Parameters

f case fatality ratio (proportion)

p symptomatic proportion

γ 1/infectious period

β transmission coefficient

b 1/time to burial

Variables

S Susceptible

I_S Infectious (symptomatic)

I_A Infected (asymptomatic)

R Immune (inc. recovered)

D Dead

Force of infection:

$$\lambda_t = \frac{\beta I_S}{N}$$

Or, with heterogeneity:

$$\lambda_t = \frac{\hat{\beta} e^{-\int_0^t \lambda S\, dt} I_S}{N}$$

Derived quantities:

$N=S+I_S+I_A+R$