



Applicant Information

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Abstract Details

Title:

Effectiveness of COVID-19 vaccines against severe acute respiratory infections hospitalization associated with laboratory-confirmed SARS-CoV-2 over a two period in Ghana

Category:

Communicable diseases (Malaria, TB, HIV, NTD)

Authors:

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Objectives:

The use of vaccines to respond to the COVID-19 pandemic required vaccine effectiveness monitoring in the context of new viral variants and changing epidemiology. This study measured COVID-19 vaccine effectiveness (VE) against laboratory-confirmed SARS-CoV-2 in hospitalized patients diagnosed with severe acute respiratory infections (SARI)

Method:

A case-control, test-negative study was conducted among patients aged >15 years, admitted at 32 sentinel hospitals. Swabs samples were tested for SARS-CoV-2 by PCR and medical records obtained. VE was estimated as one minus adjusted odds of vaccination among cases and controls expressed as a percentage using reference group (unvaccinated cases-absolute VE) or vaccinated >12 months prior to symptom onset (seasonal VE)

Results:

Of 1974 SARI patients, 1796 (91%) were eligible and enrolled. Males, 929 (52%) and females, 867 (48%) were diagnosed with SARI. A total of 118 (7%) patients tested positive for the SARS-CoV-2 of whom 29 (25%), were vaccinated with primary vaccine series and 60 (51%) were females. Of the 1678 (93%) who tested negative for SARS-CoV-2, 412 (25%) were vaccinated with the primary series. For those who had been vaccinated with the primary series, 7-179 days previously, the absolute VE against COVID-19 SARI hospitalization was 25% (95%CI: -60.7 to 79.0%) and the seasonal VE was 22% (95% CI: -60.3% to 78.1%) but waned after 6 months of vaccine uptake

Conclusion:

COVID-19 vaccines deployed in Ghana prevented one in four COVID-19 associated SARI hospitalizations in the first 6 months, but protective effectiveness waned with time as reported in other countries, reflecting potential benefit from booster vaccination

Submission Date: