics of 166 NHS healthcare worker deaths in the United Kingdom from covid-19 reported until 11 May 2020

Variable	Known	% of known	Comparison Groups *	
Sex			NHS workforce	Wider population
Female	71	43%	77%	51%
Male	95	57%	23%	49%
Age			NHS workforce	Wider population
Median (IQR, [range])	56 (49-62 [23-84])			
<35	5	4%	29%	31%
35-44	12	9%	24%	15%
45-54	45	33%	28%	17%
55-64	49	36%	18%	15%
>64	25	18%	2%	22%
Unknown	30			
Setting				
Hospital	119	75%		
Community	35	22%		
Other	5	3%		
Unknown	7			
Profession			NHS workforce	
Nurses & midwives	54	33%	27%	
Health support staff	29	17%	26%	
Doctors	31	19%	12%	
Infrastructure	27	16%	21%	
Allied health professionals	20	12%	13%	
Ambulance and transport	5	3%	1%	
Ethnicity			NHS Workforce	Wider population
White	57	35%	79%	86%
Asian	52	32%	11%	7%
Black	42	26%	6%	3%
Chinese	0	0%	1%	1%
Mixed	0	0%	2%	2%
Other	10	6%	2%	1%
Undefined	3	2%		
Unknown	2			
BAME	106	64%	21%	13%
Geographic Region			% E+W COVID-19 deaths	NHS workforce
London	49	30%	20%	13%
North West	22	13%	14%	5%

* NHS workforce figures are taken from workforce statistics for NHS England and Wales, population figures are derived from population data provided by ONS for England and Wales

Variable	Known	% of known	Comparison Groups *	
South East	22	13%	14%	9%
West Midlands	13	8%	11%	9%
East of England	11	7%	10%	7%
East Midlands	11	7%	7%	6%
Wales	10	6%	5%	5%
Scotland	7	4%	-	11%
North East	6	4%	5%	13%
Yorkshire and the Humber	6	4%	8%	9%
South West	5	3%	6%	10%
Northern Ireland	1	1%	-	2%
Unknown	3			

** NHS workforce figures are taken from workforce statistics for NHS England and Wales, population figures are derived from population data provided by ONS for England and Wales*

Analysis

Our updated dataset shows very similar patterns as the numbers rise. The increased number of reported deaths has not diluted the significant over-representation of BAME individuals. Other studies have confirmed this increased BAME mortality, independent of other risk factors.

Filipino staff remain prominent amongst reported deaths, accounting for as many more deaths as the next five countries combined. Filipino nurses comprise 3.8 per cent of the nursing workforce but represented 22 per cent of NHS nurse deaths. Similarly, 12 per cent of nurses who died were from Zimbabwe and 6 per cent from Nigeria, despite accounting for only 0.75 per cent and 0.45 per cent of NHS nurses respectively.

There remains notable under-representation of staff working in anaesthesia and intensive care settings. Amongst 31 deaths of doctors, there were no anaesthetists or intensive care doctors though these specialties alone account for around 12 per cent of hospital doctors.

We identified one death of an intensive care nurse but no others among other staff directly working in anaesthesia or intensive care, including nurses, operating department practitioners and physiotherapists. International data on healthcare worker deaths is generally supportive of this finding.

Our data continues to provide some evidence of the value of rigorous use of infection control precautions, including personal protective equipment. However, deaths are a very blunt tool for identifying risk of infection. It is likely that the time from infection to death from covid-19 is at least three weeks and may be much longer.

Many individuals had spent several weeks in hospital prior to death. The majority of infections that caused the deaths reported here are, therefore, likely to have been acquired before Public Health England revised their PPE advice (first week of April) to include significantly increased use of face masks throughout hospitals and social care settings. We cannot judge the impact of that.

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The ONS have reported on deaths by occupation and found significantly higher rates of death amongst social care workers, but not healthcare workers. Deaths subject to coroner's inquest were excluded from their analysis and 50 deaths have been reported to the Health and Safety Executive.

The ONS dataset included approximately equal numbers of deaths from healthcare and social care settings, whereas social care accounted for only 1 in 6 of our cases, perhaps indicating that social care deaths are less likely to be reported in the media. We identified 110 NHS staff below the age of 65 whereas the ONS internet scraped data had only identified 71 by the same date. While this suggests we have included cases the ONS have not captured, it is likely that even our dataset underrepresents the true number of cases.

Previous analysis has shown that healthcare workers have favourable mortality compared to other working people and male healthcare professionals in England and Wales were found to have the lowest mortality amongst all occupations 1991 – 2011. It will be necessary to analyse centrally collected data within this and other such contexts before the full impact of covid-19 on health and social care workers can be fully known.

We welcome the NHS England and Public Health England-led review into deaths among the BAME population, and involvement of the Equality Commission. We also welcome collection of data relating to deaths in healthcare workers by the government and independent researchers. It was recently reported that health and social care workers in patient-facing roles have a six-fold higher rate of covid-19 infection than others.

Collection of data on rates of covid-19 related hospital admission and critical illness should also be collected and the means to do so exist. Transparent reporting of such data will enable concerns to be addressed and appropriate adjustments made to minimise risk to healthcare workers.