Method	Required information	Assumptions/Notes	References
Incidence based	• Generation interval CDF • Incidence reports	• Uses cumulative incidence directly without estimating the initial growth rate • Entire generation interval distribution is required to obtain CDF	[1]
Delta approximation	• Mean generation interval	• Assumed fixed generation interval	[2, 3]
Empirical (histogram-based)	• Generation interval samples	• Relies on binning generation intervals into discrete histograms	[2]
Empirical (sample-based)	• Generation interval samples	• Requires more samples than the histogram-based method	[4]
Euler-Lotka	• Entire generation interval distribution	• Uses moment generating function	[5]
Normal approximation	• Mean/SD generation interval	• Assuems normally distributed generation intervals • Predicts decreasing r–$\mathcal{R}$ relationship for high r	[2]
SIR model	• Mean generation interval	• Assumes exponentially distributed generation interval • Predicts linear relationship between r and $\mathcal{R}$	[6, 7, 8, 2]
SEIR (gamma)	• Mean/SD latent period • Mean/SD infectious period	• Assumes gamma distributed latent and infectious periods	[9, 10, 2, 3]
SEIR (exponential)	• Mean generation interval • Ratio of the infectious period to the generation interval	• Assumes exponentially distributed latent and infectious periods • Predicts quadratic relationship between r and $\mathcal{R}$	[11, 12, 3]
Subexponential	• Generation interval shape • Corresponding generation interval parameters • Sub-exponential growth paramete • Disease generation	• Assumes sub-exponential growth rate • Provides examples for uniform, gamma, exponential and delta distributed generation intervals	[13]
Trapezoid approximation	• Period of no infection after exposure • Time until maxium infectivity • Duration of maximum infectivity • Time until recovery	• Assumes trapezoid shaped infection kernel	[3]

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