Generalized S-I-R model

1 Equations

These are the equations for the model:

$$\frac{dS}{dt} = -\mu_1 * S_1 + \mu_1 * R_1$$

$$\frac{dE}{dt} = \mu_1 * S_1 + \nu_1\omega_1 * R_1 + \nu_1$$

$$\frac{dI_{pre}}{dt} = -\gamma_1 * I_{pre1} + \gamma_1 * E_1$$

$$\frac{dI_{symps}}{dt} = -\gamma_1 * I_{symps1} + \gamma_1 * I_{pre1}$$

$$\frac{dI_{sympm}}{dt} = -\gamma_1 * I_{sympm1} + \gamma_1 * I_{pre1}$$

$$\frac{dI_{asymp}}{dt} = -\gamma_1 * I_{asymp1} + \gamma_1 * I_{pre1}$$

$$\frac{dHOSP_m}{dt} = -\theta_1 * HOSP_{m1} + \theta_1 * I_{sympm1}$$

$$\frac{dHOSP_s}{dt} = -\theta_1 * HOSP_{s1} + \theta_1 * I_{symps1}$$

$$\frac{dR}{dt} = -\omega_1 * R_1 + \omega_1 * I_{symps1} + -\omega_1 * R_1 + \omega_1 * I_{sympm1} + -\omega_1 * R_1 + \omega_1 * I_{asymp1} + -\omega_1 * R_1 + \omega_1 * HOSP_{m1} + -\omega_1$$