# S1_Table

**Parameters of SEIR model for human deaths from rabies for different regions, different age and gender groups and different occupational groups in mainland China.**

| Parameters | Male<45 | Male>45 | Female<45 | Female>45 |
|---|---|---|---|---|
| A | $2.34 \times 10^5$ | $2.34 \times 10^5$ | $2.34 \times 10^5$ | $2.34 \times 10^5$ |
| $\lambda_D$ | 0.1666 | 0.1666 | 0.1666 | 0.1666 |
| $\gamma_D$ | 0.49 | 0.49 | 0.49 | 0.49 |
| $\sigma_D$ | 0.95 | 0.95 | 0.95 | 0.95 |
| $m_D$ | 0.0064 | 0.0064 | 0.0064 | 0.0064 |
| $k_D$ | 0.09 | 0.09 | 0.09 | 0.09 |
| $\mu_D$ | 1 | 1 | 1 | 1 |
| B | $7.00 \times 10^5$ | $8.72 \times 10^5$ | $6.40 \times 10^5$ | $8.63 \times 10^5$ |
| $\lambda_H$ | 0.1666 | 0.1666 | 0.1666 | 0.1666 |
| $\gamma_H$ | 0.5 | 0.5 | 0.5 | 0.5 |
| $\sigma_H$ | 0.5 | 0.5 | 0.5 | 0.5 |
| $m_H$ | 0.001912 | 0.001783 | 0.001988 | 0.00164 |
| $k_H$ | 0.54 | 0.54 | 0.54 | 0.54 |
| $\mu_H$ | 1 | 1 | 1 | 1 |
| $S_D$ | $3.30 \times 10^7$ | $3.30 \times 10^7$ | $3.30 \times 10^7$ | $3.30 \times 10^7$ |
| $E_D$ | $2.20 \times 10^4$ | $2.20 \times 10^4$ | $2.20 \times 10^4$ | $2.20 \times 10^4$ |
| $I_D$ | $1.10 \times 10^4$ | $1.10 \times 10^4$ | $1.10 \times 10^4$ | $1.10 \times 10^4$ |
| $R_D$ | $3.30 \times 10^6$ | $3.30 \times 10^6$ | $3.30 \times 10^6$ | $3.30 \times 10^6$ |
| $S_H$ | $4.56 \times 10^8$ | $2.03 \times 10^8$ | $4.34 \times 10^8$ | $2.03 \times 10^8$ |
| $E_H$ | 110 | 66 | 110 | 54 |
| $I_H$ | 55 | 33 | 55 | 27 |
| $R_H$ | $2.10 \times 10^7$ | $9.37 \times 10^6$ | $2.00 \times 10^7$ | $9.37 \times 10^6$ |
| $a_D$ | $9.85 \times 10^{-8}$ | $1.00 \times 10^{-7}$ | $9.82 \times 10^{-8}$ | $1.00 \times 10^{-7}$ |
| $a_H$ | $2.84 \times 10^{-11}$ | $4.64 \times 10^{-11}$ | $1.28 \times 10^{-11}$ | $2.38 \times 10^{-11}$ |
| $b_D$ | 0.42 | 0.42 | 0.42 | 0.42 |
| $b_H$ | 0.33 | 0.33 | 0.33 | 0.33 |

**S1_Table continued**

| Parameters | Region1 | Region2 | Region3 | Region4 |
|---|---|---|---|---|
| A | $4.15 \times 10^4$ | $5.50 \times 10^4$ | $5.25 \times 10^4$ | $6.50 \times 10^4$ |
| $\lambda_D$ | 0.1666 | 0.1666 | 0.1666 | 0.1666 |
| $\gamma_D$ | 0.49 | 0.49 | 0.49 | 0.49 |
| $\sigma_D$ | 0.95 | 0.95 | 0.95 | 0.95 |
| $m_D$ | 0.0064 | 0.0064 | 0.0064 | 0.0064 |
| $k_D$ | 0.09 | 0.09 | 0.09 | 0.09 |
| $\mu_D$ | 1 | 1 | 1 | 1 |
| B | $2.87 \times 10^5$ | $3.11 \times 10^5$ | $2.98 \times 10^5$ | $3.66 \times 10^5$ |
| $\lambda_H$ | 0.1666 | 0.1666 | 0.1666 | 0.1666 |
| $\gamma_H$ | 0.5 | 0.5 | 0.5 | 0.5 |
| $\sigma_H$ | 0.5 | 0.5 | 0.5 | 0.5 |
| $m_H$ | 0.000632 | 0.000651 | 0.000643 | 0.000666 |
| $k_H$ | 0.54 | 0.54 | 0.54 | 0.54 |
| $\mu_H$ | 1 | 1 | 1 | 1 |
| $S_D$ | $6.04 \times 10^6$ | $7.88 \times 10^6$ | $7.15 \times 10^6$ | $9.17 \times 10^6$ |
| $E_D$ | $4.03 \times 10^3$ | $5.25 \times 10^3$ | $4.77 \times 10^3$ | $6.11 \times 10^3$ |
| $I_D$ | $2.01 \times 10^3$ | $2.63 \times 10^3$ | $2.38 \times 10^3$ | $3.06 \times 10^3$ |
| $R_D$ | $6.04 \times 10^5$ | $7.88 \times 10^5$ | $7.15 \times 10^5$ | $9.17 \times 10^5$ |
| $S_H$ | $2.39 \times 10^8$ | $3.10 \times 10^8$ | $2.82 \times 10^8$ | $3.61 \times 10^8$ |
| $E_H$ | 170 | 34 | 44 | 38 |
| $I_H$ | 85 | 17 | 22 | 19 |
| $R_H$ | $1.10 \times 10^7$ | $1.10 \times 10^7$ | $1.43 \times 10^7$ | $1.30 \times 10^7$ |
| $a_D$ | $5.45 \times 10^{-7}$ | $4.29 \times 10^{-7}$ | $4.56 \times 10^{-7}$ | $3.68 \times 10^{-7}$ |
| $a_H$ | $4.28 \times 10^{-10}$ | $6.53 \times 10^{-11}$ | $5.58 \times 10^{-11}$ | $2.88 \times 10^{-11}$ |
| $b_D$ | 0.42 | 0.42 | 0.42 | 0.42 |
| $b_H$ | 0.23 | 0.43 | 0.43 | 0.43 |

**S1_Table continued**

| Parameters | Children | Students | Workers | Farmers |
|---|---|---|---|---|
| A | $2.34 \times 10^5$ | $2.34 \times 10^5$ | $2.34 \times 10^5$ | $2.34 \times 10^5$ |
| $\lambda_D$ | 0.1666 | 0.1666 | 0.1666 | 0.1666 |
| $\gamma_D$ | 0.49 | 0.49 | 0.49 | 0.49 |
| $\sigma_D$ | 0.95 | 0.95 | 0.95 | 0.95 |
| $m_D$ | 0.0064 | 0.0064 | 0.0064 | 0.0064 |
| $k_D$ | 0.09 | 0.09 | 0.09 | 0.09 |
| $\mu_D$ | 1 | 1 | 1 | 1 |
| B | $1.34 \times 10^6$ | $1.67 \times 10^6$ | $2.57 \times 10^5$ | $6.70 \times 10^5$ |
| $\lambda_H$ | 0.1666 | 0.1666 | 0.1666 | 0.1666 |
| $\gamma_H$ | 0.5 | 0.5 | 0.5 | 0.5 |
| $\sigma_H$ | 0.5 | 0.5 | 0.5 | 0.5 |
| $m_H$ | 0.0119 | 0.00694 | 0.002 | 0.0006 |
| $k_H$ | 0.54 | 0.54 | 0.54 | 0.54 |
| $\mu_H$ | 1 | 1 | 1 | 1 |
| $S_D$ | $3.30 \times 10^7$ | $3.30 \times 10^7$ | $3.30 \times 10^7$ | $3.30 \times 10^7$ |
| $E_D$ | $2.20 \times 10^4$ | $2.20 \times 10^4$ | $2.20 \times 10^4$ | $2.20 \times 10^4$ |
| $I_D$ | $1.10 \times 10^4$ | $1.10 \times 10^4$ | $1.10 \times 10^4$ | $1.10 \times 10^4$ |
| $R_D$ | $3.30 \times 10^6$ | $3.30 \times 10^6$ | $3.30 \times 10^6$ | $3.30 \times 10^6$ |
| $S_H$ | $1.12 \times 10^8$ | $2.40 \times 10^8$ | $2.00 \times 10^8$ | $6.50 \times 10^8$ |
| $E_H$ | 34 | 46 | 18 | 174 |
| $I_H$ | 17 | 23 | 9 | 87 |
| $R_H$ | $5.17 \times 10^6$ | $1.11 \times 10^7$ | $9.23 \times 10^6$ | $3.00 \times 10^7$ |
| $a_D$ | $9.82 \times 10^{-8}$ | $9.74 \times 10^{-8}$ | $9.96 \times 10^{-8}$ | $1.01 \times 10^{-7}$ |
| $a_H$ | $3.28 \times 10^{-11}$ | $2.90 \times 10^{-11}$ | $1.26 \times 10^{-11}$ | $2.52 \times 10^{-11}$ |
| $b_D$ | 0.42 | 0.42 | 0.42 | 0.42 |
| $b_H$ | 0.33 | 0.33 | 0.33 | 0.33 |