**Personal protective behaviours in NHS workers**[14th May 2020]

DHSC are commissioning weekly polls of the UK general population. Within this, we identified a sample who report working for the NHS (termed NHS workers). We compared NHS workers to people who were working but not for the NHS on a variety of items relating to personal protective behaviours.

Three main limitations apply. First, we are unsure how representative the sample of NHS workers is. The high percentage of NHS workers in our sample without a university degree, and low percentage who indicate that they live in rural areas, suggest potential differences between this sample and the true population of NHS workers (Table 1). Second, all associations investigated were cross-sectional; we cannot determine the direction of causality. Third, note that these analyses are based on self-reported data – self reports of behaviour may be unreliable.

*Key outcomes*

Compared to workers who do not work for the NHS, NHS workers were:

* less likely to identify cough and fever as among the most common symptoms of coronavirus.
* more likely to report having experienced cough or high temperature/fever and to think they have had coronavirus. There were no differences between NHS and non-NHS workers in staying at home (~40%) or going to work (~10%) when symptomatic.
* less likely to think that washing your hands thoroughly and regularly was effective in preventing the spread of coronavirus and were less confident that they could do so.
* more likely to wear professional face masks or gloves when out and about. They were no more likely to wash their hands when they got home (~80%), into work (~75%) or before eating or preparing food (~80%).
* more likely to report out-of-home activity and were more likely to have been in close contact with someone while out and about.
* more likely to be very or extremely worried about coronavirus, and to perceive a major or significant risk of coronavirus to people in the UK and themselves.

*Recommendations*

Messages to NHS workers should:

* Increase awareness about the symptoms of coronavirus and enforcing the requirement to stay at home if ill.
* Emphasise that handwashing is highly effective, straightforward to do, and must be performed not only at work but also in day-to-day life.
* Discuss the importance of adhering to standard social distancing practices outside of work settings. These messages should be clear that wearing masks, face coverings or gloves is not sufficient to reduce risk to themselves or others.

These surveys were not intended to provide detailed data on NHS workers. Additional research is required to identify how best to convey these messages, whether differences exist within NHS subgroups, and what other behaviours or risk factors may be important.

*Differences between NHS workers and those not working for the NHS*

Compared to those not working in the NHS, NHS workers were:

* less likely to identify the most common symptoms of coronavirus (see Figure 1 and Table 2).
* more likely to report having experienced symptoms of coronavirus (cough or high temperature / fever) and to think they had had coronavirus (see Figure 1). There were no differences in behaviour (staying at home, going out to work) in those who were symptomatic (see Figure 2).
* more likely to have worn a professional face mask and protective gloves while out and about (see Figure 3). It is possible that NHS workers may have interpreted this question to relate to their working environment. There were no differences in self-reported hand hygiene.
* less likely to think that washing your hands thoroughly and regularly was an effective way of preventing the spread of coronavirus and were less confident that they could do so (see Figure 4). It is possible that NHS workers may have interpreted this question in relation to their working environment.
* more likely to have gone shopping for items other than groceries/pharmacy and have met up with friends or family who they did not live with in the last week (see Figure 5). They were also more likely to have gone to work and have provided help or care for a vulnerable person.
* reported more close contact (coming closer than 2 metres, 3 steps to people from outside their household) while out shopping for groceries/pharmacy, shopping for items other than groceries/pharmacy, at work, providing help or care for a vulnerable person, and while exercising (see Figure 6). This may be due to an increased sense of safety from wearing a professional face mask and protective gloves, although we did not test this formally.
* more worried about coronavirus, and perceived a greater risk of coronavirus to people in the UK and themselves (see Figure 7).

Figure 1. Percentage of people who identified cough and high temperature / fever as symptoms of coronavirus, who reported having a cough or high temperature / fever in the last week, and who think they have had coronavirus, by NHS worker status (\* denotes statistically significant difference, *p*<.05).

Figure 2. Percentage of people who reported staying at home (self-isolating) and going to work when symptomatic, by NHS worker status.

Figure 3. Percentage of people who reported that they were frequently or very frequently carrying out hand hygiene and personal protective behaviours, by NHS worker status (\* denotes statistically significant difference, *p*<.05).

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Figure 4. Percentage of people who agreed or strongly agreed that and effective way to prevent the spread of coronavirus, and that if they wanted to, they could adopt hand hygiene and personal protective behaviours, by NHS worker status (\* denotes statistically significant difference, *p*<.05).

Figure 5. Percentage of those who reported having gone out in the last seven days, by NHS worker status (\* denotes statistically significant difference, *p*<.05).

Figure 6. Percentage of people who came into close contact (closer than 2m, 3 steps) with someone from outside their household while out of their home, by NHS worker status (\* denotes statistically significant difference, *p*<.05).

Figure 7. Percentage of people who were very or extremely worried about coronavirus, and who perceived a major or significant risk of coronavirus to people in the UK and themselves, by NHS worker status.

Table 1. Sociodemographic characteristics of people who indicated they were working (full-time, part-time, or self-employed), by NHS worker status.

|  |  |  |  |
| --- | --- | --- | --- |
|  | | Not NHS worker n=14,331, n (%) | NHS workers n=1,655, n (%) |
| Gender | Male | 7,311 (51.2) | 780 (47.2) |
| Female | 6,973 (48.8) | 872 (52.8) |
| Age | 16 to 24 years | 1,419 (9.9) | 227 (13.7) |
| 25 to 34 years | 3,465 (24.2) | 554 (33.5) |
| 35 to 44 years | 3,025 (24.1) | 370 (22.4) |
| 45 to 54 years | 3,234 (22.6) | 293 (17.7) |
| 55 to 64 years | 2,378 (16.6) | 167 (10.1) |
| 65 to 74 years | 618 (4.3) | 39 (2.4) |
| 75+ years | 192 (1.3) | 5 (0.3) |
| Have a dependent child | No | 8,666 (60.5) | 814 (49.2) |
| Yes | 5,665 (39.5) | 841 (50.8) |
| Having a chronic illness (oneself, any) | None | 11,392 (80.4) | 1,026 (62.6) |
| Present | 2,771 (19.6) | 614 (37.4) |
| Household member has any chronic illness | None | 12,146 (85.8) | 1,429 (87.1) |
| Present | 2,017 (14.2) | 211 (12.9) |
| Index of multiple deprivation | 1st quartile | 2,987 (20.8) | 282 (17.0) |
| 2nd quartile | 3,527 (24.6) | 269 (22.3) |
| 3rd quartile | 3,843 (26.8) | 465 (28.1) |
| 4th quartile | 3,974 (27.7) | 539 (32.6) |
| Socioeconomic status (highest earner is manual worker) | Lower SES | 4,757 (33.2) | 562 (34.0) |
| Higher SES | 9,574 (66.8) | 1,093 (66.0) |
| Ethnicity | White | 12,909 (90.5) | 1,412 (85.7) |
| Black and Minority ethnicities | 1,351 (9.5) | 235 (14.3) |
| Education | GCSE/vocational/A-level/No formal qualifications | 7,368 (59.9) | 662 (45.8) |
| Degree or higher | 4,941 (40.1) | 784 (54.2) |
| Region | Urban | 12,018 (85.3) | 1,451 (88.9) |
| Rural | 2,074 (14.7) | 181 (11.1) |

Table 2. Number and percentage of people who identified individual symptoms as symptoms of coronavirus (*symptoms according to World Health Organisation[[1]](#footnote-1) in italics*).

|  |  |  |  |
| --- | --- | --- | --- |
|  | Not NHS worker n=9,482, n (%) | NHS workers n=1,115, n (%) | *p*-value |
| *Cough* | *7,177 (75.7)* | *689 (61.8)* | *<.001\** |
| *High temperature / fever* | *7,408 (78.1)* | *676 (60.6)* | *<.001\** |
| *Shortness of breath / difficulty breathing* | *5,787 (61.0)* | *522 (46.8)* | *<.001\** |
| *Loss of sense of smell / taste* | *2,129 (37.6)* | *207 (32.2)* | *.01\** |
| Flu-like symptoms | 3,548 (37.4) | 355 (31.8) | <.001\* |
| *Sore throat* | *1,920 (20.2)* | *199 (17.8)* | *.06* |
| *Feeling tired or having low energy* | *1,195 (12.6)* | *121 (10.9)* | *.09* |
| *Headaches* | *873 (9.2)* | *103 (9.2)* | *.97* |
| *Aches and pains* | *826 (8.7)* | *125 (11.2)* | *.006\** |
| Chest pain | 620 (6.5) | 84 (7.5) | .21 |
| Sneezing | 579 (6.1) | 86 (7.7) | .04\* |
| *Runny or blocked nose* | *553 (5.8)* | *95 (8.5)* | *<.001\** |
| Chills / shivering | 523 (5.5) | 84 (7.5) | .006\* |
| *Diarrhoea* | *182 (1.9)* | *43 (3.9)* | *<.001\** |
| Pain in your arms, legs or joints | 250 (2.6) | 60 (5.4) | <.001\* |
| Loss of appetite | 244 (2.6) | 58 (5.2) | <.001\* |
| Nausea / vomiting | 213 (2.2) | 49 (4.4) | <.001\* |
| Dizziness | 163 (1.7) | 43 (3.9) | <.001\* |
| Feeling your heart pound or race | 134 (1.4) | 38 (3.4) | <.001\* |
| Back pain | 89 (0.9) | 33 (3.0) | <.001\* |
| Fainting spells | 81 (0.9) | 44 (3.9) | <.001\* |
| Stomach ache | 76 (0.8) | 31 (2.8) | <.001\* |
| Trouble sleeping | 72 (0.8) | 30 (2.7) | <.001\* |
| Other | 24 (0.3) | 2 (0.2) | .77 |
| Don’t know | 160 (1.7) | 35 (3.1) | .001\* |
| Cough and high temperature / fever | 5,987 (64.2) | 542 (50.2) | <.001\* |

Datasets used:

* Department of Health and Social Care weekly tracker
  + Tracking DHSC marketing, coronavirus attitudes, beliefs, knowledge, reported behaviour, satisfaction with Government response, credibility of Government.
  + Data collected weekly (Monday to Wednesday) since late January.
  + N~2000 per wave (~1050 full-time, part-time or self-employed, ~120 NHS workers per wave).
  + Analyses were conducted on people who reported working (full-time, part-time, or self-employment). We compared those who were working for the NHS to those who did not work for the NHS using chi-squared tests.
  + Market research company commissioned: BMG Research.

*Please note that this work has been conducted rapidly and has not been peer reviewed or subject to normal quality control measures.*

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1. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-coronaviruses> [↑](#footnote-ref-1)