



Research Working Papers

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

by: Andrew Glover, Jonathan Heathcote, Dirk Krueger and José-Víctor Ríos-Rull

December 17, 2021

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

RWP 21-15, December 2021

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>
-

Author



Andrew Glover

Research and Policy Advisor

Andrew Glover is a research and policy advisor in the economic research department at the Federal Reserve Bank of Kansas City. His research studies labor and credit markets from a macroeconomic perspective. Prior to joining the Federal Reserve of Kansas City, Mr. Glover was an assistant professor of economics at the University of Texas at Austin. He earned his PhD from the University of Minnesota in 2011.
