

Did Ghana's switch to ROTAVAC free cold chain capacity?

Short answer: **yes**



In 2020, Ghana switched from using ROTARIX® to ROTAVAC® in its national immunization program. PATH worked with Ghana Health Service and the University of Ghana to analyze the economic implications of this switch. This fact sheet is part of a series on key results of these analyses, collectively providing a case study on Ghana's rotavirus vaccine product switch. (*Manuscript pending submission to a peer-reviewed journal.*)

One of the two main motivating factors for Ghana's switch was to free cold chain capacity for other vaccines (the other factor was cost). ROTAVAC has a smaller cold chain requirement per course compared to ROTARIX. And while ROTARIX is stored in standard refrigerators at 2 to 8°C, ROTAVAC must be stored in freezers at the central level.

To analyze the impact of rotavirus vaccine presentations on Ghana's cold chain capacity, PATH, Ghana Health Service, and the University of Ghana collected information on cold chain equipment use and purchases related to the 2020 switch and combined that with publicly available data to estimate the total cold chain volume before and after the switch.

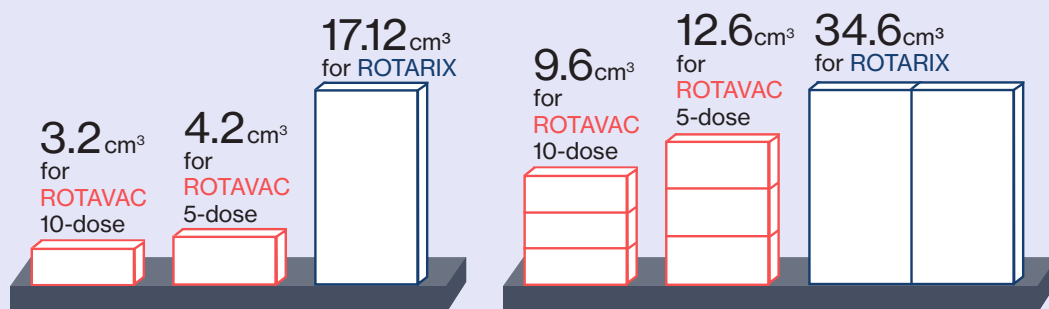
Minimal additional cold chain purchases

Only one district in the study sample reported that a refrigerator had been provided to the facility because of the switch. The system also had enough transport capacity to accommodate ROTAVAC with no additional transportation purchases needed.

A reduced cold chain requirement

The estimated cold chain volume per one single dose of vaccine is:

So, for a fully vaccinated child, the cold chain volume required for a full course of vaccine is:



Overall, the required cold chain volume for a full course of ROTAVAC – even accounting for an additional vaccine dose – is about one-third of the cold chain volume needed for a full course of ROTARIX. Additionally, while the Ministry of Health originally switched to the 5-dose vial presentation of ROTAVAC, they are now considering the 10-dose presentation due to its further reduced cost and even lower cold chain volume per course.

Learn more about Ghana's rotavirus vaccine product switch with the three other fact sheets in this series:



Why did Ghana switch to a different rotavirus vaccine?



What did Ghana's switch to ROTAVAC require?



Was the switch from ROTARIX to ROTAVAC cost-saving for Ghana?

