

1163-34-174

**Henry Zhao** and **Zhilan Feng\*** ([fengz@purdue.edu](mailto:fengz@purdue.edu)), 150 N. University Street, Department of Mathematics, Purdue University, West Lafayette, IN 47907. *Staggered Release Policies for COVID-19 Control: Costs and Benefits of Relaxing Restrictions by Age and Risk.*

Lockdown and social distancing restrictions have been widely used as part of policy efforts aimed at controlling the ongoing COVID-19 pandemic. Since these restrictions have a negative impact on the economy, there exists a strong incentive to relax these policies while protecting public health. Using a multigroup SEIR epidemiological model, we explore the costs and benefits associated with the sequential release of specific groups based on age and risk from isolation. The results suggest that properly designed staggered-release policies can do better than simultaneous-release policies in terms of protecting the most vulnerable members of a population, reducing health risks overall, and increasing economic activity. This work is based on Zhao and Feng, *Mathematical Biosciences* (2020), <https://doi.org/10.1016/j.mbs.2020.108405>. (Received August 25, 2020)