Supplementary Information:
The SIR dynamic model of infectious disease transmission and its
analogy with chemical kinetics

S1 Early exponential growth of $[I](t)$

See Fig. S1 to see how the approximation of $[I](t)$ in eqn. 9 fares.

Figure S1: The $[I](t)$ curve from Fig. 2 along with eqn. 9 (gray, dashed line) to show that $[I](t)$ exhibits, approximately, exponential growth in the early stage of the epidemic. The fraction of the population that is infectious, $[I](t)$, is shown on both a (a) linear and (b) log scale.
S2 An alternative visualization of SIR model dynamics

Fig. S2 presents an alternative visualization of SIR model dynamics that emphasizes $[S](t) + [I](t) + [R](t) = 1$ for all $t > 0$.

Figure S2: Numerical approximation of the solution to the SIR model in eqns 1-3 and initial conditions in eqns 6-8. At any given time $t$, the proportion of the panel colored green, red, and blue, respectively, represents the fraction of the population in the susceptible, infectious, and removed compartment.