

Polio Birth Dose Vaccination in Pastoralist and Semi-pastoralist Communities: Evidences from CORE Group Polio Project Implementation Districts (*Woredas*) in Ethiopia.

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BACKGROUND:

Immunization is one of the most powerful and cost-effective public health interventions to prevent devastating illness and disability. Immunization program in pastoral communities needs locally sound and proven approaches to increase immunization uptake. Estimates of immunization coverage rates in Ethiopia varied widely, but were consistent in that polio birth dose coverage is much lower than other antigens, particularly in semi-pastoralist and pastoralist areas.

OBJECTIVE:

To examine polio birth dose vaccination status and maternal factors affecting polio birth dose in CORE Group Polio Project implementation districts.

METHODS:

A community based cross sectional study using Modified WHO EPI cluster (30 by 10) survey sampling technique with the total sample size of 672 mothers/caretakers with children 12-23 months of age.

RESULTS:

Of the sampled households, 582 (86.6%) were rural residents. More than 93% of the respondents were mothers' of the index child and 51.6% were Muslims by religion. Based on the child immunization card, only one-fourth (23.7%) of children received polio birth dose (OPV0) in the study area. The proportion of children vaccinated for OPV0 based on both card and history was 54.2% for OPV0.

Mothers with four or more number of ANC visit during pregnancy showed relatively higher percent (25.7%) of OPV0 vaccinated children than those with less than 4 times ANC visits.

RESULTS ...

Similarly, children born in health facilities (Health center or Hospital) showed a higher rate (27.7%) of OPV0 vaccination whereas those born at home had only 10.8% OPV0 vaccination coverage rate (Table 1). Mothers who got information about polio from community volunteers had higher rate (24.0%) of OPV0 vaccinated children.

Table 1: Polio Birth Dose coverage by respondents' characteristics and MCH service use in CORE Group Polio Project Areas, Ethiopia, July, 2017

| Characteristics respondents, | Not Received OPV0 | | Received OPV0 | | Total | p-value |
|---|-------------------|-------------|---------------|-------------|------------|---------|
| | No. | % | No. | % | | |
| Residence | | | | | | < 0.001 |
| Urban | 37 | 41.1 | 53 | 58.9 | 90 | |
| Rural | 476 | 81.8 | 106 | 18.2 | 582 | |
| Total | 513 | 76.3 | 159 | 23.7 | 672 | |
| Ever attended formal school | | | | | | < 0.001 |
| Yes | 156 | 65.3 | 83 | 34.7 | 239 | |
| No | 357 | 82.4 | 76 | 17.6 | 433 | |
| Total | 513 | 76.3 | 159 | 23.7 | 672 | |
| Mother/Caretaker religion | | | | | | 0.014 |
| Muslim | 276 | 79.5 | 71 | 20.5 | 347 | |
| All Christians | 210 | 73.4 | 76 | 26.6 | 286 | |
| Traditional | 27 | 69.2 | 12 | 30.8 | 39 | |
| Total | 513 | 76.3 | 159 | 23.7 | 672 | |
| ANC visits during index pregnancy | | | | | | < 0.001 |
| None | 63 | 78.8 | 17 | 10.0 | 80 | |
| < 4 Visits | 212 | 82.2 | 46 | 14.3 | 258 | |
| 4+ Visits | 238 | 71.3 | 96 | 25.7 | 334 | |
| Total | 513 | 76.3 | 159 | 23.7 | 672 | |
| Place of delivery of the index child | | | | | | < 0.001 |
| Home | 267 | 84.8 | 48 | 10.8 | 315 | |
| HC/Hospital | 239 | 68.3 | 111 | 27.7 | 350 | |
| Total | 506 | 76.1 | 159 | 23.9 | 665 | |

CONCLUSION AND RECOMMENDATION:

Ensuring quality of antenatal care services could improve the uptake of polio birth dose. Newborn tracking beginning from pregnancy up to the administration of the polio birth dose is crucial. Community awareness raising using locally sound communication interventions is magic bullet to increase coverage of polio birth dose..