

**[Supplemental Material]**

**The contribution of pre-symptomatic infection to the transmission dynamics of COVID-2019**

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### 1. The effectiveness of case isolation in reducing the number of secondary cases during the symptomatic period

Let  $x$  be the proportion of pre-symptomatic transmission in the absence of active case finding and  $y$  that proportion in the presence of active case finding. Then  $y$  can be expressed as a function of  $x$  accounting for a reduction  $\phi$  in the symptomatic cases:

$$y = \frac{x}{x + \phi(1 - x)}$$

Solving for  $\phi$ :

$$\phi = \frac{\frac{x}{y} - x}{1 - x} = \frac{x(1 - y)}{y(1 - x)}$$

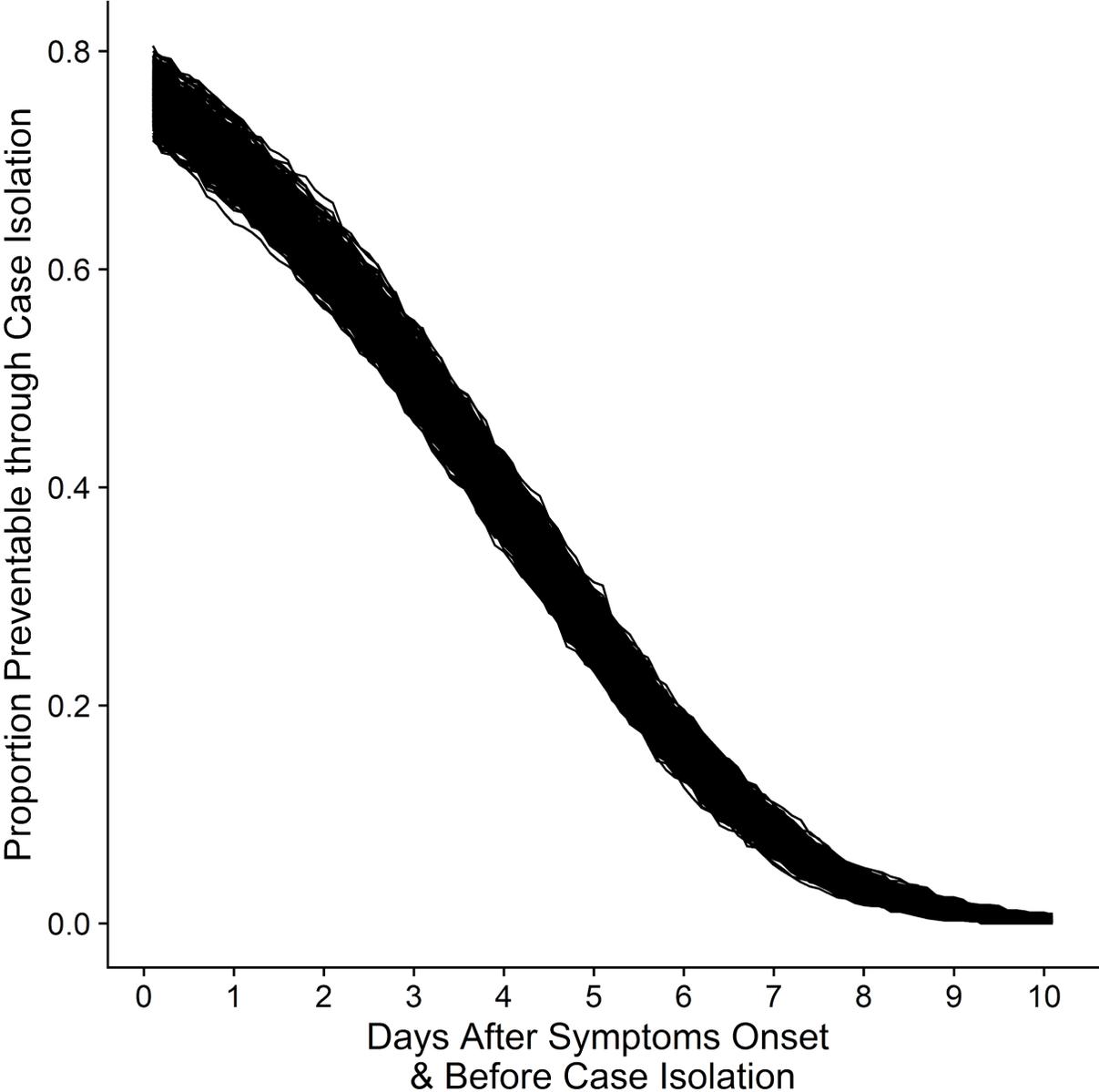
## 2. Symptom onset and case isolation

**Supplemental Table 1. Proportions Potentially Targetable in Case Isolation**

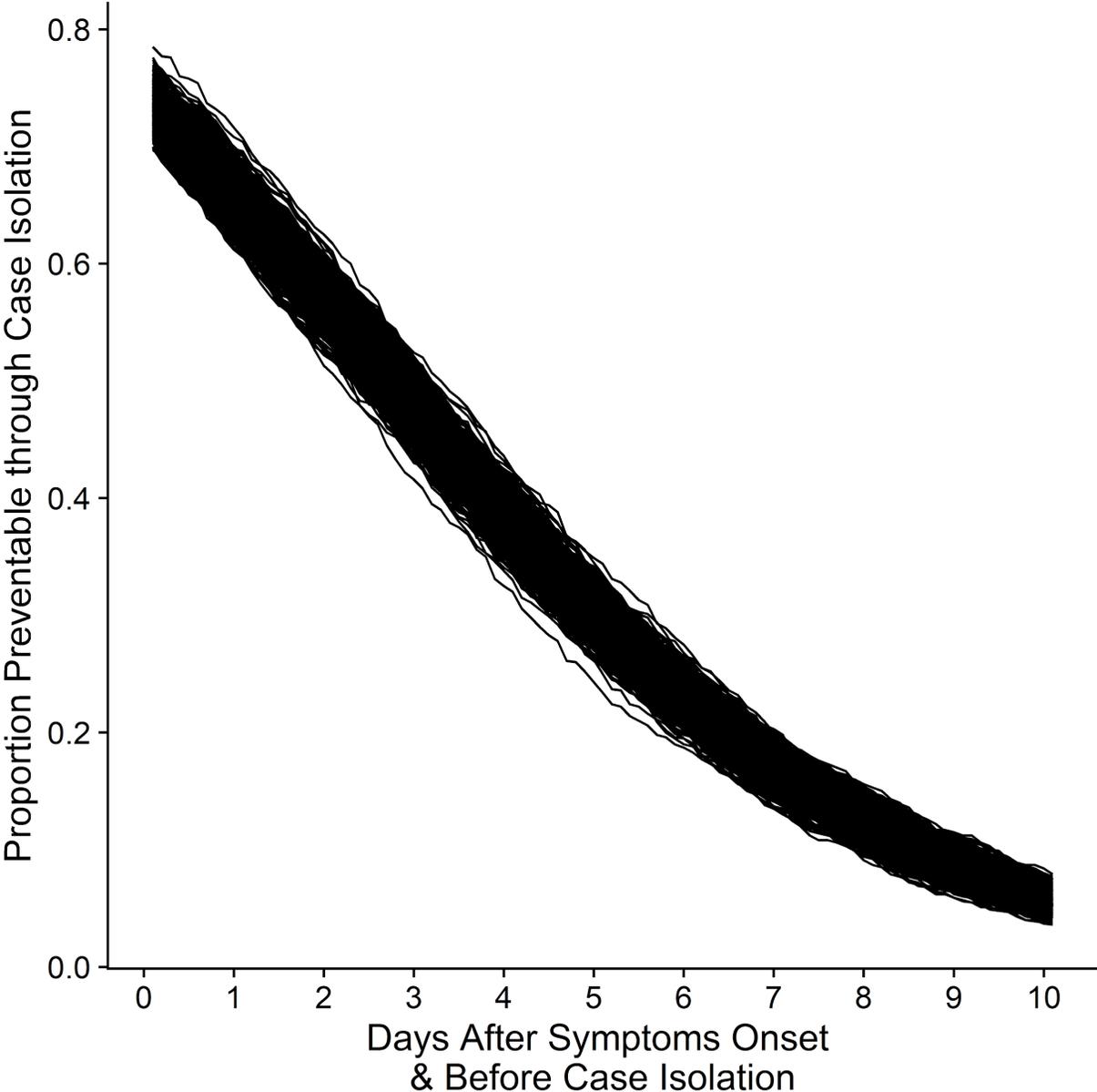
Study	Days after Symptoms but before case isolation	The proportion of cases that can be targeted for case isolation in order to reduce onward transmission
Li et al.	0	73%
Li et al.	1	65%
Li et al.	2	56%
Li et al.	3	47%
Li et al.	7	17%
Bi et al.	0	76%
Bi et al.	1	69%
Bi et al.	2	60%
Bi et al.	3	50%
Bi et al.	7	8%

This has only been done for study currently done in settings without case isolation.

**Supplemental Figure 1. Association between days of case isolation and proportion of cases potential targetable for case isolation based on Bi et al. (subgroup = those isolated after more than 6 days).**



Supplemental Figure 2. Association between days of case isolation and proportion of cases potential targetable for case isolation based on Li et al.



## References

1. Bi Q, Wu Y, Mei S, Ye C, Zou X, Zhang Z, et al. Epidemiology and Transmission of COVID-19 in Shenzhen China: Analysis of 391 cases and 1,286 of their close contacts [Internet]. *Infectious Diseases (except HIV/AIDS)*; 2020 Mar [cited 2020 Mar 7]. Available from: <http://medrxiv.org/lookup/doi/10.1101/2020.03.03.20028423>
2. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, et al. Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus–Infected Pneumonia. *N Engl J Med* [Internet]. 2020 Jan 29 [cited 2020 Jan 30];0(0):null. Available from: <https://doi.org/10.1056/NEJMoa2001316>