

Is universal health care progress related to changes in childhood vaccination rates?

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The health center in Mukoko parish, Bukululo subcountry, Kalungi district in Uganda. Credit: Yesim Tozan (CC-BY 4.0, https://creativecommons.org/licenses/by/4.0/)

Countries with greater progress toward universal health coverage (UHC) had smaller declines in childhood vaccination coverage during the COVID-19 pandemic, according to a new study publishing August 16 in the open-access journal *PLOS Medicine* by Yesim Tozan of New York University's School of Global Public Health, U.S., and colleagues.

Many previous studies have indicated that UHC strategies improve health service coverage, utilization and outcomes, and result in improvements in population health. However, a robust quantitative assessment of the effects of UHC on health system performance and outcomes has been challenging, since many systems-wide contextual factors confound the relationship.

In the new study, researchers used the COVID-19 <u>pandemic</u> as a natural experiment to compare differences in childhood immunization coverage based on countries' progress toward UHC. Immunization data were derived from the WHO/UNICEF Joint Estimates of National Immunization Coverage dataset, which includes information on 195 countries and 14 childhood vaccines between 1997 and 2020. The 2019 UHC Service Coverage Index (UHC SCI), a measure that represents indicators of coverage for a range of health services across the lifespan, was used to divide countries into a "high UHC index" group and the rest.

The researchers found that countries with a high UHC index were associated with a 2.7% smaller decline in childhood immunization coverage during 2020 compared to countries with a lower UHC index, after adjusting for potential confounders (95% CI 0.75–4.65, p=0.007).



Pre-pandemic, countries with a high UHC index had an average childhood immunization coverage rate of 92.7% whereas those with a lower UHC index had a coverage rate of 86.2%. During the pandemic year of 2020, countries with a high UHC index had a coverage rate of 91.9% while those with a lower UHC index had a coverage rate of 81.7%.







The Ministry of Health COVID-19 poster on display in the health center in Mukoko parish, Bukululo subcountry, Kalungi district in Uganda. Credit: Yesim Tozan (CC-BY 4.0, https://creativecommons.org/licenses/by/4.0/)

"Our findings strongly suggest that policymakers should continue to advocate for policies aimed at achieving <u>universal health coverage</u> in coming years," the authors say. "This study also sets the stage for future research in understanding the synergistic impact of investments in global health security and universal health coverage strategies on countries' health system resilience."

"The COVID-19 pandemic has affected the delivery of essential health services across countries worldwide," Tozan adds. "This study provided the much- needed quantitative evidence of the protective effects of universal health coverage in times of public health crises, underpinning the policy recommendations for sustained political commitment and investments for universal health coverage to build resilient health systems."

More information: Universal healthcare coverage and health service delivery before and during the COVID-19 pandemic: A difference-in-difference study of childhood immunization coverage from 195 countries, *PLoS Medicine* (2022). DOI: 10.1371/journal.pmed.1004060

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