Figure 4—Figure supplement 3. Descriptive parameters for respiratory viral loads based on individual sample data.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | **Weibull distribution parameters** | | **Respiratory viral load, log10 copies/ml** | | | | |
| **Category** | ***n*** \* **(specimens)** | ***n*** \* **(studies)** | **Scale factor**  **(95% CI)** | **Shape factor (95% CI)** | **Mean (95% CI)**† | **SD**† | **80th percentile (95% CI)**‡ | **90th percentile (95% CI)**‡ | **99th percentile (95% CI)**‡ |
| SARS-CoV-2 (overall)§ | 3,834 | 26 | 7.01 (6.94-7.08) | 3.47 (3.39-3.56) | 6.29 (6.22-6.35) | 2.04 | 8.04 (7.96-8.11) | 8.91 (8.83-9.00) | 10.88 (10.75-11.01) |
| SARS-CoV-1 (overall)§ | 303 | 5 | 6.37 (6.15-6.60) | 3.40 (3.12-3.71) | 5.72 (5.51-5.93) | 1.86 | 7.33 (7.09-7.57) | 8.14 (7.86-8.43) | 9.98 (9.56-10.42) |
| A(H1N1)pdm09 (overall)§ | 512 | 10 | 7.39 (7.27-7.51) | 5.43 (5.07-5.81) | 6.81 (6.69-6.94) | 1.45 | 8.07 (7.94-8.20) | 8.62 (8.47-8.76) | 9.79 (9.59-10.00) |
| SARS-CoV-2 (adult)§ | 3,575 | 20 | 7.00 (6.93-7.07) | 3.48 (3.39-3.57) | 6.27 (6.21-6.34) | 2.03 | 8.02 (7.95-8.10) | 8.89 (8.81-8.98) | 10.86 (10.72-10.99) |
| SARS-CoV-2 (pediatric)§ | 198 | 9 | 7.43 (7.14-7.74) | 3.63 (3.25-4.05) | 6.69 (6.40-6.97) | 2.06 | 8.47 (8.15-8.80) | 9.35 (8.98-9.73) | 11.32 (10.76-11.90) |
| SARS-CoV-2 (symptomatic/presymptomatic)§ | 1,574 | 22 | 7.40 (7.30-7.51) | 3.81 (3.67-3.97) | 6.68 (6.58-6.79) | 2.00 | 8.39 (8.28-8.50) | 9.21 (9.09-9.34) | 11.05 (10.86-11.24) |
| SARS-CoV-2 (asymptomatic)§ | 2,221 | 7 | 6.72 (6.63-6.81) | 3.33 (3.22-3.44) | 6.01 (5.92-6.09) | 2.01 | 8.04 (7.96-8.11) | 8.91 (8.83-9.00) | 10.88 (10.75-11.01) |
| SARS-CoV-2 (all DFSO)§ | 955 | 21 | 7.07 (6.94-7.21) | 3.50 (3.33-3.68) | 6.35 (6.22-6.48) | 2.03 | 8.10 (7.95-8.25) | 8.97 (8.80-9.15) | 10.94 (10.68-11.21) |
| SARS-CoV-2 (-3 DFSO)|| | 1 | 1 | - | - | 10.34 | - | - | - | - |
| SARS-CoV-2 (-2 DFSO)|| | 3 | 2 | - | - | 4.22 (2.41-6.02) | 1.59 | - | - | - |
| SARS-CoV-2 (-1 DFSO) | 15 | 5 | 6.17 (5.11-7.47) | 2.82 (1.89-4.19) | 5.48 (4.25-6.70) | 2.21 | 7.31 (6.11-8.75) | 8.30 (6.88-10.02) | 10.62 (8.38-13.45) |
| SARS-CoV-2 (0 DFSO) | 50 | 11 | 6.66 (6.13-7.24) | 3.52 (2.87-4.32) | 6.00 (5.49-6.51) | 1.83 | 7.62 (7.05-8.25) | 8.44 (7.78-9.16) | 10.28 (9.30-11.36) |
| SARS-CoV-2 (1 DFSO) | 63 | 11 | 7.86 (7.33-8.43) | 3.71 (3.04-4.53) | 7.08 (6.54-7.63) | 2.22 | 8.94 (8.36-9.55) | 9.84 (9.17-10.56) | 11.86 (10.84-12.99) |
| SARS-CoV-2 (2 DFSO)¶ | 71 | 15 | 7.33 (6.84-7.87) | 3.46 (2.85-4.19) | 6.58 (6.07-7.10) | 2.22 | 8.42 (7.87-9.01) | 9.34 (8.69-10.03) | 11.41 (10.39-12.53) |
| SARS-CoV-2 (3 DFSO)¶ | 75 | 17 | 7.24 (6.73-7.78) | 3.25 (2.70-3.92) | 6.47 (5.95-6.98) | 2.28 | 8.38 (7.81-8.98) | 9.35 (8.68-10.07) | 11.57 (10.52-12.72) |
| SARS-CoV-2 (4 DFSO)¶ | 85 | 17 | 6.83 (6.29-7.41) | 2.75 (2.32-3.27) | 6.06 (5.54-6.58) | 2.44 | 8.12 (7.51-8.77) | 9.25 (8.52-10.03) | 11.90 (10.72-13.20) |
| SARS-CoV-2 (5 DFSO)¶ | 93 | 16 | 7.16 (6.69-7.66) | 3.17 (2.69-3.73) | 6.41 (5.95-6.87) | 2.26 | 8.32 (7.80-8.87) | 9.31 (8.70-9.97) | 11.59 (10.63-12.64) |
| SARS-CoV-2 (6 DFSO)¶ | 105 | 15 | 6.84 (6.41-7.29) | 3.13 (2.67-3.66) | 6.10 (5.68-6.53) | 2.23 | 7.96 (7.49-8.46) | 8.93 (8.36-9.53) | 11.14 (10.24-12.12) |
| SARS-CoV-2 (7 DFSO)¶ | 136 | 20 | 6.59 (6.23-6.97) | 3.11 (2.71-3.56) | 5.90 (5.55-6.26) | 2.12 | 7.68 (7.27-8.11) | 8.62 (8.14-9.13) | 10.77 (10.05-11.60) |
| SARS-CoV-2 (8 DFSO)¶ | 123 | 19 | 6.51 (6.12-6.92) | 3.03 (2.62-3.49) | 5.82 (5.44-6.19) | 2.13 | 7.62 (7.18-8.08) | 8.58 (8.06-9.12) | 10.78 (9.96-11.67) |
| SARS-CoV-2 (9 DFSO)¶ | 128 | 19 | 6.26 (5.87-6.67) | 2.87 (2.50-3.29) | 5.57 (5.20-5.94) | 2.14 | 7.38 (6.95-7.85) | 8.37 (7.85-8.92) | 10.66 (9.83-11.55) |
| SARS-CoV-2 (10 DFSO)¶ | 115 | 18 | 5.71 (5.30-6.16) | 2.55 (2.20-2.95) | 5.09 (4.70-5.48) | 2.14 | 6.89 (6.41-7.40) | 7.93 (7.35-8.56) | 10.41 (9.45-11.47) |

\*These two columns summarize the cumulative number of specimens (left) collected from the number of contributing studies (right) for each category in the systematic dataset.

†The mean and sample SD were calculated on the entirety of individual sample data for each category. These data were collected from studies clearly reporting data for individual specimens.

‡The Weibull quantile distributions were used to determine rVLs at the 80th, 90th and 99th cps.

§These categories included only rVL data from positive (above the detection limit) assay measurements.

||Data for earlier DFSO were excluded from distribution fitting based on limited data, and empty cells were marked with “-“.

¶These categories included negative assay measurements (set at the detection limit to estimate rVLs; *N* = 5, 3, 7, 10, 13, 17, 14, 22 and 17 specimens for 2-10 DFSO, respectively) for cases that tested positive at an earlier DFSO.