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2022
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ABSTRACT OF THE RESEARCH REPORT

VACCINATION DROPOUT IN SOUTH AFRICA

SUBMITTED BY

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23RD SEPTEMBER, 2022

Abstract

Background: Vaccination is one of the most effective public health interventions. However, vaccine efficacy is dependent on completeness and timeliness of vaccine doses. Using data from the South African national vaccination coverage survey completed in 2019, we assessed vaccination timeliness, dropout rates and reasons for missed doses in three provinces of South Africa.

Methods: This study was a descriptive cross-sectional study including children aged 24-35 months in Gauteng, KwaZulu-Natal and Eastern Cape provinces in South Africa. Timeliness was calculated for each dose received by the child in reference to their date of birth while dropout rate was calculated as the proportion of children who received an earlier vaccine dose, but not the later dose. Analyses were done on the following vaccines; Bacillus Calmette-Guérin (BCG), each of the 3 doses of diphtheria-pertussis-tetanus (DPT) containing vaccine (hexavalent1, 2 and 3), and 2 doses of measles-containing vaccine (MCV1 and MCV2). Data analysis was done using STATA 15.

Results: 1,827 children aged 24-35 months were included in the analysis; 687 (37.6%) from Gauteng, 872 (47.7%) from KwaZulu-Natal and 268 (14.7%) from Eastern Cape. Timely vaccination coverage ranged from the lowest of 55.4% for MCV2 given at 12 months, to the highest of 92.9% for BCG given at birth. There was a trend towards increased vaccination delay with the vaccines administered later in life, with vaccination delay ranging from 5.7% for BCG to 25.0% for MCV2. Specific dropout rate between hexa1 and hexa3, and between MCV1 and MCV2 were 2.1% and 5.3% respectively. Over 8% of children who received BCG vaccine failed to complete their vaccination schedule with MCV2. For children who missed vaccines, at least 1 in 5 instances, the child was taken to the health facility, but a vaccine stock-out had occurred. There were substantial differences in vaccination timeliness and dropout rates at provincial level, with Gauteng having the highest proportion of children vaccinated on time while a high proportion of doses delayed and the highest vaccination dropout rates was noted in Eastern Cape.

Conclusions: Vaccination timeliness and dropout remain a concern in EPI-SA, with significant variation by province. The NDoH, EPI-SA and relevant stakeholders, need to use the timeliness and dropout rate indicators to implement interventions that address the major bottlenecks in immunization programs. Such interventions include catch-up vaccination campaigns for those missed or dropped from schedule, interventions to increase demand and timely uptake of vaccines.