Supplementary Information

Household transmission of the SARS-CoV-2 Omicron variant in Denmark

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1 Background

This section provides some background information on the circumstances surrounding our study, i.e., the situation in Denmark between 1st-31st December 2021. Table S1 shows the number of cases identified with RT-PCR, the proportion of positive cases selected for Variant PCR testing and the proportion of positive cases selected for Variant PCR for which Omicron was detected.

Table S1: Daily number of cases detected in Denmark during December 2021

| Sample date | Positive RT-PCR tests (N) | Selected for Variant PCR (%) | With Omicron (%) |
|-------------|---------------------------|------------------------------|------------------|
| 01DEC21     | 4,563                     | 96                           | 2                |
| 02DEC21     | 4,606                     | 94                           | 1                |
| 03DEC21     | 5,212                     | 96                           | 2                |
| 04DEC21     | 5,132                     | 97                           | 2                |
| 05DEC21     | 4,827                     | 97                           | 4                |
| 06DEC21     | 7,131                     | 96                           | 5                |
| 07DEC21     | 7,380                     | 96                           | 8                |
| 08DEC21     | 6,729                     | 95                           | 11               |
| 09DEC21     | 6,678                     | 95                           | 12               |
| 10DEC21     | 6,974                     | 94                           | 13               |
| 11DEC21     | 6,717                     | 95                           | 17               |
| 12DEC21     | 7,181                     | 93                           | 23               |
| 13DEC21     | 10,642                    | 90                           | 30               |
| 14DEC21     | 11,566                    | 94                           | 41               |
| 15DEC21     | 11,264                    | 94                           | 48               |
| 16DEC21     | 10,610                    | 93                           | 48               |
| 17DEC21     | 11,089                    | 92                           | 54               |
| 18DEC21     | 10,486                    | 86                           | 57               |
| 19DEC21     | 10,650                    | 72                           | 63               |
| 20DEC21     | 13,950                    | 20                           | 63               |
| 21DEC21     | 13,726                    | 24                           | 76               |
| 22DEC21     | 12,317                    | 11                           | 76               |
| 23DEC21     | 13,300                    | 26                           | 78               |
| 24DEC21     | 7,434                     | 9                            | 78               |
| 25DEC21     | 8,296                     | 12                           | 77               |
| 26DEC21     | 11,581                    | 20                           | 85               |
| 27DEC21     | 24,029                    | 20                           | 88               |
| 28DEC21     | 23,341                    | 7                            | 87               |
| 29DEC21     | 18,401                    | 3                            | 85               |
| 30DEC21     | 20,477                    | 5                            | 86               |
| 31DEC21     | 10,299                    | 5                            | 85               |

Notes: This table provides number of positive RT-PCR tests along with the proportion of those selected for Variant PCR and the proportion of those identified with Omicron (relative to Delta) for December 2021. See appendix Tables S2 and S3 for the number of antigen and RT-PCR tests performed.
1.1 Time to test result

During the study period, testing with both antigen and RT-PCR tests was available to all residents of Denmark free of charge. Antigen tests provide a quick test result (positive/negative) with a median time from sample to result of less than 30 minutes (Table S2). All positive antigen tests were recommended by the authorities to be confirmed with an RT-PCR test. RT-PCR tests are more sensitive, but also require a longer time before the result is known. The median time to known result is approximately 24 hours (Table S3). Only samples with positive RT-PCR test results were available for selection for Variant PCR and whole genome sequencing (WGS).
Table S2: Time between sampling and test results for antigen tests (minutes)

| Sample date | Time to test result, minutes | Number of tests |
|-------------|------------------------------|-----------------|
|             | P5  | Q1  | Median | Q3  | P95 |
| 01DEC21     | 8   | 16  | 20     | 25  | 35  | 188,052       |
| 02DEC21     | 9   | 17  | 22     | 29  | 42  | 216,548       |
| 03DEC21     | 9   | 18  | 24     | 30  | 35  | 189,593       |
| 04DEC21     | 12  | 20  | 23     | 28  | 33  | 142,053       |
| 05DEC21     | 11  | 16  | 19     | 24  | 29  | 149,098       |
| 06DEC21     | 8   | 13  | 19     | 26  | 32  | 211,712       |
| 07DEC21     | 9   | 15  | 22     | 26  | 31  | 211,038       |
| 08DEC21     | 9   | 15  | 20     | 25  | 29  | 207,141       |
| 09DEC21     | 10  | 16  | 22     | 27  | 33  | 245,058       |
| 10DEC21     | 9   | 19  | 25     | 30  | 37  | 213,063       |
| 11DEC21     | 13  | 20  | 24     | 30  | 35  | 155,858       |
| 12DEC21     | 11  | 16  | 21     | 26  | 32  | 167,670       |
| 13DEC21     | 8   | 16  | 22     | 27  | 36  | 232,668       |
| 14DEC21     | 9   | 20  | 25     | 30  | 38  | 225,263       |
| 15DEC21     | 8   | 21  | 26     | 32  | 41  | 219,478       |
| 16DEC21     | 10  | 22  | 29     | 35  | 45  | 258,491       |
| 17DEC21     | 10  | 29  | 34     | 39  | 47  | 236,644       |
| 18DEC21     | 17  | 29  | 34     | 38  | 47  | 176,424       |
| 19DEC21     | 12  | 28  | 31     | 33  | 39  | 182,974       |
| 20DEC21     | 10  | 25  | 29     | 35  | 45  | 271,191       |
| 21DEC21     | 11  | 26  | 32     | 40  | 48  | 258,469       |
| 22DEC21     | 10  | 26  | 33     | 41  | 48  | 272,965       |
| 23DEC21     | 10  | 32  | 38     | 47  | 56  | 246,286       |
| 24DEC21     | 8   | 32  | 34     | 36  | 41  | 72,578        |
| 25DEC21     | 7   | 17  | 20     | 22  | 30  | 73,516        |
| 26DEC21     | 7   | 11  | 12     | 15  | 31  | 82,131        |
| 27DEC21     | 8   | 12  | 16     | 21  | 28  | 186,664       |
| 28DEC21     | 8   | 13  | 17     | 19  | 27  | 195,094       |
| 29DEC21     | 8   | 13  | 16     | 21  | 28  | 216,572       |
| 30DEC21     | 8   | 13  | 18     | 23  | 30  | 229,325       |
| 31DEC21     | 7   | 11  | 13     | 15  | 35  | 72,615        |

Notes: This table provides summary statistics on the time from sampling to the test result (positive/negative). P5 = 5th percentile, Q1 = 1st quartile, Q3 = 3rd quartile, P95 = 95th percentile.
Table S3: Time between sampling and test results for RT-PCR tests (hours)

| Sample date | Time to test result, hours | Number of PCR tests |
|-------------|----------------------------|---------------------|
|             | P5 | Q1  | Median | Q3  | P95 |
| 01DEC21     | 16 | 20  | 22     | 26  | 36  | 177,466 |
| 02DEC21     | 16 | 20  | 22     | 27  | 41  | 217,979 |
| 03DEC21     | 16 | 20  | 22     | 28  | 42  | 237,466 |
| 04DEC21     | 16 | 20  | 24     | 28  | 40  | 143,557 |
| 05DEC21     | 16 | 20  | 23     | 27  | 37  | 144,766 |
| 06DEC21     | 16 | 20  | 22     | 27  | 39  | 228,352 |
| 07DEC21     | 16 | 20  | 22     | 27  | 39  | 233,073 |
| 08DEC21     | 16 | 20  | 23     | 28  | 41  | 239,456 |
| 09DEC21     | 16 | 20  | 22     | 28  | 41  | 268,387 |
| 10DEC21     | 16 | 20  | 23     | 28  | 41  | 274,849 |
| 11DEC21     | 16 | 20  | 24     | 29  | 40  | 178,176 |
| 12DEC21     | 16 | 20  | 24     | 28  | 37  | 178,068 |
| 13DEC21     | 16 | 20  | 23     | 28  | 41  | 261,261 |
| 14DEC21     | 16 | 20  | 22     | 27  | 40  | 254,258 |
| 15DEC21     | 16 | 20  | 24     | 29  | 42  | 225,026 |
| 16DEC21     | 16 | 20  | 24     | 29  | 42  | 255,303 |
| 17DEC21     | 16 | 20  | 24     | 29  | 45  | 273,106 |
| 18DEC21     | 16 | 21  | 25     | 29  | 42  | 221,579 |
| 19DEC21     | 16 | 20  | 24     | 29  | 39  | 220,878 |
| 20DEC21     | 16 | 20  | 24     | 28  | 41  | 248,232 |
| 21DEC21     | 16 | 20  | 24     | 28  | 39  | 251,443 |
| 22DEC21     | 16 | 20  | 24     | 29  | 40  | 275,255 |
| 23DEC21     | 16 | 20  | 24     | 30  | 45  | 277,456 |
| 24DEC21     | 16 | 20  | 24     | 28  | 38  | 155,248 |
| 25DEC21     | 16 | 19  | 23     | 27  | 36  | 128,703 |
| 26DEC21     | 16 | 20  | 23     | 27  | 36  | 168,399 |
| 27DEC21     | 16 | 19  | 23     | 27  | 35  | 207,265 |
| 28DEC21     | 16 | 19  | 23     | 27  | 36  | 213,340 |
| 29DEC21     | 16 | 20  | 23     | 27  | 36  | 238,567 |
| 30DEC21     | 16 | 20  | 24     | 29  | 39  | 314,614 |
| 31DEC21     | 16 | 20  | 23     | 27  | 35  | 181,564 |

Notes: This table provides summary statistics on the time from sampling to the test result (positive/negative). P5 = 5th percentile, Q1 = 1st quartile, Q3 = 3rd quartile, P95 = 95th percentile. See appendix Table S1 for the number of positive RT-PCR tests, including the proportion identified as Omicron.
1.2 Probability of sampling for Variant PCR

This subsection provides details on the sampling probability for variant PCR during the time interval corresponding to the inclusion period for primary cases (9th-15th December 2021). Figure S1 shows the proportion of positive RT-PCR samples selected for Variant PCR testing as well as the proportion of positive samples with the Omicron VOC. The probability that a positive RT-PCR sample was selected for Variant PCR testing (purple) was extremely high, with no evidence for selection bias depending on either sample Ct value (panel a) or age (panel b). However, a higher proportion of cases aged 15-30 years tested positive with the Omicron VOC relative to other age groups (green dashed line, panel b). This confirms that household characteristics are confounded with variant.

**Figure S1: Probability of sampling for Variant PCR**

(a) Ct value  
(b) Age

Notes: This figure shows the proportion of positive RT-PCR samples selected (purple) for Variant PCR testing and the proportion testing positive (green) with the Omicron VOC. Panel (a) shows the selection by Ct value; panel (b) by age. Only positive RT-PCR tests from 9th-15th December 2021 performed by TestCenter Denmark are included. The markers show the point estimates of the mean. The shaded areas show the 95% confidence bands.
1.3 Robustness of Variant PCR results

This subsection provides additional results of the validity of the Variant PCR, i.e., the laboratory test used to distinguish between Omicron and Delta in positive RT-PCR tests, using high quality whole-genome sequencing (WGS).

Of the 326,588 positive RT-PCR tests between 1st-31st December 2021, 39,683 had a Variant PCR result and a successfully sequenced genome (Table S4). Of these samples, the Variant PCR test categorized 10,637 as Omicron and 29,046 as “not Omicron”. The WGS results showed that 35 (0.33%) of the Omicron classifications were incorrect, and that 257 (0.88%) of the “not Omicron” classifications were incorrect (Table S5). This extremely high agreement confirms that our study is not affected by any classification bias with respect to variant.

### Table S4 Sample selection for validation of PCR test using whole genome sequencing (WGS)

| Number                      |         |         |         |         |
|-----------------------------|---------|---------|---------|---------|
| RT-PCR positive samples     | 326,588 |         |         |         |
| Selected for Variant PCR    | 160,767 |         |         |         |
| Selected for WGS            | 56,646  |         |         |         |
| Successful WGS              | 44,669  |         |         |         |
| Variant PCR & WGS result    | 39,683  |         |         |         |

Notes: This table shows the number of positive RT-PCR samples and the number selected for Variant PCR and WGS as well as having a successfully sequenced genome. The samples were taken from 1-31 December 2021.

### Table S5 Validation of Variant PCR test using whole genome sequencing (WGS)

| Variant PCR     | Omicron | Not Omicron | Total  | False positive rate (%) | False negative rate (%) |
|-----------------|---------|-------------|--------|-------------------------|-------------------------|
| Omicron         | 10,602  | 35          | 10,637 | 0.33                    |                         |
| Not Omicron     | 257     | 28,789      | 29,046 |                         | 0.88                    |
| Total           | 10,859  | 28,824      | 39,683 |                         |                         |

Notes: This table shows the number of positive RT-PCR samples with both a Variant PCR test result and a successfully sequenced genome (see appendix Table S4 for selection of sample). The Variant PCR test identified 10,637 as Omicron and 29,046 as “not Omicron”. The WGS results showed that 35 of the 10,637 samples identified by the Variant PCR as Omicron were in fact “not Omicron”, implying a false positive rate for Omicron of 0.33% (35/10,637). Similarly, the WGS results showed that 257 of the 29,046 samples identified by the Variant PCR as “not Omicron” were in fact Omicron, implying a false negative rate for Omicron of 0.88% (257/29,046).
2 Causal assumptions

The causal effect of household exposure to the Omicron VOC rather than the Delta VOC on the SAR may be confounded. We assume that these differences are caused by the temporo-spatial patterns of transmission of the Omicron VOC when first introduced in Denmark (see appendix Figure S2). The directed acyclic graph displayed in Figure S2 suggests a confounding pathway from variant to SAR via the initial chains of transmission through household characteristics. What the graph encodes is that we believe that any differences between households exposed to the Omicron VOC and those exposed to the Delta VOC are due to the particularities of how Omicron was initially spread throughout the community. While the Delta VOC was widespread at the start of the study period, the Omicron VOC was not widespread. The household structure and other characteristics of the households exposed to the two variants might therefore differ. A causal interpretation of our findings is conditional on the assumption that all effects of the non-random assignment of variants to households are intercepted by conditioning on the observed household characteristics. We note that this will also diminish any household unobserved characteristics that are associated with the observed characteristics, e.g., age-related behavioral factors will be indirectly adjusted through the adjustment for age.
Figure S2: Directed acyclic graph (DAG) showing the causal inference of the study.

Notes: The initial chain of transmission affects the estimated SAR through both the household characteristics and the variant within the household.
3 Descriptive statistics

In this section, we provide additional descriptive statistics on our study sample.

Appendix Table S6 shows the summary statistics at the level of primary case (this augments Table 1, which shows the summary statistics for primary cases and contacts separately).

Appendix Tables S7 and S8 show more detailed summary statistics on the vaccination status of individuals within the “Fully vaccinated” category.

Appendix Table S9 shows the SAR and number of observations by vaccination status of both the primary case and contact.

Appendix Table S10 shows SAR and number of observations by vaccination status and age of the primary case.

Appendix Table S11 shows SAR and number of observations by vaccination status and age of the contact.

Appendix Table S12 shows SAR and number of observations by household size and vaccination status of the contact.
Table S6: Summary statistics by primary case level

|                  | Omicron | Delta |
|------------------|---------|-------|
|                  | Primary | Household | Secondary | SAR (%) | Primary | Household | Secondary | SAR (%) |
| Total            | 8,568   | 18,038   | 5,229     | 29      | 18,107  | 42,964   | 8,911     | 21      |
| **Sex**          |         |         |           |         |         |         |           |         |
| Male             | 4,417   | 9,393    | 2,835     | 30      | 9,257   | 21,971   | 4,668     | 21      |
| Female           | 4,151   | 8,645    | 2,394     | 28      | 8,850   | 20,993   | 4,243     | 20      |
| **Age**          |         |         |           |         |         |         |           |         |
| 0-10 years       | 417     | 1,228    | 443       | 36      | 4,475   | 13,351   | 2,727     | 20      |
| 10-20 years      | 1,875   | 4,883    | 954       | 20      | 3,507   | 9,688    | 1,482     | 15      |
| 20-30 years      | 2,755   | 4,596    | 1,096     | 24      | 2,432   | 4,358    | 677       | 16      |
| 30-40 years      | 1,186   | 2,665    | 866       | 32      | 1,909   | 4,747    | 1,230     | 26      |
| 40-50 years      | 1,094   | 2,731    | 1,039     | 38      | 2,312   | 5,729    | 1,362     | 24      |
| 50-60 years      | 874     | 1,505    | 618       | 41      | 2,056   | 3,428    | 895       | 26      |
| 60-70 years      | 280     | 334      | 167       | 50      | 1,019   | 1,230    | 407       | 33      |
| 70+ years        | 87      | 96       | 46        | 48      | 397     | 433      | 131       | 30      |
| **Household size** |     |         |           |         |         |         |           |         |
| 2 persons        | 3,339   | 3,339    | 1,266     | 38      | 5,564   | 5,564    | 1,584     | 28      |
| 3 persons        | 2,102   | 4,204    | 1,179     | 28      | 3,863   | 7,726    | 1,552     | 20      |
| 4 persons        | 2,190   | 6,570    | 1,894     | 29      | 5,632   | 16,896   | 3,451     | 20      |
| 5 persons        | 760     | 3,040    | 734       | 24      | 2,462   | 9,848    | 1,884     | 19      |
| 6 persons        | 177     | 885      | 156       | 18      | 586     | 2,930    | 440       | 15      |
| **Immunity**     |         |         |           |         |         |         |           |         |
| Unvaccinated     | 1,166   | 2,936    | 904       | 31      | 8,611   | 23,694   | 5,086     | 21      |
| Fully vaccinated | 6,934   | 14,318   | 4,076     | 28      | 8,968   | 18,461   | 3,679     | 20      |
| Booster vaccinated | 468   | 784      | 249       | 32      | 528     | 809      | 146       | 18      |

Notes: This table shows the household contacts, secondary cases and SAR for both Omicron and Delta, defined by the primary case. For instance, there were 417 primary cases with Omicron aged 0-10 years, which had 1,228 household contacts of which 443 tested positive, implying a SAR of 36% from 0 cases with Omicron aged 0-10 years.

Table S7: Summary statistics of vaccination status

|                  | Omicron | Delta |
|------------------|---------|-------|
|                  | Primary | Household | Secondary | SAR (%) | Primary | Household | Secondary | SAR (%) |
| Total            | 8,568   | 18,038   | 5,229     | 29      | 18,107  | 42,964   | 8,911     | 21      |
| **Immunity**     |         |         |           |         |         |         |           |         |
| Unvaccinated     | 1,166   | 4,171    | 1,155     | 28      | 8,611   | 13,750   | 3,718     | 27      |
| Previous infection (no vaccination) | 128     | 479      | 70        | 15      | 145     | 920      | 49        | 5       |
| Fully vaccinated (no previous infection) | 6,392   | 11,124   | 3,541     | 32      | 8,765   | 24,229   | 4,794     | 20      |
| Fully vaccinated & previous infection | 414     | 952      | 157       | 16      | 58      | 1,192    | 32        | 3       |
| Booster vaccinated | 468     | 1,312    | 306       | 23      | 528     | 2,873    | 318       | 11      |

Notes: Summary statistics are not aggregated on the primary case level. Unvaccinated includes 7 primary cases with partial vaccination and 52 contacts with partial vaccination.
Table S8: Summary statistics of vaccination status by primary case level

| Immunity                      | Omicron Cases | Household Contacts | Secondary Cases | SAR (%) | Delta Cases | Household Contacts | Secondary Cases | SAR (%) |
|-------------------------------|---------------|--------------------|-----------------|---------|-------------|--------------------|-----------------|---------|
| Total                         | 8,568         | 18,038             | 5,229           | 29      | 18,107      | 42,964             | 8,911           | 21      |
| Unvaccinated                  | 1,166         | 2,936              | 904             | 31      | 8,611       | 23,694             | 5,086           | 21      |
| Previous infection (no vaccination) | 128          | 287                | 43              | 15      | 145         | 374                | 28              | 7       |
| Fully vaccinated (no previous infection) | 6,392      | 13,206             | 3,901           | 30      | 8,765       | 17,953             | 3,641           | 20      |
| Fully vaccinated & previous infection | 414       | 825                | 132             | 16      | 58          | 134                | 10              | 7       |
| Booster vaccinated            | 468           | 784                | 249             | 32      | 528         | 809                | 146             | 18      |

Notes: This table is similar to Table S7, but with row-wise aggregation on the primary case level. For instance, there were 1,166 primary cases with Omicron that were unvaccinated. These primary cases had 2,936 household contacts of which 904 tested positive as secondary cases, implying a SAR of 31%.

Table S9: Secondary attack rate (SAR) and number of observations by vaccination status of both primary case and contact

a. Omicron households

| Contact                  | Unvaccinated | Fully vaccinated | Booster vaccinated |
|--------------------------|--------------|-----------------|--------------------|
| Unvaccinated             | 22% [32/146/103] | 32% [150/462/300] | 38% [67/176/174] |
| Fully vaccinated         | 27% [742/2,788/1,906] | 30% [3,125/10,525/6,274] | 21% [209/1,005/940] |
| Booster vaccinated       | 31% [381/1,237/756] | 31% [493/1,568/892] | 23% [30/131/119] |

b. Delta households

| Contact                  | Unvaccinated | Fully vaccinated | Booster vaccinated |
|--------------------------|--------------|-----------------|--------------------|
| Unvaccinated             | 18% [27/154/101] | 18% [72/402/291] | 19% [47/253/249] |
| Fully vaccinated         | 25% [1,090/4,365/2,853] | 19% [2,433/12,741/7,850] | 12% [156/1,355/1,287] |
| Booster vaccinated       | 28% [2,601/9,231/5,907] | 18% [2,370/13,198/6,891] | 9% [115/1,265/1,136] |

Notes: Numbers in each cell show: “SAR% [Number of secondary cases / Number of contacts / Number of primary cases]”.

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Table S10: Secondary attack rate (SAR) and number of observations by vaccination status and age, at the primary case level

**a. Omicron households**

| Age             | Unvaccinated | Fully vaccinated | Booster vaccinated |
|-----------------|--------------|------------------|--------------------|
| 0-10 years      | 36% [433/1,188/404] | 25% [10/40/13]   | -                  |
| 10-20 years     | 27% [206/772/282]  | 18% [745/4,095/1,588] | -% [<5/16/5]       |
| 20-30 years     | 22% [116/525/273]  | 24% [942/3,900/2,366] | 22% [38/171/116]   |
| 30-40 years     | 28% [78/279/123]   | 33% [732/2,210/969] | 32% [56/176/94]    |
| 40-50 years     | 37% [41/110/49]    | 38% [936/2,438/976] | 34% [62/183/69]    |
| 50-60 years     | 48% [27/56/29]     | 41% [562/1,362/792] | 33% [29/87/53]     |
| 60-70 years     | -% [<5/5/5]        | 54% [136/250/210]  | 37% [29/79/65]     |
| 70+ years       | -% [<5/<5/<5]      | 57% [13/23/20]     | 44% [32/72/66]     |

**b. Delta households**

| Age             | Unvaccinated | Fully vaccinated | Booster vaccinated |
|-----------------|--------------|------------------|--------------------|
| 0-10 years      | 20% [2,714/13,242/4,438] | 12% [13/109/37]  | -                  |
| 10-20 years     | 19% [1,163/6,073/2,126] | 9% [316/3,608/1,379] | -% [<5/7/<5]       |
| 20-30 years     | 19% [327/1,682/845]   | 13% [345/2,616/1,548] | 8% [5/60/39]       |
| 30-40 years     | 32% [478/1,509/614]   | 23% [727/3,095/1,230] | 17% [25/143/65]    |
| 40-50 years     | 36% [274/765/336]    | 22% [1,066/4,806/1,909] | 14% [22/158/67]    |
| 50-60 years     | 29% [90/311/170]     | 26% [787/2,999/1,818] | 15% [18/118/68]    |
| 60-70 years     | 35% [33/94/65]       | 35% [354/1,019/854]  | 17% [20/117/100]   |
| 70+ years       | 39% [7/18/17]        | 34% [71/209/193]   | 26% [53/206/187]   |

Notes: Numbers in each cell show: "SAR% [Number of secondary cases / Number of contacts / Number of primary cases]".
Table S11: Secondary attack rate (SAR) and number of observations by immunity status and age, at the contact level

*a. Omicron households*

| Age      | Vaccination status     | Unvaccinated       | Fully vaccinated | Booster vaccinated |
|----------|------------------------|--------------------|------------------|--------------------|
| 0-10 years | 27% [698/2,563/1,843] | 13% [18/141/121]  | -                |                    |
| 10-20 years | 31% [202/644/574]        | 22% [629/2,846/2,192] | -% [<5/16/16] |                    |
| 20-30 years | 21% [96/447/400]         | 27% [827/3,045/2,441] | 21% [46/220/212] |                    |
| 30-40 years | 30% [75/248/231]         | 41% [605/1,467/1,309] | 32% [54/170/165] |                    |
| 40-50 years | 35% [58/164/148]         | 33% [859/2,599/2,107] | 23% [76/334/322] |                    |
| 50-60 years | 26% [20/77/70]           | 34% [677/2,011/1,687] | 22% [60/278/270] |                    |
| 60-70 years | 29% [5/17/17]            | 35% [134/387/364]  | 22% [31/141/135] |                    |
| 70+ years   | -% [<5/11/11]            | 32% [19/59/55]     | 24% [36/153/139] |                    |

*b. Delta households*

| Age      | Vaccination status     | Unvaccinated       | Fully vaccinated | Booster vaccinated |
|----------|------------------------|--------------------|------------------|--------------------|
| 0-10 years | 24% [1,996/8,297/6,177] | 3% [8/253/228]      | -                |                    |
| 10-20 years | 30% [699/2,365/2,075]        | 8% [495/5,873/4,538] | -% [<5/21/20] |                    |
| 20-30 years | 28% [267/952/876]         | 13% [375/2,812/2,397] | -% [<5/141/137] |                    |
| 30-40 years | 37% [405/1,094/983]        | 22% [1,175/5,313/4,167] | 13% [91/702/663] |                    |
| 40-50 years | 34% [225/655/595]         | 21% [1,565/7,347/5,709] | 7% [68/924/882] |                    |
| 50-60 years | 33% [86/260/247]          | 24% [821/3,436/3,033] | 13% [53/403/392] |                    |
| 60-70 years | 29% [26/91/90]            | 35% [371/1,066/1,031] | 15% [43/282/276] |                    |
| 70+ years   | 39% [14/36/34]            | 27% [65/241/226]    | 15% [59/400/380] |                    |

Notes: Numbers in each cell show: “SAR% [Number of secondary cases / Number of contacts / Number of primary cases]”. 
Table S12: Secondary attack rate (SAR) and number of observations by immunity status and household size, at the contact level

*a. Omicron households*

| Household size | Unvaccinated | Fully vaccinated | Booster vaccinated |
|----------------|--------------|-----------------|-------------------|
| 2 persons      | 32% [103/319/319] | 39% [1,020/2,606/2,606] | 35% [143/414/414] |
| 3 persons      | 29% [242/840/703] | 29% [887/3,037/1,898] | 15% [50/327/300]  |
| 4 persons      | 29% [520/1,766/1,109] | 29% [1,298/4,443/2,064] | 21% [76/361/334]  |
| 5 persons      | 26% [242/941/502] | 24% [462/1,941/730] | 19% [30/158/143]  |
| 6 persons      | 16% [48/305/132] | 19% [101/528/168] | 13% [7/52/42]     |

*b. Delta households*

| Household size | Unvaccinated | Fully vaccinated | Booster vaccinated |
|----------------|--------------|-----------------|-------------------|
| 2 persons      | 37% [329/894/894] | 29% [1,119/3,871/3,871] | 17% [136/799/799] |
| 3 persons      | 27% [595/2,180/1,710] | 18% [910/5,025/3,232] | 9% [47/521/483]   |
| 4 persons      | 28% [1,532/5,549/3,816] | 18% [1,838/10,382/5,129] | 8% [81/965/877]   |
| 5 persons      | 26% [1,013/3,869/1,937] | 15% [822/5,516/2,267] | 11% [49/463/409]  |
| 6 persons      | 20% [249/1,258/504] | 12% [186/1,547/533] | 4% [5/125/104]    |

Notes: Numbers in each cell show: “SAR% [Number of secondary cases / Number of contacts / Number of primary cases]”. 
4 Additional analyses

This section provides additional analyses for the robustness of our main results.

4.1 Viral load of primary cases

Figure S3 shows the density of sample Ct values of primary cases stratified by the Omicron VOC and Delta VOC.

Figure S3: Density of Ct value

Notes: This figure shows the density of the sample Ct values of primary cases stratified by the Omicron (red) and Delta (blue) VOC.
4.2 Misclassification of cases

One of the main potential weaknesses of our approach is the assumption that primary and secondary cases are classified correctly, i.e., that the presumed within-household transmission did in fact occur from primary to secondary household cases. There are three overall concerns with misclassifications: i) Tertiary cases could be misclassified as secondary cases; ii) Misclassification of primary cases iii) Secondary cases are identified as being infected in the household, but are in fact infected by the outside community. We address these three overall concerns below. Lastly, we investigate the impact on our results from the potential pollution from misclassification of cases.

i) Misclassification of tertiary cases as secondary cases

Tertiary cases could in theory be misclassified as secondary cases. This should not pose an issue when comparing variants, as long as the misclassification is the same across variants. However, if one variant has a shorter serial interval time, as the Omicron VOC has been suggested to have\(^2\), this could lead to a difference in the misclassification that is correlated with the household variant. To address this, we use two-person households as a validation measure, because they do not include tertiary cases. Figure S4, panels a-b shows the testing propensity for the overall sample (2-6 person households) as well as for 2-person households. Both the levels and trends are relatively similar across the two panels. Panel c-d show the SAR over time. Here, we see a higher level of SARs for 2-person households compared to larger households, but the trends are similar.
Figure S4: Probability of being tested and testing positive, stratified by household size

Notes: Panels a and c show the same as Figure 1, whereas panels b and d are stratified by 2-person households. Panels a-b show the probability of potential secondary cases being tested after a primary case has been identified within the household. Panel c-d show the probability of potential secondary cases that test positive subsequently to a primary case being identified within the household. Note that the latter is not conditional on being tested, i.e., the denominator contains test negative individuals and untested individuals. The x axes show the days since the primary case tested positive, and the y axes show the proportion of individuals either being tested (a) or testing positive (b) with an RT-PCR test, based on the variant of the primary case. The SAR for each day relative to the primary case can be read directly from panels c-d. For example, in panel c the SAR on day 7 is 29% for Omicron (red) and 21% for Delta (blue), whereas the SAR on day 4 is 22% for Omicron and 15% for Delta. The markers show the point estimates of the mean. The shaded areas show the 95% confidence bands clustered on the household level.

Next, using the SAR estimates from panel b, we can calculate the relative SAR in Omicron households compared to Delta households. If the increased serial interval for Omicron implied more tertiary cases, we should see an increased difference in the relative SAR over time for households with more than two members. We find no indication of a difference in the relative SAR of households infected with the Omicron VOC relative to those infected with the Delta VOC across household size (Table
This suggests that differences in the probability of misclassification of tertiary cases as secondary cases across variants is negligible, and thus not a major limitation in our study. Lastly, we note that the levels of the SAR in two-person households differ from the SAR in larger households, which might be due to unobserved differences in characteristics related to transmission. However, we have no reason to believe any differences across variants within household size, i.e., that the two-person households infected with the Omicron VOC are inherently different from those infected with the Delta VOC.

### Table S13: Relative SAR over time since primary case by household size by day since primary case

| Day | All households | 2-person households | Relative SAR | All households | 2-person households |
|-----|---------------|---------------------|--------------|---------------|---------------------|
|     | Delta | Omicron | Delta | Omicron | (Omicron/Delta) | Delta | Omicron | (Omicron/Delta) |
| 1   | 3     | 5       | 5     | 8       | 1.7            | 1.6 |
| 2   | 7     | 11      | 11    | 18      | 1.6            | 1.6 |
| 3   | 11    | 17      | 17    | 25      | 1.5            | 1.5 |
| 4   | 15    | 22      | 22    | 31      | 1.5            | 1.4 |
| 5   | 17    | 25      | 25    | 34      | 1.5            | 1.4 |
| 6   | 19    | 27      | 27    | 36      | 1.4            | 1.3 |
| 7   | 21    | 29      | 28    | 38      | 1.4            | 1.4 |

Notes: The SAR estimates are presented in Figure S4 panels c-d.

**ii) Misclassification of primary cases**

Correct identification of primary cases within the household is important for this study as this determines whether the household is counted as an Omicron or Delta household when assessing the effect of the VOC on transmission. In theory the first identified case, i.e., the index case, may not be the primary case of a household transmission chain. Correct identification of primary cases is important for our estimates of infectiousness from primary cases, as infectiousness is correlated with age, vaccination status, and viral load. In our setting, we use the timing of tests and test results to classify cases. This could be an issue, if for example vaccination status and/or symptoms are correlated with the likelihood of being tested. The optimal setting would be to test all household members on, say, a daily basis to make sure of the temporal ordering between the primary and secondary cases. We do not have that, but Denmark had a high test capacity and test intensity, which leaves us with a large proportion of contacts actually having several test results within 7 days of exposure.
Overall, we can classify the relevant household contacts into five types by their observed tests and test results from two tests within 7 days of exposure:

**Table S14: Classification of contacts using obtained tests and test results**

| Type | Test 1 | Test 2 | Potential primary case | Number of contacts on day 7 | Number of contacts on day 14 |
|------|--------|--------|------------------------|-----------------------------|-----------------------------|
| A    | None   | None   | Yes                    | 7,044                       | 5,681                       |
| B    | Positive | None   | Yes                    | 4,245                       | 4,408                       |
| C    | Negative | None   | No                     | 6,384                       | 4,779                       |
| D    | Negative | Positive | No                     | 9,895                       | 12,338                      |
| E    | Negative | Negative | No                     | 33,434                      | 33,796                      |
| Total|        |        |                        | 61,002                      | 61,002                      |

- Type A can potentially be the primary case, as we do not have any test result for them.
- Type B can potentially be the primary case, but just identified later than the index case.
- Type C, D and E cannot be the primary case, as we have a negative test result on them after exposure.

We can leverage this and only include households in the analysis, where all household contacts have a negative test after the primary case, i.e., we only include households consisting of contact types C, D and E. For these households, we assume no misclassification of primary cases (assuming a high test sensitivity). This leaves us with a subsample of 72% of all households and 68% of all contacts.

Using this sub-sample, we estimate our full regression model again. The estimates are relatively robust to this sub-sampling (Table S21, model XI).

Finally, to reduce the probability of misclassifying primary cases as secondary cases, we only include secondary cases found on day 2-7 and 3-7. This accounts for the possibility that an individual that was previously infected may self-present for a test the day after another person in the same household that they themselves infected. The results (Table S19, column V and VI) are qualitatively similar to the main results presented in the paper, which further supports the overall robustness of our conclusions.

iii) **Misclassification of community cases as secondary household cases**

Lastly, secondary cases could in theory be infected by the outside community and not the household and therefore be misclassified as secondary household cases. To address this potential concern of misclassification, we first investigate the probability that secondary cases are infected with the same
variant as the primary case. In households where the primary case was infected with the Omicron VOC, we found 4,090 secondary cases that also had a Variant PCR result (Table S15). Of these, 4,010 (98%) were also Omicron VOC and 80 (2%) were Delta VOC. Similarly, in households where the primary case was infected with the Delta VOC, we found 7,420 secondary cases. Of these, 7,209 (97%) were also Delta and 211 (3%) were Omicron VOC. The overall intra-household correlation of variants was 97.5 (CI: 97.1-97.8). We interpret this as the possibility of misclassification being negligible.

Table S15: Intra-household correlation of variants

| I. Number of cases                           |                |
|---------------------------------------------|----------------|
| Secondary Case | Primary case |                |
| Omicron       | Omicron      | Delta          | All  |
| 4,010         | 211          | 4,221          |
| Delta         | 80           | 7,209          | 7,289|
| All           | 4,090        | 7,420          | 11,510|

| II. Regression estimates                     |                |
|---------------------------------------------|----------------|
| Intra-household correlation (%) | Omicron: 98.0 (97.6-98.5) | Delta: 97.2 (96.7-97.6) | All: 97.5 (97.1-97.8) |
| Number of observations                     | 4,090          | 7,420          | 11,510|
| Number of households                      | 3,038          | 5,445          | 8,483|

Notes: This table provides estimates of the intra-household correlation of variants, i.e., the probability that the primary and secondary cases are infected with the same variant. Panel I provides the number of observations. Panel II provides regression estimates. Cluster-robust standard errors are clustered on the household level.

This measure is, however, a necessary—but not sufficient—condition. If the local geographic neighborhood is primarily infected with one variant and that is the same as within the household, we would not be able to separate secondary cases infected in the household from those infected in the local community based on the variant. However, for households infected with a different variant from that which is dominant in the neighborhood, we can in fact gauge the role of misclassified community infections. To this end, we calculated the overall incidence (Figure S5, a) and the share of Omicron cases (Figure S5, b) for each of the 98 municipalities in Denmark. Thus, we can follow households infected with Omicron that are surrounded by a neighborhood with Delta. Here, we
would expect the secondary cases to be infected with Omicron, if they were infected in the household, and infected with Delta, if they were infected in the community. And vice versa for Delta households situated in Omicron neighborhoods.

Figure S5: Overall case incidence and proportion of cases with Omicron in Danish municipalities

(a) Case incidence per 100,000 inhabitants by municipality
(b) Proportion of cases with Omicron by municipality

Notes: This figure shows the geospatial pattern across Danish municipalities of overall SARS-CoV-2 incidence as well as the proportion of cases with Omicron for the period 10th to 21st December 2021. Panel a shows the incidence of RT-PCR positive cases per 100,000 inhabitants. Panel b shows the proportion of positive cases with Omicron.

We categorized municipalities into four quartiles based on their proportion of Omicron cases. We then again estimated the probability that the secondary case has the same variant as the primary case. We found a strong correlation for households infected with the Omicron VOC—across all municipality incidence quartiles. For households infected with the Delta VOC, we find a 5 percentage point (on a baseline of 99%) lower probability in municipalities with the highest proportion of Omicron cases (Table S16, specification I). Moreover, we found little evidence that the estimates of misclassification were driven by households located in municipalities with either low or high overall case incidence (specification II and III). Indeed, this suggests that there is some are some contamination of household secondary cases for Delta households, but also that the misclassification is limited.
Table S16: Intra-household correlation of variants by municipality omicron case proportion

| Specification | I |        | II |        | III |        |
|---------------|---|--------|----|--------|-----|--------|
|               |   | Delta  | Omicron | Delta  | Omicron | Delta  | Omicron |
| Omicron case proportion |   |        |        |        |        |        |        |
| Q1 (0-25%)    | 99| 99     | 99     | 98     | 99   | 99     |
| Q2 (25-34%)   | 99| 98     | 99     | 97     | 99   | 99     |
| Q3 (34-48%)   | 97| 98     | 97     | 98     | 97   | 99     |
| Q4 (48-100%)  | 94| 98     | 94     | 98     | 97   | 99     |
| Number of observations | 7,420| 4,090 | 6,132 | 3,864 | 4,834 | 1,510 |
| Number of households | 5,445| 3,038 | 4,488 | 2,869 | 3,550 | 1,077 |
| Number of municipalities | 97| 92     | 70     | 70     | 72   | 67     |

Notes: The incidence quartiles are number of cases per 1,000 inhabitants: Q1=13, Q2=16, and Q3=26. The geospatial patterns of the incidence and omicron case proportions are illustrated in Figure S5.

**Impact of misclassification on our estimates**

If a substantial number of secondary cases were more or less randomly infected with the Delta vs the Omicron VOC from outside the household, then we expect that the within-household correlation would be lower than we observed. However, it could also be argued that a high correlation may result from a sufficiently strong local-level spatial component in the spread of variants. In this case, a natural geographical correlation in the variant with which a case is infected would be expected to affect both the primary and secondary case within the household, as the geographical location of the household is fixed. Therefore, the intra-household correlation of variants would be biased upwards compared to the real effect of secondary cases being infected by the primary case, as secondary cases are overcounted. However, the misclassification would only affect the OR estimates reported in the paper if the misclassification is not proportional to the stratum-specific odds of testing positive. If one assumes that the misclassification is proportional to the risk such that the percentage that is misclassified is the same in low- and high-risk strata. Such a proportional mechanism would work to inflate the estimates, but to a limited extent. The misclassification would also shrink the confidence intervals, but not substantially under reasonable assumptions. Appendix Table S17 shows how our effect sizes would be influenced under different levels of misclassification. We believe that the effects are unlikely to materially change the conclusions of the analyses, even under more severe assumptions that those assumed here. Table S17 shows the OR estimates with no misclassification of cases (column 1), 10% misclassification (column 2), and 30% misclassification (column 3).
### Table S17: Sensitivity of OR estimates to potential misclassification of cases

| Contact vaccination status | No misclassification OR | 10% misclassification OR | 30% misclassification OR |
|----------------------------|-------------------------|--------------------------|--------------------------|
| **Delta households**       |                         |                          |                          |
| Booster vaccinated         | 0.41                    | 0.42                     | 0.43                     |
| Fully vaccinated           | 1.00                    | 1.00                     | 1.00                     |
| Unvaccinated               | 2.36                    | 2.28                     | 2.16                     |
| **Omicron households**     |                         |                          |                          |
| Booster vaccinated         | 1.31                    | 1.30                     | 1.28                     |
| Fully vaccinated           | 2.39                    | 2.31                     | 2.18                     |
| Unvaccinated               | 2.60                    | 2.50                     | 2.34                     |

Notes: This table provides hypothetical estimates of the sensitivity of the OR estimates to potential misclassification of cases using relatively extreme proportions of misclassification.
4.3 Time since vaccination for positive secondary cases

Figure S6 shows the distribution of days since last vaccination/infection for secondary cases, stratified by the household VOC and time since vaccination of both the primary and secondary case. The panels show there is no obvious trend in the waning immunity across variants. Note the groups of booster-vaccinated primary and secondary cases are from a low number of cases, which limits precision.

Figure S6: Time since vaccination for positive secondary cases

Notes: This figure shows the distribution of days since last vaccination/infection for secondary cases, stratified by the household VOC (red=Omicron, blue=Delta) and vaccination status of both the primary and secondary case.
4.4 Robustness of main results

This subsection provides results of additional analyses using different model specifications in order to validate the results shown in the main paper.

The test probabilities for RT-PCR test alone are shown in Figure S7 (this augments Figure 1, which also includes antigen tests). Similarly, Figure S8 shows the same as Figure 1, but using a 14-day follow-up period in place of the 7-day period shown in the main paper. The patterns are qualitatively similar to these different potential assumptions.

![Figure S7: Probability of being tested and testing positive with an RT-PCR test](image)

**(a) Probability of testing**

**(b) Probability of testing positive**

Notes: This figure shows the same as Figure 1, but only including RT-PCR tests. Panel (a) shows the probability of potential secondary cases being tested after a primary case has been identified within the household. Panel (b) shows the probability of potential secondary cases that test positive subsequently to a primary case being identified within the household. Note that the latter is not conditional on being tested, i.e., the denominator contains test negative individuals and untested individuals. The x axes show the days since the primary case tested positive, and the y axes show the proportion of individuals either being tested (panel a) or testing positive (panel b) with an RT-PCR test, based on the variant of the primary case. The SAR for each day relative to the primary case can be read directly from panel (b). For example, the SAR on day 7 is 28% for Omicron (red) and 20% for Delta (blue), whereas the SAR on day 4 is 21% for Omicron and 14% for Delta. The markers show the point estimates of the mean. The shaded areas show the 95% confidence bands clustered on the household level.
Figure S8: Probability of being tested and testing positive, 14-day follow-up

(a) Probability of testing

(b) Probability of testing positive

Notes: This figure shows the same as Figure 1, but with a 14-day follow-up period. Panel (a) shows the probability of potential secondary cases being tested after a primary case has been identified within the household. Panel (b) shows the probability of potential secondary cases that test positive subsequently to a primary case being identified within the household. Note that the latter is not conditional on being tested, i.e., the denominator contains test negative individuals and untested individuals. The x axes show the days since the primary case tested positive, and the y axes show the proportion of individuals either being tested (a) or testing positive (b) with an RT-PCR test, based on the variant of the primary case. The SAR for each day relative to the primary case can be read directly from panel (b). For example, the SAR on day 7 is 29% for Omicron (red) and 21% for Delta (blue), whereas the SAR on day 4 is 22% for Omicron and 15% for Delta. The markers show the point estimates of the mean. The shaded areas show the 95% confidence bands clustered on the household level.
To investigate the robustness of our main results, including the underlying assumptions, we re-ran the models to specific strata of the data. The estimates obtained from the same logistic regression model fit to each data subset are shown in Tables S1-S22, where Columns I-XII refer to the following:

I) The analysis presented in the main manuscript (for reference).

II) Using 14 days of follow-up, rather than 7 days.

III) Restricting the household contacts to those having obtained a test, rather than all members of the same household.

IV) Excluding all households with a previous infection.

V) Only including secondary cases identified on day 2-7, rather than days 1-7.

VI) Only including secondary cases identified on day 3-7, rather than days 1-7.

VII) Excluding all households with a primary case younger than 10 years.

VIII) Including only 2-person households.

IX) Excluding all individuals with partial vaccination.

X) Controlling for Ct value of the primary case using an additional explanatory variable.

XI) Only including households where all contacts have been tested negative subsequent to the primary case.

XII) Splitting the “Fully vaccinated” category into four categories for both the primary case and household contact.

The results are qualitatively similar between these 11 different analyses, which further supports the robustness of our conclusions.

In Table S23, we further provide unadjusted estimates for the infectiousness and susceptibility, i.e., excluding the control variables age, sex, and household size.
### Table S18: Robustness Analyses I

|                  | I Main | I 14-day follow-up | II Only tested contacts | III No prev. HH infect. |
|------------------|--------|--------------------|-------------------------|-------------------------|
|                  | OR     | CI                 | OR                      | CI                      |
| **Contact vaccination status** |        |                    |                          |                         |
| Delta households |        |                    |                          |                         |
| Booster vaccinated | 0.41   | (0.36-0.47)        | 0.38                    | (0.34-0.43)             |
| Fully vaccinated  | ref    | ()                 | ref                     | ()                      |
| Unvaccinated     | 2.36   | (2.20-2.54)        | 2.80                    | (2.60-3.02)             |
|                  |        | (1.97-2.30)        |                         |                         |
| Omicron households |     |                    |                          |                         |
| Booster vaccinated | 1.31   | (1.14-1.51)        | 1.25                    | (1.08-1.44)             |
| Fully vaccinated  | 2.39   | (2.24-2.54)        | 2.46                    | (2.31-2.62)             |
| Unvaccinated     | 2.60   | (2.35-2.87)        | 3.27                    | (2.93-3.64)             |
|                  |        | (2.40-2.68)        |                         |                         |
| **Primary case vaccination status** |        |                    |                          |                         |
| Booster vaccinated | 0.80   | (0.69-0.92)        | 0.77                    | (0.66-0.89)             |
| Fully vaccinated  | ref    | ()                 | ref                     | ()                      |
| Unvaccinated     | 1.37   | (1.27-1.47)        | 1.64                    | (1.51-1.77)             |
|                  |        | (1.39-1.51)        |                         |                         |
| **Primary case age** |        |                    |                          |                         |
| 0-10             | 1.23   | (1.11-1.36)        | 0.82                    | (0.74-0.92)             |
| 10-20            | 0.90   | (0.82-0.99)        | 0.69                    | (0.63-0.77)             |
| 20-30            | 1.74   | (1.58-1.92)        | 1.65                    | (1.48-1.83)             |
| 30-40            | 2.25   | (2.04-2.49)        | 1.94                    | (1.75-2.16)             |
| 50-60            | 2.95   | (2.53-3.44)        | 2.60                    | (2.20-3.07)             |
| 70+              | 4.17   | (3.22-5.41)        | 3.36                    | (2.55-4.44)             |
| **Contact age**  |        |                    |                          |                         |
| 0-10             | 0.79   | (0.72-0.87)        | 0.74                    | (0.66-0.82)             |
| 10-20            | 0.74   | (0.68-0.81)        | 0.68                    | (0.62-0.75)             |
| 30-40            | 1.62   | (1.48-1.76)        | 1.58                    | (1.44-1.74)             |
| 50-60            | 1.47   | (1.34-1.61)        | 1.52                    | (1.38-1.68)             |
| 70+              | 0.94   | (0.76-1.17)        | 1.29                    | (1.01-1.65)             |
| **Household size** |        |                    |                          |                         |
| 2                | 2.35   | (2.04-2.72)        | 2.03                    | (1.77-2.34)             |
| 3                | 1.53   | (1.33-1.77)        | 1.36                    | (1.18-1.58)             |
| 4                | 1.57   | (1.37-1.80)        | 1.34                    | (1.16-1.54)             |
| 5                | 1.40   | (1.21-1.62)        | 1.24                    | (1.07-1.44)             |
| 6                | ref    | ()                 | ref                     | ()                      |
| **Contact sex**  |        |                    |                          |                         |
| Male             | ref    | ()                 | ref                     | ()                      |
| Female           | 1.12   | (1.08-1.16)        | 1.05                    | (1.01-1.09)             |
| **Primary case sex** |        |                    |                          |                         |
| Male             | ref    | ()                 | ref                     | ()                      |
| Female           | 0.97   | (0.93-1.02)        | 0.93                    | (0.89-0.98)             |
| **Number of observations** |       |                    |                          |                         |
|                  | 61,002 | 61,002             | 53,958                  | 52,770                  |
| **Number of households** |       |                    |                          |                         |
|                  | 26,675 | 26,675             | 25,247                  | 23,481                  |
### Table S19: Robustness Analyses II

|                      | I Main Only cases on day 2-7 | V Only cases on day 3-7 | VI Only cases on day 3-7 | VII Primary cases >10years |
|----------------------|-----------------------------|------------------------|-------------------------|---------------------------|
|                      | OR  | CI       | OR  | CI       | OR  | CI       | OR  | CI       |
| **Contact vaccination status** |     |          |     |          |     |          |     |          |
| **Delta households**  |     |          |     |          |     |          |     |          |
| Booster vaccinated   | 0.41| (0.36-0.47)| 0.42| (0.36-0.48)| 0.43| (0.37-0.50)| 0.42| (0.36-0.49)|
| Fully vaccinated     | ref |          | ref |          | ref |          | ref |          |
| Unvaccinated         | 2.36| (2.20-2.54)| 2.26| (2.10-2.44)| 2.15| (1.98-2.33)| 2.32| (2.14-2.53)|
| **Omicron households** |     |          |     |          |     |          |     |          |
| Booster vaccinated   | 1.31| (1.14-1.51)| 1.25| (1.07-1.45)| 1.19| (0.99-1.42)| 1.29| (1.11-1.49)|
| Fully vaccinated     | 2.39| (2.24-2.54)| 2.36| (2.21-2.52)| 2.24| (2.08-2.41)| 2.33| (2.18-2.49)|
| Unvaccinated         | 2.60| (2.35-2.87)| 2.64| (2.37-2.92)| 2.51| (2.24-2.82)| 2.49| (2.24-2.78)|
| **Primary case vaccination status** |     |          |     |          |     |          |     |          |
| Booster vaccinated   | 0.80| (0.69-0.92)| 0.78| (0.67-0.91)| 0.79| (0.67-0.94)| 0.80| (0.69-0.92)|
| Fully vaccinated     | ref |          | ref |          | ref |          | ref |          |
| Unvaccinated         | 1.37| (1.27-1.47)| 1.38| (1.28-1.49)| 1.34| (1.24-1.46)| 1.36| (1.26-1.46)|
| **Primary case age**  |     |          |     |          |     |          |     |          |
| 0-10                 | 1.23| (1.11-1.36)| 1.32| (1.19-1.47)| 1.40| (1.25-1.58)| -  | -          |
| 10-20                | 0.90| (0.82-0.99)| 0.96| (0.87-1.06)| 1.02| (0.91-1.13)| 0.93| (0.84-1.02)|
| 20-30                | ref |          | ref |          | ref |          | ref |          |
| 30-40                | 1.74| (1.58-1.92)| 1.73| (1.56-1.92)| 1.77| (1.58-1.98)| 1.72| (1.56-1.90)|
| 40-50                | 2.25| (2.04-2.49)| 2.29| (2.07-2.54)| 2.34| (2.09-2.62)| 2.28| (2.06-2.51)|
| 50-60                | 2.32| (2.10-2.57)| 2.35| (2.11-2.61)| 2.35| (2.08-2.64)| 2.32| (2.10-2.57)|
| 60-70                | 2.95| (2.53-3.44)| 2.80| (2.38-3.30)| 2.72| (2.28-3.25)| 2.87| (2.46-3.36)|
| 70+                  | 4.17| (3.22-5.41)| 4.08| (3.09-5.37)| 3.87| (2.87-5.22)| 4.00| (3.09-5.20)|
| **Contact age**      |     |          |     |          |     |          |     |          |
| 0-10                 | 0.79| (0.72-0.87)| 0.86| (0.78-0.95)| 0.95| (0.85-1.06)| 0.83| (0.75-0.92)|
| 10-20                | 0.74| (0.68-0.81)| 0.78| (0.71-0.86)| 0.82| (0.74-0.91)| 0.74| (0.67-0.81)|
| 20-30                | ref |          | ref |          | ref |          | ref |          |
| 30-40                | 1.62| (1.48-1.76)| 1.69| (1.54-1.85)| 1.77| (1.59-1.96)| 1.62| (1.47-1.79)|
| 40-50                | 1.59| (1.46-1.73)| 1.67| (1.52-1.82)| 1.71| (1.54-1.89)| 1.51| (1.38-1.66)|
| 50-60                | 1.47| (1.34-1.61)| 1.51| (1.37-1.66)| 1.54| (1.38-1.72)| 1.44| (1.31-1.58)|
| 60-70                | 1.32| (1.15-1.51)| 1.41| (1.22-1.62)| 1.45| (1.23-1.70)| 1.33| (1.15-1.52)|
| 70+                  | 0.94| (0.76-1.17)| 1.00| (0.80-1.24)| 1.04| (0.81-1.33)| 0.95| (0.76-1.18)|
| **Household size**   |     |          |     |          |     |          |     |          |
| 2                    | 2.35| (2.04-2.72)| 2.34| (2.01-2.72)| 2.21| (1.88-2.60)| 2.39| (2.01-2.83)|
| 3                    | 1.53| (1.33-1.77)| 1.52| (1.31-1.76)| 1.47| (1.25-1.73)| 1.50| (1.26-1.78)|
| 4                    | 1.57| (1.37-1.80)| 1.58| (1.37-1.83)| 1.57| (1.35-1.84)| 1.54| (1.30-1.82)|
| 5                    | 1.40| (1.21-1.62)| 1.42| (1.22-1.66)| 1.39| (1.18-1.64)| 1.33| (1.11-1.59)|
| 6                    | ref |          | ref |          | ref |          | ref |          |
| **Contact sex**      |     |          |     |          |     |          |     |          |
| Male                 | ref |          | ref |          | ref |          | ref |          |
| Female               | 1.12| (1.08-1.16)| 1.12| (1.08-1.17)| 1.11| (1.07-1.17)| 1.12| (1.07-1.17)|
| **Primary case sex** |     |          |     |          |     |          |     |          |
| Male                 | ref |          | ref |          | ref |          | ref |          |
| Female               | 0.97| (0.93-1.02)| 0.97| (0.92-1.02)| 0.95| (0.90-1.00)| 0.98| (0.93-1.03)|

Number of observations: 61,002
Number of households: 26,675
### Table S20: Robustness Analyses III

| Contact vaccination status | I Main | VIII 2-person households | IX No partial vaccination |
|----------------------------|--------|--------------------------|--------------------------|
|                            | OR     | CI           | OR     | CI           | OR     | CI           |
| **Delta households**       |        |              |        |              |        |              |
| Booster vaccinated         | 0.41   | (0.36-0.47)  | 0.37   | (0.30-0.46)  | 0.41   | (0.36-0.46)  |
| Fully vaccinated           | ref    | (.)          | ref    | (.)          | ref    | (.)          |
| Unvaccinated               | 2.36   | (2.20-2.54)  | 1.94   | (1.61-2.34)  | 2.36   | (2.20-2.53)  |
| **Omicron households**    |        |              |        |              |        |              |
| Booster vaccinated         | 1.31   | (1.14-1.51)  | 1.34   | (1.06-1.70)  | 1.31   | (1.14-1.51)  |
| Fully vaccinated           | 2.39   | (2.24-2.54)  | 2.20   | (1.95-2.47)  | 2.39   | (2.24-2.54)  |
| Unvaccinated               | 2.60   | (2.35-2.87)  | 1.82   | (1.40-2.37)  | 2.60   | (2.35-2.87)  |
| **Primary case vaccination status** | |        |        |              |        |              |
| Booster vaccinated         | 0.80   | (0.69-0.92)  | 0.81   | (0.66-0.99)  | 0.80   | (0.69-0.93)  |
| Fully vaccinated           | ref    | (.)          | ref    | (.)          | ref    | (.)          |
| Unvaccinated               | 1.37   | (1.27-1.47)  | 1.20   | (1.03-1.40)  | 1.37   | (1.27-1.47)  |
| **Primary case age**       |        |              |        |              |        |              |
| 0-10                       | 1.23   | (1.11-1.36)  | 0.86   | (0.64-1.16)  | 1.23   | (1.11-1.36)  |
| 10-20                      | 0.90   | (0.82-0.99)  | 0.70   | (0.56-0.87)  | 0.90   | (0.82-0.99)  |
| 20-30                      | ref    | (.)          | ref    | (.)          | ref    | (.)          |
| 30-40                      | 1.74   | (1.58-1.92)  | 1.36   | (1.12-1.65)  | 1.74   | (1.58-1.92)  |
| 40-50                      | 2.25   | (2.04-2.49)  | 1.85   | (1.50-2.27)  | 2.26   | (2.05-2.49)  |
| 50-60                      | 2.32   | (2.10-2.57)  | 2.19   | (1.83-2.62)  | 2.32   | (2.10-2.57)  |
| 60-70                      | 2.95   | (2.53-3.44)  | 2.62   | (2.10-3.26)  | 2.96   | (2.54-3.46)  |
| 70+                        | 4.17   | (3.22-5.41)  | 3.43   | (2.45-4.80)  | 4.17   | (3.22-5.41)  |
| **Contact age**            |        |              |        |              |        |              |
| 0-10                       | 0.79   | (0.72-0.87)  | 0.65   | (0.47-0.89)  | 0.79   | (0.72-0.87)  |
| 10-20                      | 0.74   | (0.68-0.81)  | 0.53   | (0.41-0.69)  | 0.74   | (0.68-0.81)  |
| 20-30                      | ref    | (.)          | ref    | (.)          | ref    | (.)          |
| 30-40                      | 1.62   | (1.48-1.76)  | 1.00   | (0.83-1.21)  | 1.62   | (1.48-1.77)  |
| 40-50                      | 1.59   | (1.46-1.73)  | 1.04   | (0.84-1.28)  | 1.59   | (1.46-1.73)  |
| 50-60                      | 1.47   | (1.34-1.61)  | 1.37   | (1.15-1.63)  | 1.47   | (1.34-1.60)  |
| 60-70                      | 1.32   | (1.15-1.51)  | 1.33   | (1.07-1.65)  | 1.32   | (1.15-1.51)  |
| 70+                        | 0.94   | (0.76-1.17)  | 1.01   | (0.73-1.38)  | 0.95   | (0.76-1.17)  |
| **Household size**         |        |              |        |              |        |              |
| 2                          | 2.35   | (2.04-2.72)  | -      | -            | 2.35   | (2.04-2.72)  |
| 3                          | 1.53   | (1.33-1.77)  | -      | -            | 1.53   | (1.33-1.77)  |
| 4                          | 1.57   | (1.37-1.80)  | -      | -            | 1.57   | (1.37-1.80)  |
| 5                          | 1.40   | (1.21-1.62)  | -      | -            | 1.40   | (1.21-1.62)  |
| 6                          | ref    | (.)          | -      | ref          | ref    | (.)          |
| **Contact sex**            |        |              |        |              |        |              |
| Male                       | ref    | (1.08-1.16)  | ref    | (1.09-1.34)  | ref    | (1.08-1.16)  |
| Female                     | 1.12   | (1.08-1.16)  | 1.21   | (1.09-1.34)  | 1.12   | (1.08-1.16)  |
| **Primary case sex**       |        |              |        |              |        |              |
| Male                       | ref    | (.)          | ref    | (.)          | ref    | (.)          |
| Female                     | 0.97   | (0.93-1.02)  | 1.05   | (0.94-1.17)  | 0.97   | (0.93-1.02)  |
| Number of observations     | 61,002 | 8,903        | 60,936 |              |
| Number of households       | 26,675 | 8,903        | 26,663 |              |
|                              | I Main |         | X Control for Ct |         | XI Only tested negative |         |
|------------------------------|--------|---------|-----------------|---------|-------------------------|---------|
|                              | OR     | CI      | OR              | CI      | OR                      | CI      |
| **Contact vaccination status** | Delta households |        |                 |         |                          |         |
| Booster vaccinated           | 0.41 (0.36-0.47) | 0.42 (0.35-0.50) | 0.39 (0.33-0.45) |         |                          |         |
| Fully vaccinated             | ref (.) | ref (.) | ref (.)         | ref (.) |                          |         |
| Unvaccinated                 | 2.36 (2.20-2.54) | 2.48 (2.23-2.74) | 2.44 (2.21-2.69) |         |                          |         |
| **Omicron households**       |         |         |                 |         |                          |         |
| Booster vaccinated           | 1.31 (1.14-1.51) | 1.34 (1.08-1.67) | 1.26 (1.05-1.51) |         |                          |         |
| Fully vaccinated             | 2.39 (2.24-2.54) | 2.42 (2.21-2.65) | 2.39 (2.21-2.59) |         |                          |         |
| Unvaccinated                 | 2.60 (2.35-2.87) | 2.96 (2.56-3.41) | 3.09 (2.69-3.54) |         |                          |         |
| **Primary case vaccination status** |         |         |                 |         |                          |         |
| Booster vaccinated           | 0.80 (0.69-0.92) | 0.74 (0.58-0.94) | 0.74 (0.62-0.90) |         |                          |         |
| Fully vaccinated             | ref (.) | ref (.) | ref (.)         | ref (.) |                          |         |
| Unvaccinated                 | 1.37 (1.27-1.47) | 1.29 (1.16-1.43) | 1.48 (1.34-1.64) |         |                          |         |
| **Primary case age**         |         |         |                 |         |                          |         |
| 0-9                          | 1.23 (1.11-1.36) | 1.45 (1.25-1.68) | 1.06 (0.92-1.22) |         |                          |         |
| 10-20                       | 0.90 (0.82-0.99) | 0.92 (0.81-1.05) | 0.81 (0.71-0.92) |         |                          |         |
| 20-30                       | ref (.) | ref (.) | ref (.)         | ref (.) |                          |         |
| 30-40                       | 1.74 (1.58-1.92) | 1.63 (1.42-1.88) | 1.53 (1.33-1.76) |         |                          |         |
| 40-50                       | 2.25 (2.04-2.49) | 2.34 (2.03-2.69) | 2.11 (1.85-2.41) |         |                          |         |
| 50-60                       | 2.32 (2.10-2.57) | 2.31 (2.00-2.68) | 2.28 (2.00-2.60) |         |                          |         |
| 60-70                       | 2.95 (2.53-3.44) | 2.83 (2.24-3.58) | 2.48 (2.05-3.01) |         |                          |         |
| 70+                         | 4.17 (3.22-5.41) | 4.26 (2.87-6.30) | 3.73 (2.69-5.18) |         |                          |         |
| **Contact age**              |         |         |                 |         |                          |         |
| 0-10                        | 0.79 (0.72-0.87) | 0.78 (0.68-0.89) | 0.80 (0.70-0.92) |         |                          |         |
| 10-20                       | 0.74 (0.68-0.81) | 0.78 (0.69-0.89) | 0.67 (0.60-0.76) |         |                          |         |
| 20-30                       | ref (.) | ref (.) | ref (.)         | ref (.) |                          |         |
| 30-40                       | 1.62 (1.48-1.76) | 1.72 (1.51-1.95) | 1.56 (1.38-1.76) |         |                          |         |
| 40-50                       | 1.59 (1.46-1.73) | 1.67 (1.47-1.88) | 1.53 (1.37-1.72) |         |                          |         |
| 50-60                       | 1.47 (1.34-1.61) | 1.52 (1.33-1.73) | 1.46 (1.30-1.65) |         |                          |         |
| 60-70                       | 1.32 (1.15-1.51) | 1.46 (1.20-1.78) | 1.37 (1.14-1.63) |         |                          |         |
| 70+                         | 0.94 (0.76-1.17) | 0.87 (0.63-1.19) | 1.15 (0.86-1.54) |         |                          |         |
| **Household size**           |         |         |                 |         |                          |         |
| 2                           | 2.35 (2.04-2.72) | 2.47 (2.02-3.02) | 2.47 (1.96-3.13) |         |                          |         |
| 3                           | 1.53 (1.33-1.77) | 1.57 (1.29-1.91) | 1.53 (1.21-1.93) |         |                          |         |
| 4                           | 1.57 (1.37-1.80) | 1.51 (1.25-1.83) | 1.55 (1.24-1.94) |         |                          |         |
| 5                           | 1.40 (1.21-1.62) | 1.47 (1.20-1.79) | 1.46 (1.16-1.85) |         |                          |         |
| 6                           | ref (.) | ref (.) | ref (.)         | ref (.) |                          |         |
| **Contact sex**              |         |         |                 |         |                          |         |
| Male                        | ref (.) | ref (.) | ref (.)         | ref (.) |                          |         |
| Female                      | 1.12 (1.08-1.16) | 1.10 (1.04-1.16) | 1.11 (1.06-1.17) |         |                          |         |
| **Primary case sex**         |         |         |                 |         |                          |         |
| Male                        | ref (.) | ref (.) | ref (.)         | ref (.) |                          |         |
| Female                      | 0.97 (0.93-1.02) | 0.98 (0.91-1.05) | 0.90 (0.85-0.96) |         |                          |         |
| **Primary case Ct value**    |         |         |                 |         |                          |         |
| 14-16                       | 0.83 (0.19-3.70) |         |                 |         |                          |         |
| 16-18                       | 2.94 (1.80-4.80) |         |                 |         |                          |         |
| 18-20                       | 1.56 (1.23-1.98) |         |                 |         |                          |         |
| 20-22                       | 1.68 (1.44-1.96) |         |                 |         |                          |         |
| 22-24                       | 1.32 (1.16-1.50) |         |                 |         |                          |         |
| 24-26                       | 1.19 (1.05-1.35) |         |                 |         |                          |         |
| 26-28                       | 1.05 (0.92-1.20) |         |                 |         |                          |         |
| 28-30                       | ref (.) |         |                 |         |                          |         |
| 30-32                       | 0.91 (0.79-1.04) |         |                 |         |                          |         |
| 32-34                       | 0.89 (0.77-1.04) |         |                 |         |                          |         |
| 34-36                       | 0.84 (0.71-1.00) |         |                 |         |                          |         |
| 36-38                       | 0.76 (0.62-0.94) |         |                 |         |                          |         |
| **Number of observations**   | 61,002 | 29,716  | 41,662          |         |                          |         |
| **Number of households**     | 26,675 | 12,898  | 19,242          |         |                          |         |
### Table S22: Robustness Analyses V

| Contact vaccination status | XII | More vaccination groups | OR | CI   |
|----------------------------|-----|-------------------------|----|------|
| **Delta households**       |     |                         |    |      |
| Booster vaccinated         | 0.39| (0.34-0.44)             |    |      |
| Unvaccinated               | 2.12|(1.97-2.28)             |    |      |
| Previous infection (no vaccination) | 0.30| (0.22-0.41)             |    |      |
| Fully vaccinated (no previous infection) | ref | {}                    |    |      |
| Fully vaccinated & previous infection | 0.13| (0.09-0.18)             |    |      |
| **Omicron households**    |     |                         |    |      |
| Booster vaccinated         | 1.25|(1.09-1.45)             |    |      |
| Unvaccinated               | 2.36|(2.13-2.61)             |    |      |
| Previous infection (no vaccination) | 1.18| (0.88-1.58)             |    |      |
| Fully vaccinated (no previous infection) | 2.40| (2.25-2.56)             |    |      |
| Fully vaccinated & previous infection | 1.24| (1.03-1.50)             |    |      |
| **Primary case vaccination status** |     |                         |    |      |
| Booster vaccinated         | 0.78|(0.67-0.90)             |    |      |
| Unvaccinated               | 1.37|(1.27-1.47)             |    |      |
| Previous infection (no vaccination) | 0.61| (0.44-0.85)             |    |      |
| Fully vaccinated (no previous infection) | ref | {}                    |    |      |
| Fully vaccinated & previous infection | 0.55| (0.45-0.68)             |    |      |
| **Primary case age**       |     |                         |    |      |
| 0-10                       | 1.18|(1.06-1.31)             |    |      |
| 10-20                      | 0.87|(0.79-0.96)             |    |      |
| 20-30                      | ref | {}                      |    |      |
| 30-40                      | 1.71|(1.55-1.88)             |    |      |
| 40-50                      | 2.19|(1.98-2.41)             |    |      |
| 50-60                      | 2.26|(2.04-2.51)             |    |      |
| 60-70                      | 2.86|(2.45-3.34)             |    |      |
| 70+                        | 4.08|(3.15-5.30)             |    |      |
| **Contact age**            |     |                         |    |      |
| 0-10                       | 0.81|(0.73-0.89)             |    |      |
| 10-20                      | 0.73|(0.67-0.80)             |    |      |
| 20-30                      | ref | {}                      |    |      |
| 30-40                      | 1.56|(1.43-1.71)             |    |      |
| 40-50                      | 1.52|(1.39-1.65)             |    |      |
| 50-60                      | 1.40|(1.28-1.53)             |    |      |
| 60-70                      | 1.25|(1.09-1.43)             |    |      |
| 70+                        | 0.89|(0.72-1.10)             |    |      |
| **Household size**         |     |                         |    |      |
| 2                          | 2.29|(1.98-2.65)             |    |      |
| 3                          | 1.49|(1.30-1.72)             |    |      |
| 4                          | 1.54|(1.34-1.77)             |    |      |
| 5                          | 1.38|(1.20-1.60)             |    |      |
| 6                          |     |                         |    |      |
| **Contact sex**            |     |                         |    |      |
| Male                       | ref | {}                      |    |      |
| Female                     | 1.12|(1.08-1.16)             |    |      |
| **Primary case sex**       |     |                         |    |      |
| Male                       | ref | {}                      |    |      |
| Female                     | 0.97|(0.92-1.02)             |    |      |

- Number of observations: 61,002
- Number of households: 26,675
### Table S23: Robustness Analyses VI

| Contact vaccination status | XIII | I |
|----------------------------|------|---|
|                            | Unadjusted OR | CI | Main OR | CI |
| Delta households           |      |    |         |    |
| Booster vaccinated         | 0.62 | (0.48-0.62) | 0.41 | (0.36-0.47) |
| Fully vaccinated           | ref  | (.) | ref     | (.) |
| Unvaccinated               | 1.71 | (1.54-1.71) | 2.36 | (2.20-2.54) |
| Omicron households         |      |    |         |    |
| Booster vaccinated         | 1.53 | (1.17-1.53) | 1.31 | (1.14-1.51) |
| Fully vaccinated           | 2.03 | (1.80-2.03) | 2.39 | (2.24-2.54) |
| Unvaccinated               | 1.85 | (1.56-1.85) | 2.60 | (2.35-2.87) |
| Primary case vaccination status |    |    |         |    |
| Booster vaccinated         | 1.30 | (0.99-1.30) | 0.80 | (0.69-0.92) |
| Fully vaccinated           | ref  | (.) | ref     | (.) |
| Unvaccinated               | 1.09 | (0.98-1.09) | 1.37 | (1.27-1.47) |
| Primary case age           |      |    |         |    |
| 0-10                       | -    | -  | 1.23    | (1.11-1.36) |
| 10-20                      | -    | -  | 0.90    | (0.82-0.99) |
| 20-30                      | -    | -  | ref     | (.) |
| 30-40                      | -    | -  | 1.74    | (1.58-1.92) |
| 40-50                      | -    | -  | 2.25    | (2.04-2.49) |
| 50-60                      | -    | -  | 2.32    | (2.10-2.57) |
| 60-70                      | -    | -  | 2.95    | (2.53-3.44) |
| 70+                        | -    | -  | 4.17    | (3.22-5.41) |
| Contact age                |      |    |         |    |
| 0-10                       | -    | -  | 0.79    | (0.72-0.87) |
| 10-20                      | -    | -  | 0.74    | (0.68-0.81) |
| 20-30                      | -    | -  | ref     | (.) |
| 30-40                      | -    | -  | 1.62    | (1.48-1.76) |
| 40-50                      | -    | -  | 1.59    | (1.46-1.73) |
| 50-60                      | -    | -  | 1.47    | (1.34-1.61) |
| 60-70                      | -    | -  | 1.32    | (1.15-1.51) |
| 70+                        | -    | -  | 0.94    | (0.76-1.17) |
| Household size             |      |    |         |    |
| 2                          | -    | -  | 2.35    | (2.04-2.72) |
| 3                          | -    | -  | 1.53    | (1.33-1.77) |
| 4                          | -    | -  | 1.57    | (1.37-1.80) |
| 5                          | -    | -  | 1.40    | (1.23-1.62) |
| 6                          | -    | -  | ref     | (.) |
| Contact sex                |      |    |         |    |
| Male                       | -    | -  | ref     | (.) |
| Female                     | -    | -  | 1.12    | (1.08-1.16) |
| Primary case sex           |      |    |         |    |
| Male                       | -    | -  | ref     | (.) |
| Female                     | -    | -  | 0.97    | (0.93-1.02) |
| Number of observations     | 61,002 |     | 61,002  |     |
| Number of households       | 26,675 |     | 26,675  |     |
Supplementary Information References

1. Stærk-Østergaard J, Kirkeby C, Christiansen LE, et al. Evaluation of diagnostic test procedures for SARS-CoV-2 using latent class models: comparison of antigen test kits and sampling for PCR testing based on Danish national data registries. arXiv. 2021; (published online Dec 21.) (preprint).

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