

COMPARING THE IMPACT OF THE COVAX INITIATIVE ON COVID-19 VACCINATION RATES IN LOW- AND LOWER-MIDDLE INCOME COUNTRIES

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RESEARCH QUESTION

Will the global initiative COVAX improve access to COVID-19 vaccinations for populations in lower-income countries in comparison to lower-middle income countries across three WHO regional divisions?

BACKGROUND

As new and modified vaccines have been made available to the world in the past several decades, global health experts have continued to explore methods of vaccine distribution in lower-middle and low-income countries. Global partnerships and plans have become more common, especially with the inauguration of the WHO's first decade plan, Global Immunization Vision and Strategy (GIVS), in 2006. Since this policy, the WHO has introduced the GVAP from 2012-2020 as well as the recent COVAX initiative, which operates as part of the ACT Accelerator, a global response to the COVID-19 pandemic, for the distribution of COVID-19 vaccines. This study seeks to evaluate and compare the effectiveness, methods, and impact of the COVAX vaccine plan to aid in the implementation of new immunization policies.

METHODS

A policy analysis reviewed the ability of the COVAX initiative to achieve its goals in vaccine distribution to low-income and lower-middle income countries through the areas of mobilization and country involvement. Data on COVID-19 vaccine mobilization was collected from a representative sample of three WHO regions, including Uganda and Kenya from the African Region, Haiti and Nicaragua from the Region of the Americas, and Nepal and India from the South-East Asia Region. Vaccination rates between the low-income and the lower-middle income countries were compared to identify efficacy of distribution between income levels. Factors such as vaccine hesitancy and authorization mechanisms were also noted in each country to evaluate obstacles to distribution. Internal review analyses and data released from the WHO and World Bank were examined for data on the COVAX policy as information is released between 2021 and 2023. The lessons gained from previous initiatives were compared to the outcomes of the COVAX strategies to highlight future recommendations and coordinated responses for immunizations in developing nations.

Despite unprecedented delays in distribution, COVAX seemed to impact the lower-income nations in this study such as Uganda and Nepal more significantly than their lower-middle income counterparts, Kenya and India. A key commonality between countries with the highest success in vaccinating their citizens, such as Nepal and Nicaragua, was the involvement of community health workers. This strategy seemed the most effective at eliminating vaccine hesitancy and navigating distribution through rural areas.

Nation	Total Population	Total COVAX Vaccine Donations	Percentage of Perfect Administration with COVAX Donations (%)	Total Vaccine Donations	Percentage of Perfect Administration with all Donations (%)	Percentage of Actual Population Vaccinated (%)
<i>African Region</i>						
Uganda	45,850,000	42,491,740	46.34	58,061,940	63.32	27.60
Kenya	53,010,000	27,025,800	25.29	34,440,805	32.49	20.26
<i>South-East Asia Region</i>						
Nepal	30,030,000	44,818,630	74.62	69,871,743	116.34	79.56
India	1,408,000,000	240,000,000	8.52	2,427,354,458	86.20	67.17
<i>Region of the Americas</i>						
Haiti	11,450,000	1,770,300	7.73	1,770,300	7.73	2.52
Nicaragua	6,851,000	7,042,070	51.39	17,036,015	124.33	87.33

While vaccine delivery plays a key role in immunizing a country's population, the modalities a country utilizes to distribute the vaccines can dramatically impact patients' reception. A nation may ascertain a large proportion of vaccines for its citizens, but if those citizens remain hesitant, or if they struggle to gain access to the vaccines, the nation's immunization rates will cease to climb.

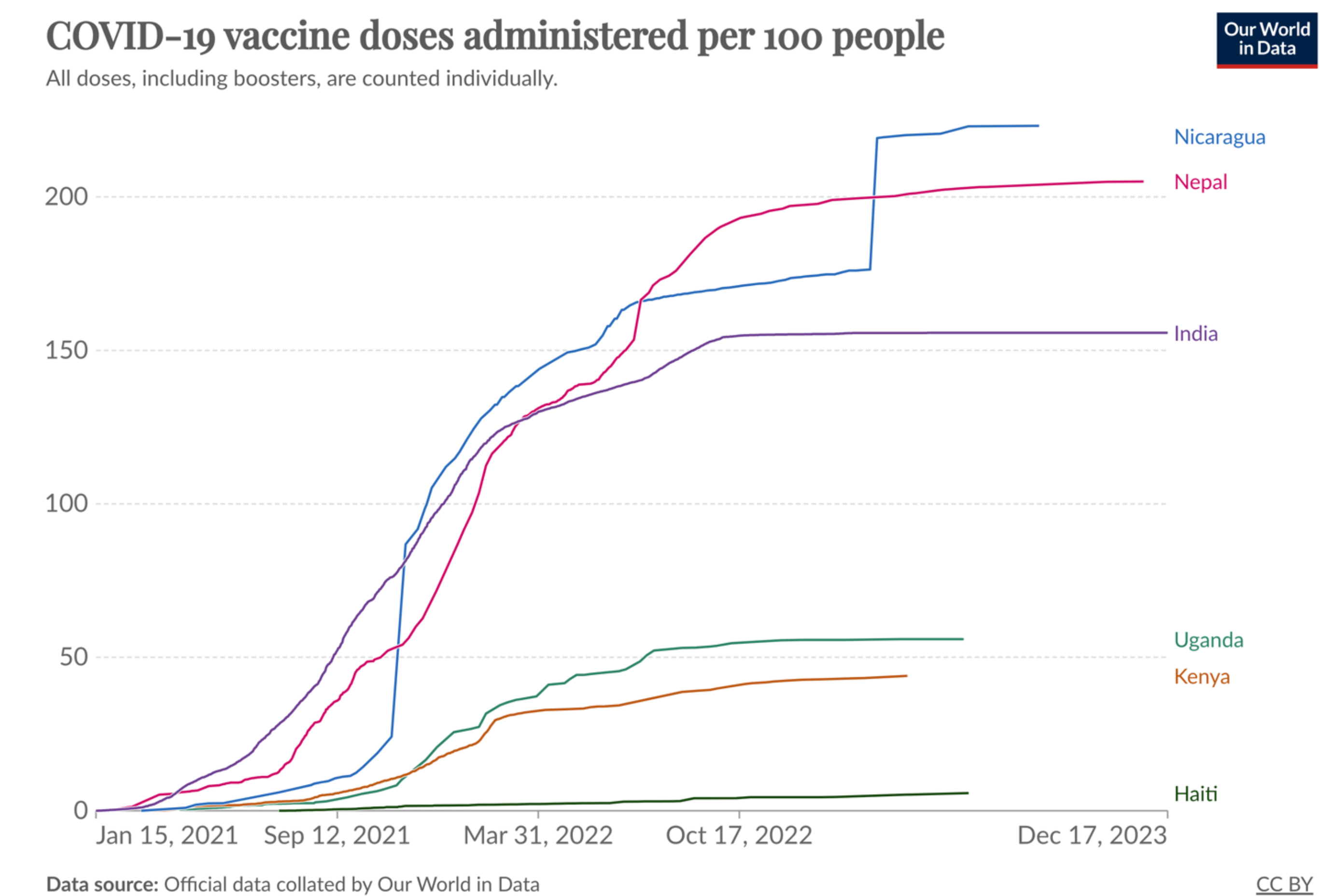


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RESULTS

The trends noted in the table can also be appreciated in a graph displaying vaccination rates per 100,000 patients in all six countries.



FUTURE DIRECTIONS

This study could be expanded to compare the impact of COVAX across all six WHO regions and include more countries in each category of low-income to lower-middle income nations. Completing this research could elucidate more facets regarding obstacles to vaccination plans in order to increase the distribution of COVID-19 or future vaccines. Expanding the sample size would also help to remove confounding factors like unique national circumstances in the evaluation of COVAX's worldwide impact. In addition to changing the sample size, an analysis about the funding mechanism utilized by COVAX could be compared against prior funding strategies for equitable access to immunizations since the funding gap seemed to be a significant factor in limiting COVAX's ability to garner more vaccines. Another modification to this study in the future could involve extending the examination period until the end of 2023. The study's results were last collected in March 2023, but with COVAX's recent announcement of the initiative's closing, the final number of vaccines supplied to all AMC nations should be available in early 2024. Another significant factor impacting COVAX vaccine distribution was a nation's amount of remote land mass. Future studies could choose to investigate countries with similar land areas in a specific region to accommodate for the lack of vaccination in remote areas.