# Generation intervals in space: understanding the effects of spatial and network structure on links between generation interval and growth rate

Jonathan Dushoff[1], Sang Woo Park[1], and David Champredon[2]

[1]McMaster University, Hamilton, Ontario, Canada; [2]York University, Toronto, Ontario

## Introduction

- Generation interval (GI) measures time between when a person is infected and when that person infects another person
- GI distributions link speed (growth rate) and strength (reproductive number) of an epidemic
- Previous work [**?**] showed that measuring GI through contact tracing data introduces bias

## Linking $r$ and $\mathcal{R}$

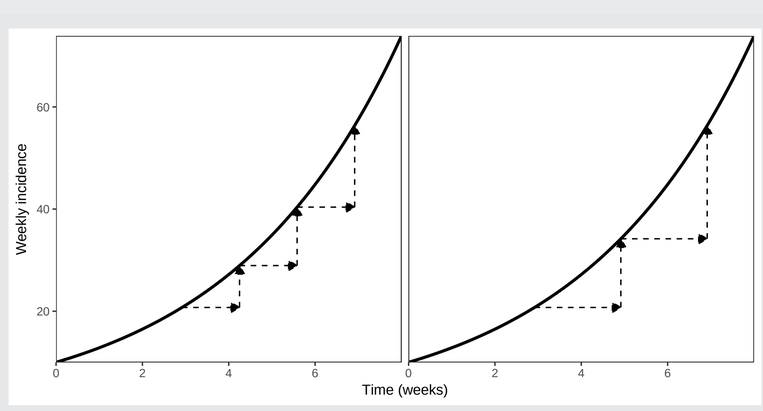
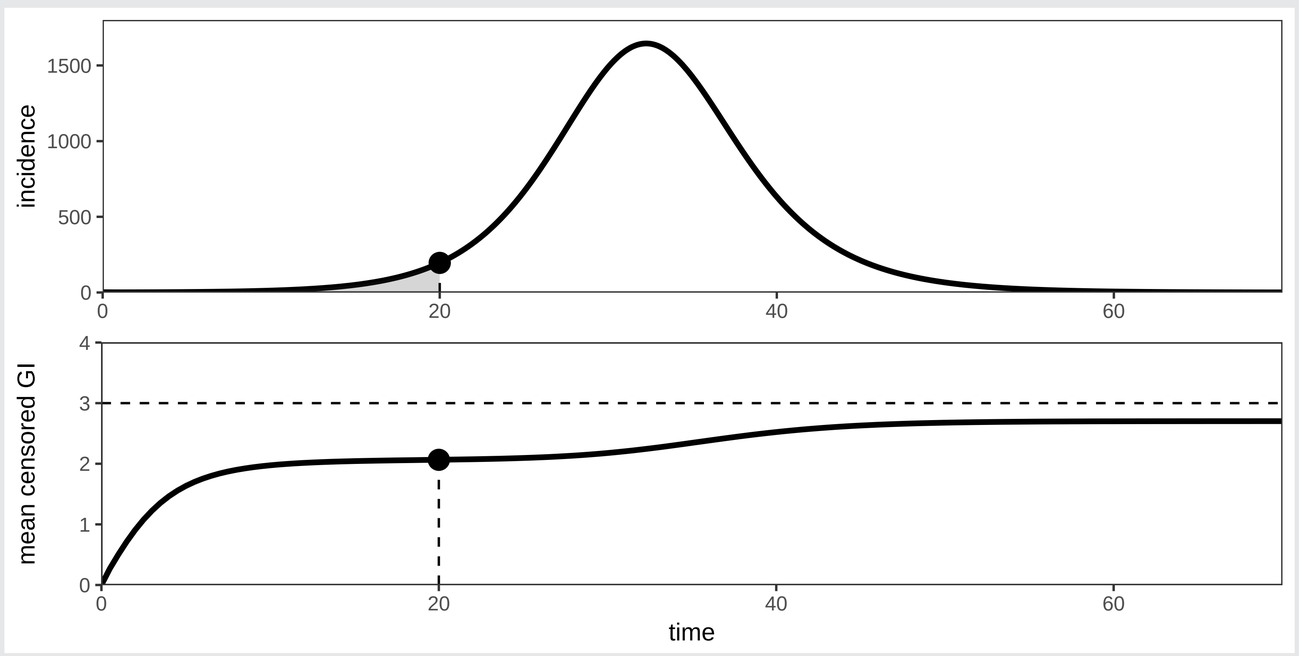


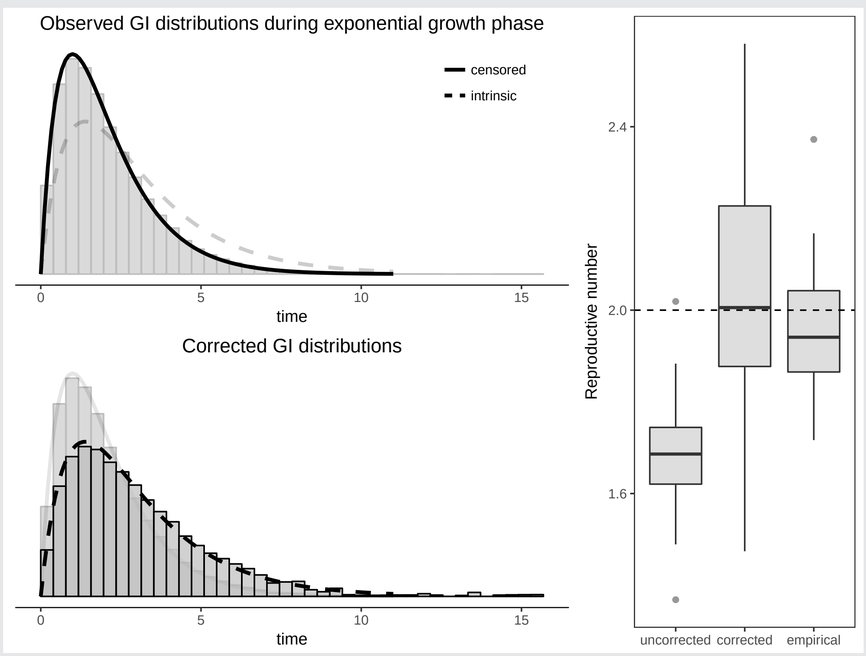

Figure: Lorem Ipsum

## Measuring generation intervals distribution from contact tracing data




- Often, GI distributions is measured through contact tracing data by **censoring** the epidemic
- Long infections are masked by short infections

## Correcting GI distributions




- During the exponential growth phase, the observed GI distributions is proportional to $g(\tau)\exp(-r\tau)$.
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## Linking $r$ and $\mathcal{R}$

Fill

https://github.com/parksw3/networkSEIR/