

SYNOPSIS

04/07/2020

Review of “Only strict quarantine measures can curb the coronavirus disease (COVID-19) outbreak in Italy, 2020”

Article citation: Sjödin H, Wilder-Smith A, Osman S, Farooq Z, Rocklöv J. Only strict quarantine measures can curb the coronavirus disease (COVID-19) outbreak in Italy, 2020. *Euro Surveill.* 2020;25(13):2000280. Available from: <https://doi.org/10.2807/1560-7917.ES.2020.25.13.2000280>

One-Minute Summary

- This study investigated the level of physical distancing interventions required to effectively control a coronavirus disease 2019 (COVID-19) outbreak in a lockdown situation in a small town setting typical of Italy.
- The authors modelled the estimated COVID-19 burden and the time required until quarantine can be lifted, by taking into account the time spent by individuals in the public (i.e. outside of the home) and household size.
- The expected number of secondary infections, including asymptomatic infections, the number of latent infections and the number of infectious persons were estimated over a 14-day lockdown period in a town of 5,000 persons.
- Quarantine scenarios included:
 - **Degree of community quarantine** (hours spent outside the house per day): every day activities (10 hours); 50% of normal (5 hours); total stay-home policy (0 hours).
 - **Average household size (i.e., quarantine unit):** larger (six persons); medium (3 persons); small (2 persons); single person.
 - **Proportion of asymptomatic infections:** 10%, 20% and 50% of all infected persons.
- The results showed **the duration of the necessary lockdown period increased with time spent in public** and larger average household size.
- The authors conclude that transmission should be expected to continue unless there is **very high adherence to community quarantine (total stay-home policy)** where smaller average household size was associated with further reduced secondary transmission.

Additional Information

- The number of secondary, latent and infected cases had a linear relationship with population size, provided that the same population densities apply between cities.
- The authors note that even with strict quarantine adherence, some transmission will continue to occur within households, suggesting additional efforts are needed:

- e.g., physical distancing combined with wearing face masks; segregated within-household isolation; prompt testing, removal of all symptomatic cases from the household, and isolation in a designated facility.

PHO Reviewer’s Comments

None

Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Review of “Only strict quarantine measures can curb the coronavirus disease (COVID-19) outbreak in Italy, 2020”. Toronto, ON: Queen’s Printer for Ontario; 2020.

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