**Annex**

**Table A. Prevalence of SARS-CoV-2 antibodies by participant characteristics, Hospital 1**

|  |  |  |  |
| --- | --- | --- | --- |
| **Participant characteristics** | **Total**  | **SARS-CoV-2 IgG detected** | **P-value\*** |
| **N** | **n** | **% (95% CI)** |
| **Age groups** | 18-29 | 728 | 148 | 20 (17 - 23) | <0.001 |
|  | 30-39 | 831 | 121 | 15 (12 -17) |
|  | 40-49 | 793 | 99 | 13 (10 -15) |
|  | 50-59 | 532 | 70 | 13 (10 - 16) |
|  | Over 60 | 158 | 26 | 17 (11 - 23) |
| **Sex** | Female | 2,326 | 347 | 15 (13 -16) | 0.355 |
|  | Male | 716 | 117 | 16 (14 -19) |
| **Ethnicity** | Irish  | 2,262 | 304 | 13 (12 - 15) | <0.001 |
|  | Any other white background | 267 | 44 | 17 (12 - 22) |
|  | African and any other black background | 65 | 15 | 23 (14 - 35) |
|  | Asian background | 393 | 94 | 24 (20 - 29) |
|  | Other  | 55 | 7 | 13 (5.3 - 25) |
| **Country of birth\*** | Ireland | 2,182 | 291 | 13 (12 - 15) | <0.001 |
|  | United Kingdom | 152 | 25 | 16 (11 - 23) |
|  | India | 201 | 46 | 23 (17 -29) |
|  | Philippines | 166 | 45 | 27 (21 - 35) |
|  | Poland | 24 | 7 | 29 (13 -51) |
|  | USA | 22 | 3 | 14 (2.9 - 35) |
|  | Other  | 295 | 47 | 16 (12 - 20) |
| **Education** | Primary | 27 | 4 | 15 (4 - 34) | 0.017 |
|  | Secondary | 420 | 53 | 13 (10 -16) |
|  | Third level | 1,300 | 229 | 18 (16 -20) |
|  | Post-graduate | 1,295 | 178 | 14 (12 -16) |
| **Role** | Admin | 454 | 44 | 10 (7.1 - 13) | <0.001 |
|  | Medical/dental | 460 | 66 | 14 (11 - 18) |
|  | Nursing/ midwifery | 1,045 | 215 | 21 (18 -23) |
|  | Allied health | 616 | 61 | 10 (7.7 - 13)  |
|  | General support | 255 | 30 | 12 (8.1 -16) |
|  | Health care assistant | 157 | 42 | 27 (20 - 34) |
|  | Other | 55 | 6 | 11 (4.1 - 22) |
| **Lives with** | Alone | 256 | 21 | 8 (5.2 -12) | 0.004 |
|  | With others | 2,768 | 441 | 16 (15 -17) |
|  | Missing | 18 | 2 | 11 (1.4 -35) |
| **Lives with HCW** | Yes | 928 | 193 | 21 (18 -24) | <0.001 |
|  | No | 2,060 | 262 | 13 (11 - 14) |
|  | Missing | 54 | 9 | 17 (7.9 – 29) |

\* Calculated using the Chi-Square test

 **Table B. Prevalence of SARS-CoV-2 antibodies by COVID-19 related characteristics, Hospital 1**

|  |  |  |  |
| --- | --- | --- | --- |
| **Participant characteristics** | **Total** | **SARS-CoV-2 IgG detected** | **P-value\*** |
| **N** | **n** |  **% (95% CI)** |
| **Contact of a COVID-19 case** | Yes | 1,185 | 272 | 23 (21 - 25) | <0.001 |
| No | 1,847 | 190 | 10 (8.9 - 12) |
|  | Missing | 10 | 2 | 20 (2.5 - 56) |
| **Setting of close contact** | Contact at work | 1,039 | 225 | 22 (19 -24) | <0.001 |
| Contact outside of work | 146 | 47 | 32 (25 - 40) |
| **Workplace exposure** | Daily contact with COVID-19 patients | 510 | 108 | 21 (18 - 25) | <0.001 |
|  | Daily contact with patients without COVID  | 1,611 | 269 | 17 (15 -19) |
|  |  No patients contact | 918 | 87 | 9.5 (7.7 - 12) |
| **Previous COVID-19 like symptoms** | No symptoms | 1,359 | 72 | 5.3 (4.2 – 6.6) | <0.001 |
| Had symptoms | 1,683 | 392 | 23 (21 - 25) |
| **Previous COVID-19 PCR test** | Yes | 1,685 | 385 | 23 (21 - 25) | <0.001 |
| No | 1,353 | 79 | 5.8 (4.6 - 7.2) |
| **Previous positive COVID-19 PCR test** | Yes | 292 | 277 | 94.9 (91.7 - 97.1) | <0.001 |
| No | 2,746 | 187 | 6.8 (5.8 – 7.8) |

\* Calculated using the Chi-Square test

**Table C. Prevalence of SARS-CoV-2 antibodies by participant characteristics, Hospital 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **Participant characteristics** | **Total**  | **SARS-CoV-2 IgG detected** | **P-value\*** |
| **N** | **n** | **% (95% CI)** |
| **Age groups** | 18-29 | 622 | 29 | 4.7 (3.1 – 6.6) | 0.002 |
|  | 30-39 | 786 | 47 | 6.0 (4.4 – 7.9) |
|  | 40-49 | 722 | 25 | 3.5 (2.2 – 5.1) |
|  | 50-59 | 469 | 7 | 1.5 (0.6 – 3.0) |
|  | Over 60 | 146 | 4 | 2.7 (0.8 – 6.9) |
| **Sex** | Female | 2,152 | 75 | 3.5 (2.8 – 4.3) | 0.003 |
|  | Male | 592 | 37 | 6.3 (4.4 – 8.5) |
| **Ethnicity** | Irish  | 2,182 | 80 | 3.7 (2.9 – 4.5) | 0.031 |
|  | Any other white background | 284 | 18 | 6.3 (3.8 - 9.8) |
|  | African and any other black background | 48 | 1 | 2.1 (0.1 - 11) |
|  | Asian background | 184 | 13 | 7.1 (3.8 - 12) |
|  | Other  | 46 | 0 | - |
| **Country of birth\*** | Ireland | 2,091 | 82 | 3.9 (3.1 – 4.8) | 0.229 |
|  | United Kingdom | 192 | 7 | 3.7 (1.5 - 7.4) |
|  | India | 98 | 8 | 8.2 (3.6 - 15) |
|  | Philippines | 25 | 2 | 8.0 (1.0 - 26) |
|  | Poland | 48 | 3 | 6.3 (0.1 - 17) |
|  | USA | 38 | 0 | - |
|  | Other  | 253 | 10 | 4.0 (1.9 – 7.2) |
| **Education** | Primary | 2 | 0 | - | 0.690 |
|  | Secondary | 264 | 8 | 3.0 (1.3 – 5.9) |
|  | Third level | 1,245 | 54 | 4.3 (3.3 – 5.6) |
|  | Post-graduate | 1,232 | 50 | 4.1 (3.0 – 5.3) |
| **Role** | Admin | 349 | 4 | 1.2 (3.1 – 2.9) | <0.001 |
|  | Medical/dental | 522 | 36 | 6.9 (4.9 – 9.4) |
|  | Nursing/ midwifery | 1,019 | 48 | 4.7 (3.5 - 6.2) |
|  | Allied health | 475 | 12 | 2.5 (1.3 – 4.4) |
|  | General support | 179 | 3 | 1.7 (0.3 – 4.8) |
|  | Health care assistant | 129 | 8 | 6.2 (2.7 - 12) |
|  | Other | 72 | 1 | 1.4 (0.1 -7.5) |
| **Lives with** | Alone | 223 | 7 | 3.1 (1.3 – 6.4) | 0.658 |
|  | With others | 2,518 | 105 | 4.2 (3.4 – 5.0) |
|  | Missing | 4 | 0 | - |
| **Lives with HCW** | Yes | 839 | 41 | 4.9 (3.5 – 6.6) | 0.354 |
|  | No | 1,859 | 70 | 3.8 (3.0 – 4.7) |
|  | Missing | 47 | 1 | 2.1 (0.1 – 11.3) |

\* Calculated using the Chi-Square test or the Fisher exact test

**Table D. Prevalence of SARS-CoV-2 antibodies by COVID-19 related characteristics, Hospital 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **Participant characteristics** | **Total** | **SARS-CoV-2 IgG detected** | **P-value\*** |
| **N** | **n** |  **% (95% CI)** |
| **Contact of a COVID-19 case** | Yes | 519 | 53 | 10 (7.7 – 13) | <0.001 |
| No | 2,224 | 59 | 2.7 (2.0 – 3.4) |
| Missing | 2 | 0 | - |
| **Setting of close contact** | Contact at work | 456 | 44 | 9.7 (7.0 – 12.7) | 0.255 |
| Contact outside of work | 63 | 9 | 14 (6.7 – 25.4) |
| **Workplace exposure** | Daily contact with COVID-19 patients | 392 | 28 | 7.1 (5.0 – 10) | <0.001 |
|  | Daily contact with patients without COVID  | 1,634 | 75 | 4.6 (3.7 -5.7) |
|  |  No patients contact | 717 | 9 | 1.3 (0.1 – 2.4) |
| **Previous COVID-19 like symptoms** | No symptoms | 1,517 | 20 | 1.3 (0.8 – 2.0)  | <0.001 |
| Had symptoms | 1,228 | 92 | 7.5 (6.1 – 9.1) |
| **Previous COVID-19 PCR test** | Yes | 1,093 | 89 | 8.1 (6.6 – 9.9) | <0.001 |
| No | 1,650 | 23 | 1.4 (0.9 – 2.1) |
| **Previous positive COVID-19 PCR test** | Yes | 75 | 73 | 97.3 (90.7 – 99.7) | <0.001 |
| No | 2,668 | 39 | 1.5 (1.0 – 2.0) |

\* Calculated using the Chi-Square test or the Fisher exact test

**Table E. Association between risk factors and the presence of SARS-CoV-2 antibodies, Hospital 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Participant characteristics** | **Unadjusted relative risk (95% CI)** | **P-value** | **Adjusted relative risk (95% CI)** | **P-value** |
| **Age groups** | 18-29 | 1.5 (1.2 – 2.0) | 0.001 | 1.3 (1.0 – 1.8) | 0.029 |
|  | 30-39 | 1.1 (0.8 - 1.5) | 0.468 | 1.0 (0.7 – 1.3) | 0.886 |
|  | 40-49 | 0.9 (0.7 – 1.3) | 0.718 | 0.9 (0.7 – 1.2) | 0.407 |
|  | 50-59 | Ref. |  |  |  |  |
|  | Over 60 | 1.3 (0.8 -1.9) | 0.289 | 1.3 (0.9 – 1.9) | 0.214 |
| **Sex** | Female | Ref. |  |  |  |
|  | Male | 1.1 (0.9 – 1.3) | 0.353 | 1.1 (0.9 – 1.4) | 0.318 |
| **Ethnicity** | Irish  | Ref. |  |  |  |
|  | Any other white background | 1.2 (0.9 – 1.6) | 0.168 | 1.2 (0.9 - 1.5) | 0.309 |
|  | African and other black background | 1.7 (1.1 – 2.7) | 0.020 | 1.4 (0.9 – 2.2) | 0.137 |
|  | Asian background | 1.8 (1.4 – 2.2) | <0.001 | 1.3 (1.0 – 1.6) | 0.052 |
|  | Other  | 0.9 (0.5 -1.9) | 0.879 | 0.7 (0.3 – 1.5) | 0.395 |
| **Country of birth** | Ireland | Ref. |  | Did not enter |
|  | India | 1.7 (1.3 – 2.3) | <0.001 |
|  | Philippines | 2.0 (1.6 – 2.7) | <0.001 |
|  | United Kingdom | 1.2 (0.8 – 1.8) | 0.272 |
|  | Poland | 2.2 (1.2 – 4.1) | 0.015 |
|  | USA | 1.0 (0.4 - 2.9) | 0.967 |
|  | Other  | 1.2 (0.9 – 1. 6) | 0.218 |
| **Education** | Primary | 1.1 (0.4 – 2.7) | 0.872 | Did not enter |
|  | Secondary | 0.9 (0.7 – 1.2) | 0.558 |
|  | Third level | 1.3 (1.1 - 1.5) | 0.007 |
|  | Post-graduate | Ref. |  |
| **Role** | Admin | Ref. |  |  |  |
|  | Doctor\Dental | 1.5 (1.0 - 2.2) | 0.032 | 1.0 (0.7 – 1.5) | 0.840 |
|  | Nursing | 2.1 (1.6 – 2.9) | <0.001 | 1.6 (1.1 – 2.2) | 0.013 |
|  | HCA | 2.8 (1.9– 4.0) | <0.001 | 2.0 (1.3 – 3.0) | 0.002 |
|  | General support | 1.2 (0.8 – 1.9) | 0.386 | 1.0 (0.6 – 1.5) | 0.870 |
|  | Allied HCW | 1.0 (0.7 – 1.5) | 0.909 | 0.9 (0.6 – 1.3) | 0.522 |
|  | Other | 1.1 (0.5 – 2.8) | 0.773 | 1.2 (0.5 – 2.6) | 0.734 |
| **Lives with** | Alone | Ref. |  |  |  |
|  | With others | 1.9 (1.3 – 3.0) | 0.002 | 1.6 (1.0 – 2.4) | 0.037 |
| **Lives with HCW** | No | Ref. |  |  |  |
|  | Yes | 1.6 (1.4 - 1.9) | <0.001 | 1.6 (1.0 – 2.4) | 0.037 |
| **Contact of a COVID-19 case** | No | Ref. |  |  | Did not enter |
|  | Yes | 2.2 (1.9 – 2.6) | <0.001 |
| **Close contact at work \*\*** | No | 1.5 (1.1 – 1.9) | 0.003 | Did not enter |
|  | Yes | Ref. |  |  |
| **Workplace exposure to COVID-19 patients** | No patients contact | Ref. |  |  |
| Daily contact with patients without COVID  | 1.8 (1.4 – 2.2) | <0.001 | 1.3 (1.0 – 1.7) | 0.0398 |
| Daily contact with COVID-19 patients | 2.2 (1.7 – 2.9) | <0.001 | 1.4 (1.0 – 1.9) | 0.036 |
| **Previous COVID-19 like symptoms** | No  | Ref. |  | Did not enter |
|  | Yes | 4.4 (3.5 – 5.6) | <0.001 |

\*\*Calculated for close contacts of COVID-19 cases only (n=1,185)

**Table F. Association between risk factors and the presence of SARS-CoV-2 antibodies, Hospital 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Participant characteristics** | **Unadjusted relative risk (95% CI)** | **P-value** | **Adjusted relative risk (95% CI)** | **P-value** |
| **Age groups** | 18-29 | 3.2 (1.4 – 7.1) | 0.006 | 2.7 (1.2 – 6.2) | 0.018 |
|  | 30-39 | 4.0 (1.8 – 8.8) | <0.001 | 3.5 (1.6 – 7.6) | 0.002 |
|  | 40-49 | 2.3 (1.0 – 5.3) | 0.047 | 2.0 (1.0 – 5.0) | 0.064 |
|  | 50-59 | Ref. |  |  |  |  |
|  | Over 60 | 1.8 (0.5 -6.2) | 0.327 | 2.1 (0.6 – 6.9) | 0.241 |
| **Sex** | Female | Ref. |  |  |  |
|  | Male | 1.8 (1.2 – 2.6) | 0.003 | 1.9 (1.2 – 3.0) | 0.005 |
| **Ethnicity** | Irish  | Ref. |  |  |  |
|  | Any other white background | 1.7 (1.0 – 2.8) | 0.031 | 1.6 (1.0 - 2.6) | 0.072 |
|  | African and other black background | 0.6 (0.1 – 4.0) | 0.570 | 0.4 (0.1 – 2.5) | 0.295 |
|  | Asian background | 1.9 (1.1 – 3.4) | 0.023 | 1.0 (0.6 – 1.9) | 0.921 |
|  | Other  | no observation | - | - | - |
| **Country of birth** | Ireland | Ref. |  | Did not enter |
|  | India | 2.1 (1.0 – 4.2) | 0.039 |
|  | Philippines | 2.0 (0.5 – 7.8) | 0.29 |
|  | United Kingdom | 0.9 (0.4 – 2.0) | 0.850 |
|  | Poland | 1.6 (0.5 – 4.9) | 0.413 |
|  | USA | no observation | - |
|  | Other  | 1.0 (0.5 – 1.9) | 0.981 |
| **Education** | Primary | no observation | - | Did not enter |
|  | Secondary | 0.7 (0.4 – 1.6) | 0.436 |
|  | Third level | 1.1 (0.7 - 1.6) | 0.729 |
|  | Post-graduate | Ref. |  |
| **Role** | Admin | Ref. |  |  |  |
|  | Doctor\Dental | 6.0 (2.2 - 17) | 0.001 | 2.4 (0.8 – 7.6) | 0.126 |
|  | Nursing | 4.1 (1.5 – 11) | 0.006 | 2.2 (0.7 – 6.7) | 0.157 |
|  | HCA | 5.4 (1.7 – 14) | 0.005 | 2.7 (0.8 – 9.4) | 0.122 |
|  | General support | 1.5 (0.3 - 6.5) | 0.616 | 0.6 (0.1 – 2.7) | 0.445 |
|  | Allied HCW | 2.2 (0.7 – 6.8) | 0.168 | 1.4 (0.4 – 4.4) | 0.571 |
|  | Other | 1.2 (0.1 – 11) | 0.863 | 0.6 (0.1 – 5.0) | 0.607 |
| **Lives with** | Alone | Ref. |  |  |  |
|  | With others | 1.3 (0.6 – 2.8) | 0.460 | 1.0 (0.5 – 2.2) | 0.920 |
| **Lives with HCW** | No | Ref. |  |  |  |
|  | Yes | 1.3 (0.9 -1.9) | 0.175 | 0.9 (0.6 – 1.4) | 0.736 |
| **Contact of a COVID-19 case** | No | Ref. |  |  | Did not enter |
|  | Yes | 3.9 (2.7 – 5.5) | <0.001 |
| **Close contact at work \*\*** | No | 1.5 (0.8 – 2.9) | 0.249 | Did not enter |
|  | Yes | Ref. |  |  |
| **Workplace exposure to COVID-19 patients** | No patients contact | Ref. |  |  |
| Daily contact with patients without COVID  | 3.7 (1.8 – 7.3) | <0.001 | 2.0 (0.9 – 4.4) | 0.069 |
| Daily contact with COVID-19 patients | 5.7 (2.7 –12) | <0.001 | 3.1 (1.3 – 6.9) | 0.009 |
| **Previous COVID-19 like symptoms** | No  | Ref. |  | Did not enter |
|  | Yes | 5.7 (3.5– 9.2) | <0.001 |

\*\*Calculated for close contacts of COVID-19 cases only (n=519)