

S2 Appendix. Single-Sex Model Description and Parameter Values

Equation 16 gives the single-sex model incidence rates and exit rates presented in equation 14.

$$\left\{ \begin{array}{l} \beta_u = \frac{c\gamma}{N_y} [I_u + \alpha_c \rho_c I_a + (\alpha_c \rho_c + \alpha_t \rho_t) T_u], \\ \beta_a = \frac{c\gamma}{N_y} [I_u + \alpha_c \rho_c I_a + (\alpha_c \rho_c + \alpha_t \rho_t) T_u] \alpha_{ht} \rho_{ht}, \\ \tilde{\beta}_a = \frac{c\gamma}{N_y} [I_u + \alpha_c \rho_c I_a + (\alpha_c \rho_c + \alpha_t \rho_t) T_u] \alpha_{ht}^1 \rho_{ht}, \\ \mu_1 = \rho_{ht} + \mu + \sigma, \mu_2 = \mu + \sigma, \mu_3 = \rho_{ht} + \mu + \sigma + \delta, \mu_4 = \rho_{ct} + \rho_{ct}^1 + \mu + \sigma + \delta, \\ \mu_5 = \rho_{ct}^1 + \bar{\mu} + \delta, \mu_6 = \rho_{ct} + \mu + \sigma. \end{array} \right. \quad (16)$$