

Abstract

This study investigates whether COVID-19 vaccination policies can mitigate voluntary avoidance of healthcare during the pandemic and restore non-COVID-19 healthcare utilization. Existing literature suggests that even in the absence of severe healthcare system collapse, individuals may voluntarily reduce medical visits due to perceived infection risks. However, empirical evidence remains limited regarding whether vaccination policies can alleviate such behavioral responses.

Using weekly county-level healthcare utilization data from the Taiwan Centers for Disease Control (Taiwan CDC) Open Data Portal, this study exploits Taiwan's phased vaccination rollout as a quasi-natural experiment. Elderly individuals prioritized for early vaccination are defined as the treatment group, while younger unvaccinated populations serve as the control group. Given violations of the parallel trends assumption and heterogeneous policy shocks during the pandemic, this study primarily employs the Synthetic Difference-in-Differences (SDID) approach to reduce estimation bias.

The empirical results show that vaccination policies exerted statistically significant positive effects on healthcare utilization for multiple non-COVID-19 infectious diseases, including Acute Upper Respiratory Infection, Influenza-like Illness, Diarrhea, and Other Pneumonia. These findings suggest that vaccination not only provided biological protection but also reduced perceived infection risks and partially restored healthcare demand suppressed during the pandemic.

This study highlights that the role of vaccination policies extends beyond infection control and may contribute to maintaining healthcare system resilience and restoring normal healthcare utilization during public health crises.

Keywords: COVID-19 vaccination; voluntary healthcare utilization; synthetic difference-in-differences; risk perception; Taiwan