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How does integration affect the cost of immunization campaigns? Findings from Nigeria and Sierra Leone

BACKGROUND

- The COVID-19 pandemic accentuated the need for efficient strategies for vaccine delivery.
- Co-delivering multiple antigens through immunization campaigns is likely to take place more frequently over the coming years.
- However, the impact of integration on campaign costs is not known.

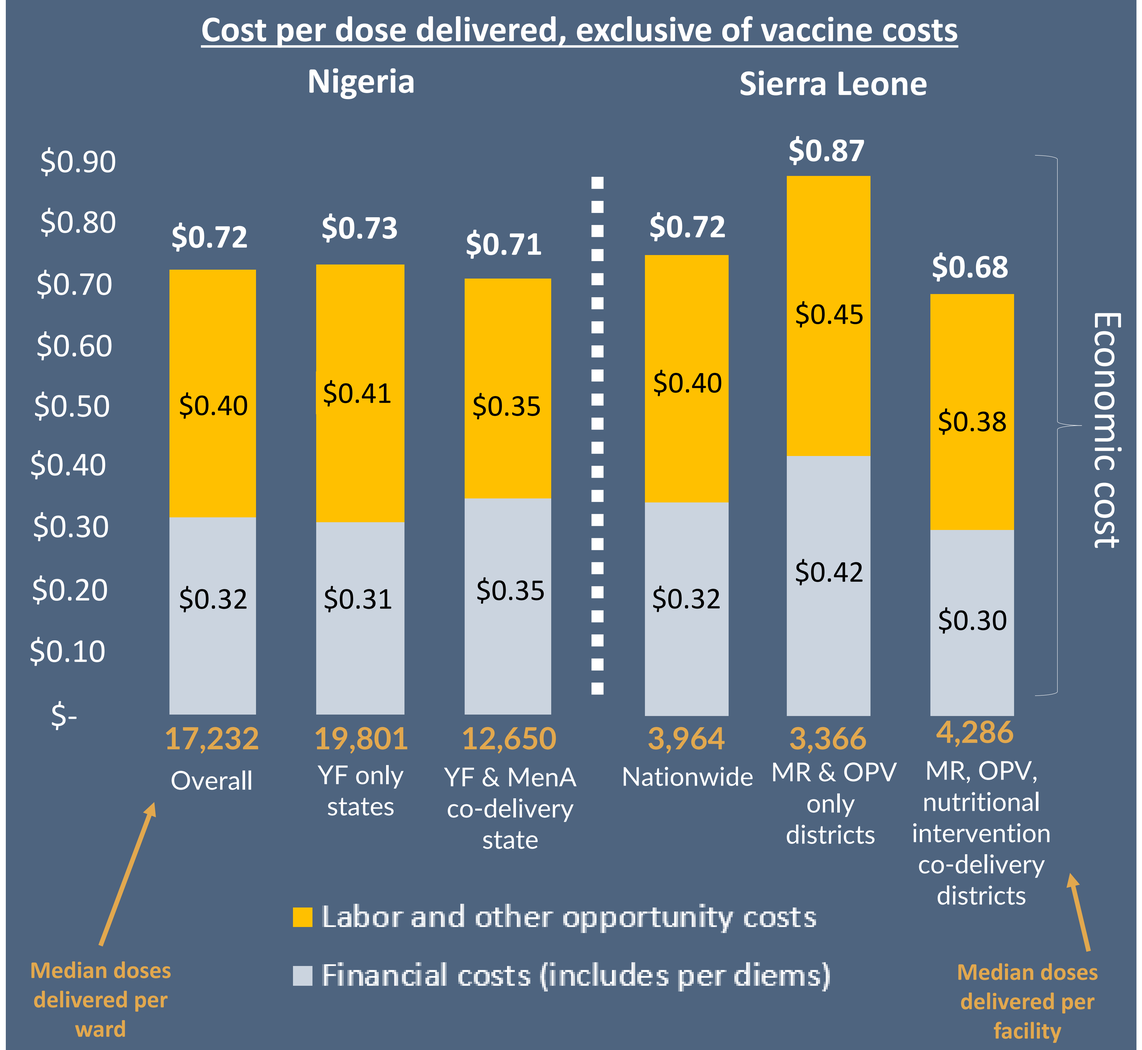
OBJECTIVE & SCOPE

- To estimate the cost of immunization campaigns in two countries, with co-delivery of additional antigens and interventions in certain geographies.
- Compare costs of integration vs non-integration.

	Nigeria	Sierra Leone
Implemented	2019-2020	2019
Areas	3 states: Anambra, Katsina, Rivers	Nationwide
Main antigen	Yellow fever (YF)	Measles-rubella (MR)
Co-delivered antigens	Meningitis A (MenA) vaccines in Anambra	Oral polio vaccine (OPV) nationwide. Nutritional interventions in half of the country's districts
Post-campaign coverage survey	76-83% (YF)	93% (MR)
Sample	78 health facilities in 28 wards and 10 LGAs	30 health facilities in 6 districts

METHODS

- Ingredients-based, retrospective costing studies.
- Estimated the costs incurred by MOH and implementing partners at all levels.



Integrated campaigns may be associated with cost efficiencies, but only in case of greater delivery volume.

Results are shown in 2020 US$

DELIVERY COST

- Average financial cost of delivery was $0.34 per dose delivered in Sierra Leone and $0.32 in Nigeria which is below Gavi support levels for campaigns.
- However, averages mask large subnational cost variation: in Sierra Leone, financial unit cost ranged across facilities from **$0.14 to $1.12 per dose delivered** while in Nigeria the delivery cost per dose delivered ranged from **$0.18 to $0.70** across wards.

INTEGRATION

- In Sierra Leone, both the financial and economic cost per dose delivered were lower in districts that delivered more interventions, suggesting cost efficiencies from co-delivery.
- In Nigeria, no financial cost efficiencies were observed, as the financial unit cost of delivery was greater in the state that co-delivered multiple antigens during the campaign.
- This is likely because, despite delivering two antigens as opposed to one, wards in this state delivered fewer doses during the campaign.
- Nevertheless, the economic cost per dose was lower in the state that co-delivered yellow fever and MenA. As labor makes up 96-99% of the opportunity costs across states, this suggests efficiencies in the use of human resources.

CONCLUSIONS

- Large subnational cost variation means tailored planning and budgeting is needed to ensure high coverage is achieved among all target populations and in all settings.
- Co-delivery may be associated with cost efficiencies, but only if co-delivery means increased delivery volume.
- Changes in funding mechanisms to promote co-delivery campaigns should consider potential unintended consequences on health worker reliance on campaign per diems.
- Any savings from co-delivery campaigns should be reinvested in strengthening the routine system.