



Research Working Papers

Optimal Age-Based Vaccination and Economic Mitigation Policies for the Second Phase of the COVID-19 Pandemic

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Vaccinating older adults against COVID-19 before younger adults reduces deaths and boosts economic activity relative to other vaccination paths.

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In this paper we ask how to best allocate a given time-varying supply of vaccines during the second phase of the Covid-19 pandemic across individuals of different ages. Building on the heterogeneous household model of optimal economic mitigation and redistribution developed by Glover et al. (2021), we contrast the actual vaccine deployment path that prioritized older individuals with one that first vaccinates younger workers. Vaccinating older adults first saves more lives but slows the economic recovery relative to inoculating younger adults first. Vaccines carry large welfare benefits in both scenarios (relative to a world without vaccines), but the older-first policy is optimal under a utilitarian social welfare function.

JEL classifications: E21, E63

Article Citations

- Glover, Andrew, Jonathan Heathcote, Dirk Krueger, and José-Víctor Ríos-Rull. 2020. Optimal Age-Based Vaccination and Economic Mitigation Policies for the Second Phase of the COVID-19 Pandemic” Federal Reserve Bank of Kansas City, Research Working Paper no. 21-15, December. Available at <https://doi.org/10.18651/RWP2021-15>

Related Research

- Glover, Andrew S., Jonathan Heathcote, Dirk Krueger, and José-Víctor Ríos-Rull. 2020. “Health versus Wealth: On the Distributional Effects of Controlling a Pandemic.” Federal Reserve Bank of Kansas City, Research Working Paper no. 20-03, May. Available at <https://doi.org/10.18651/RWP2020-03>
- Eichenbaum, Martin S., Sergio Rebelo, and Mathias Trabandt. 2021. “The Macroeconomics of Epidemics.” *The Review of Financial Studies*, vol. 34, no. 11, pp. 5149–5187. Available at <https://doi.org/10.1093/rfs/hhab040>

- Krueger, Dirk, Harald Uhlig, and Taojun Xie. 2020. “Macroeconomic Dynamics and Reallocation in an Epidemic: Evaluating the “Swedish Solution.” National Bureau of Economic Research, working paper no. 27047, October. Available at <https://doi.org/10.3386/w27047>
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