| #  | MPZ    | Tg (days) | Tg (weeks) | Δt (weeks) | Baseline | pC  | IC  | R0   | R0 (1.5g) Tg (days) | R0 (1.5g) Tg (weeks) |
|----|--------|-----------|------------|------------|----------|-----|-----|------|---------------------|-----------------------|
| 1  | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 2  | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 3  | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 4  | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 5  | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 6  | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 7  | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 8  | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 9  | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 10 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 11 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 12 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 13 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 14 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 15 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 16 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 17 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 18 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 19 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 20 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 21 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 22 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 23 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 24 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 25 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 26 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 27 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 28 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 29 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 30 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 31 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 32 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 33 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 34 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 35 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 36 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 37 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
| 38 | 0      | 284.32    | 2.60       | 6.49       | 3.63     | 1.16| 1.60| 0.07 | 1.35                | 1.35                  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39 | 87117 | 1831 | 36.02 | 0.84 | 3.67 | 2.60 | 1.20 | 0.07 | 1.82 | 1.56 | 1.59 | 1.24 | 1.82 | 1.82 | 1.82 | 186.67 |
| 40 | 96859 | 15475 | 21.99 | 0.00 | 4.35 | 2.60 | 0.80 | 0.07 | 1.03 | 0.95 | 1.06 | 1.28 | 1.03 | 1.03 | 1.28 | 259.26 |
| 41 | 65473 | 15146 | 26.51 | 7.46 | 4.46 | 2.60 | 1.05 | 0.07 | 1.00 | 0.96 | 1.00 | 1.37 | 1.00 | 1.00 | 1.37 | 183.77 |
| 42 | 29152 | 2719 | 35.29 | 10.34 | 1.05 | 2.60 | 0.80 | 0.07 | 1.34 | 1.32 | 1.35 | 2.49 | 1.34 | 1.34 | 2.49 | 153.51 |
| 43 | 31314 | 17657 | 27.89 | 1.89 | 8.41 | 2.60 | 0.81 | 0.07 | 0.97 | 0.92 | 1.01 | 1.21 | 0.97 | 0.97 | 1.21 | 186.18 |
| 44 | 96319 | 1899 | 45.35 | 4.16 | 6.29 | 2.60 | 0.80 | 0.07 | 1.70 | 1.71 | 1.72 | 2.49 | 2.49 | 2.49 | 2.49 | 139.79 |
| 45 | 96350 | 3103 | 33.07 | 2.67 | 5.01 | 2.60 | 0.81 | 0.07 | 1.70 | 1.02 | 1.36 | 1.05 | 1.70 | 1.05 | 1.70 | 174.92 |
| 46 | 78843 | 780 | 37.89 | 1.90 | 1.07 | 2.60 | 2.55 | 0.07 | 1.88 | 1.31 | 1.35 | 0.71 | 1.88 | 0.71 | 1.88 | 206.17 |
| 47 | 84056 | 2726 | 39.71 | 3.62 | 1.07 | 2.60 | 0.80 | 0.07 | 1.70 | 1.53 | 1.54 | 0.85 | 1.70 | 0.85 | 1.70 | 116.66 |
| 48 | 31905 | 25822 | 29.77 | 1.49 | 4.61 | 2.60 | 0.80 | 0.07 | 0.94 | 0.73 | 1.04 | 1.39 | 0.94 | 0.94 | 1.39 | 174.90 |
| 49 | 57706 | 1977 | 38.97 | 1.50 | 1.02 | 2.60 | 0.80 | 0.07 | 2.32 | 1.47 | 1.80 | 1.40 | 2.32 | 2.32 | 2.32 | 115.67 |
| 50 | 71459 | 7204 | 27.82 | 0.00 | 1.06 | 2.60 | 0.80 | 0.07 | 1.09 | 1.07 | 1.13 | 2.20 | 1.09 | 1.09 | 2.20 | 164.81 |
1 MPZ = Military Installation by Zip Code. Anonymized individuals are identified by the zip-5 code of the clinic that they visited. Other possible locators would be: (1) the unit identifier code (UIC) of the unit the individual belongs to; (2) the zip-3 code of the UIC; or (3) the name (and/or location) of the installation to which their unit is assigned. However, these would likely introduce errors into our analysis, particularly when troops are temporarily transferred from one installation to another or troops are staged and/or deployed. MPZ, on the other hand, provides a measure of the instantaneous location of the individual when they present to the clinic with symptoms.

2 \( N_{\text{total}} \) is the total population size for each MPZ, that is, the estimated number of individuals who are served by the clinics within a particular MPZ.

3 \( T_0 \) is the initial time of onset of the epidemic in the model, that is, when the first susceptible individual becomes infectious. To within a week or two, it is also a measure of the timing of the model-fit peak.

4 \( t_1 \) is the time at which \( R_0 \) changes to \( R^* \).

5 \( \Delta t \) is the duration over which the basic reproduction number remains at \( R^* \).

6 \( T_g \) is the generation time, or, in this model, the average time of infection. For the results shown here, \( T_g \) was fixed at 2.6 days.

7 ‘Baseline’ is the amount of noise added to the solution during the fitting procedure and is optimized in the same manner as the other parameters. At the first time step, the number of infectious individuals is: \( I = S \times p_{Inf} + seed_{Inf} \), where \( p_{Inf} \) is the probability of becoming infected and \( seed_{Inf} \) is the baseline noise.

8 \( p_C \) is the proportion of active military individuals who are infectious that visit a clinic.

9 \( R_0 \) is the initial value of the basic reproduction number.

10 \( R_0(25) \) is the 25\% quantile.

11 \( R_0(75) \) is the 75\% quantile.

12 \( R^* \) is the value that the basic reproduction number changes to at time \( t_1 \).

13 \( R_{\text{modal}} \) is the value of \( R \), either \( R_0 \) or \( R^* \), corresponding to the most number of infections, that is, it is the value with the largest fraction of the area under the model fit profile.

14 \( R_{\text{max}} \) is the value of \( R \), either \( R_0 \) or \( R^* \), at the time of peak model incidence.

15 \( R_{\text{best}} \) is the maximum value of \( R_0 \) or \( R^* \).

16 AIC\(_c\) = Reduced Akaike Information Criterion. This is typically used when the number of parameters (\( K \)) is large relative to the sample size (\( n \)). [17] suggest using AIC\(_c\) unless \( n/K > 40 \). In our case, \( K \) is seven and \( n \) may be as large as one year, or 52 weeks, suggesting that \( n/K < 7.4 \), and AIC\(_c\), not AIC should be used throughout.