

PERFORMANCE MONITORING FOR ACTION (PMA)- ETHIOPIA

PMA data provides insights in to zero-dose and under-immunized infants in Ethiopia.



Introduction

Childhood immunization is one of the most effective public health interventions for preventing vaccine preventable diseases and deaths¹. Children who have not received the first dose of the vaccine for diphtheria-tetanus-pertussis containing vaccine (DTP1) are referred to as “zero-dose” children, while those who have not received the third dose of the same vaccine are known as “under-immunized” children².

Zero-dose children serve as a marker for marginalized groups that are deprived of basic healthcare, wider social services, and immunizations¹. In 2019, two-thirds of zero-dose children resided in just five countries: Nigeria, India, the Democratic Republic of the Congo, Pakistan, and Ethiopia¹.

GAVI, the vaccine alliance, uses the prevalence of zero-dose and under-immunized children as a proxy measure for inequality¹. This brief presents findings on the prevalence of zero-dose and under-immunization, broken down by various factors. Data from two cohorts of the PMA Ethiopia longitudinal survey that follows pregnant women, and their infants, through one-year postpartum are used in this brief. This brief specifically uses findings from the one-year postpartum surveys from the first and second cohorts.

Key findings

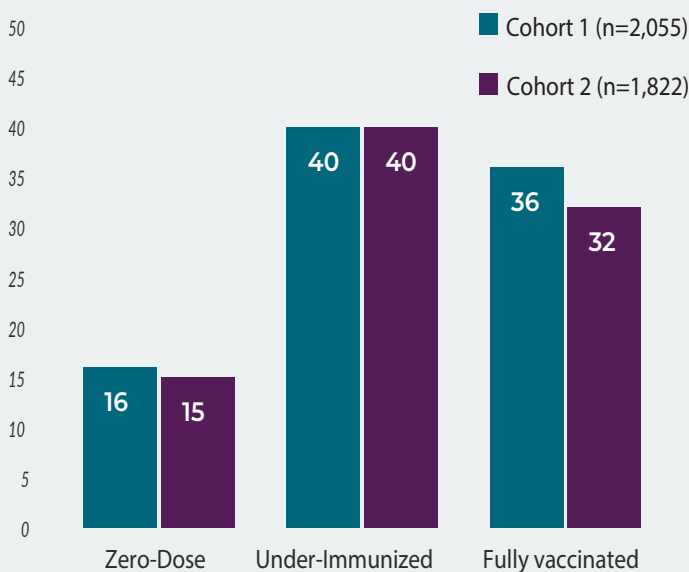
- The prevalence of zero-dose infants showed little change, comparing results from 2020 to 2023.
- In both cohorts, former SNNP region had the highest prevalence of zero-dose and under-immunized children, followed by the Oromia region
- In contrast to urban areas, where only one out of every 50 infants were zero-dose, in rural areas, one out of five infants were zero-dose.
- The percentage of households with zero-dose and under-immunized children ranged from 2% in the richest households to 26% in the poorer households across both cohorts.
- One in five mothers with no education had zero-dose children. In stark contrast, for mothers with tertiary level education this value was one in twenty five.

PMA data collection and samples

In the first and second longitudinal surveys 2,055 and 1,822 women from four regions (Addis Ababa, Amhara, Oromia and SNNP*) were included, respectively. Data were collected in 2019/20 for cohort 1, and in 2021/22 for cohort 2. Infant's vaccination status was measured using a vaccination card, and where the card was not available using the caretaker's response.

Zero-dose & Under-immunized infants

Zero-dose, under-immunized and fully vaccinated infants



Key messages on zero-dose and under-immunized

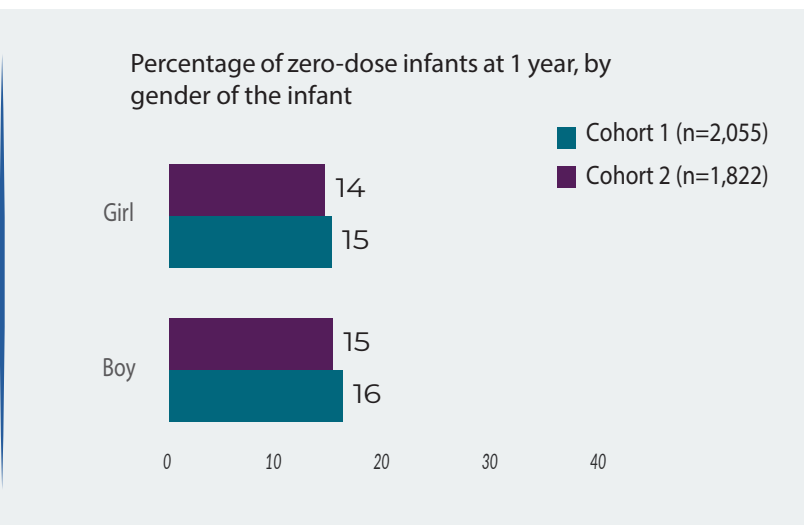
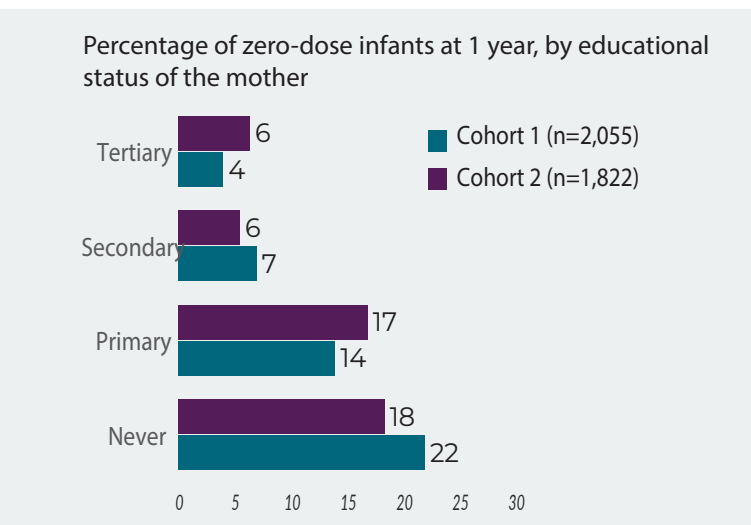
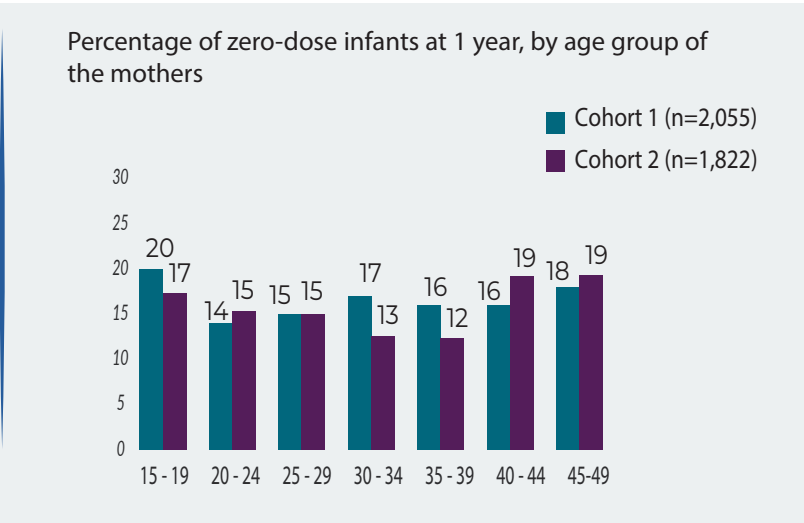
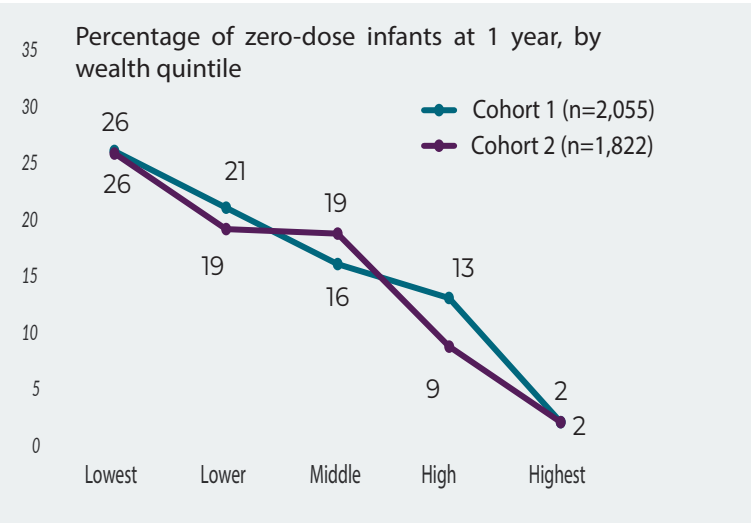
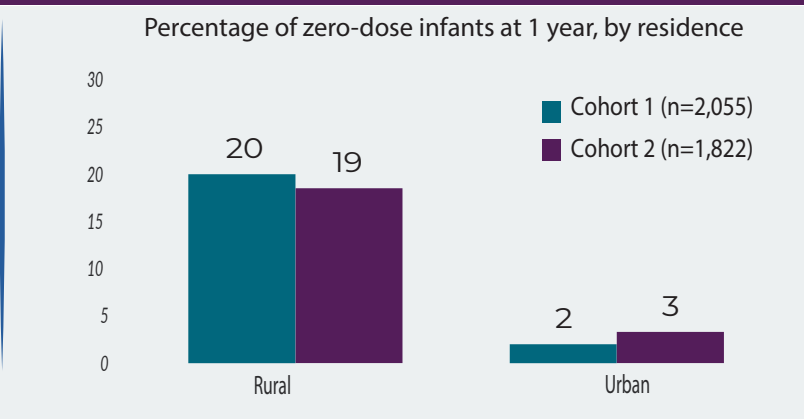
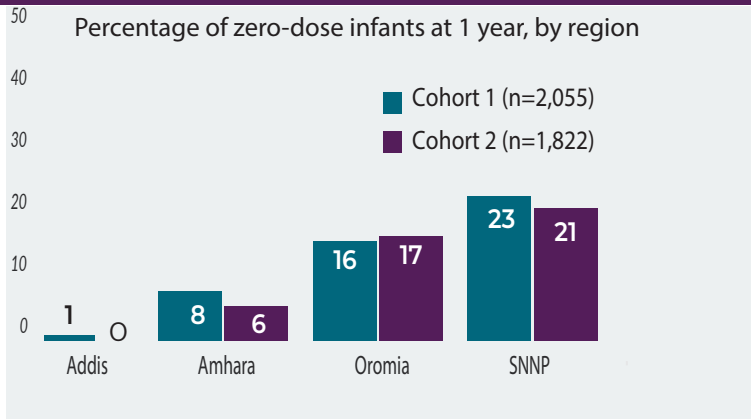
- One out of six were zero-dose infants in both cohorts.
- Four out of ten infants were under-immunized by the end of 1 year interview, in both cohort 1 and cohort 2.
- One third of infants were fully vaccinated (8 vaccine doses) by their first birthday in cohort 1 and cohort 2.



Notes

- A fully vaccinated child is one who received 8 vaccine doses at the age of 1 year as recommended by MoH
- 8 Vaccine doses are - BCG, Pentavalent-1(DTP-Hep B-Hib1), Polio-1, Polio-2, Pentavalent-2 (DTP-Hep B-Hib2), Polio-3, Pentavalent-3 (DTP-Hep B-Hib3) AND Measles-1
- SNNP* Includes South west Ethiopia, central Ethiopia, and South Ethiopia

Zero-dose infants

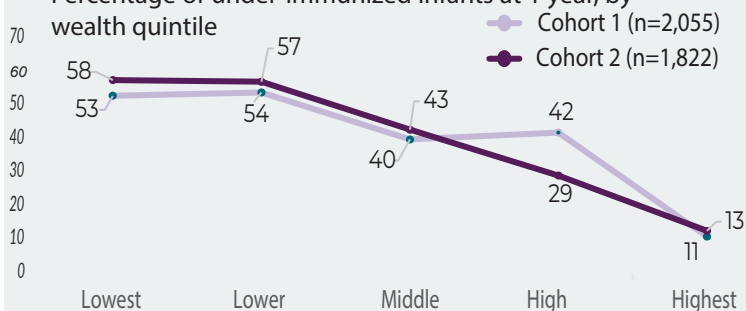


Key messages on zero-dose infants

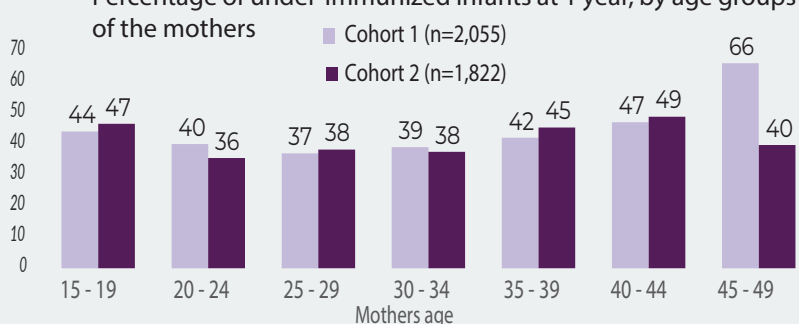
- The highest prevalence of zero-dose infants is observed in SNNP region followed by Oromia region in both cohorts.
- In rural areas, one out of five infants was zero-dose, compared to urban areas where the ratio ranged from one out of 30 to 50 infants.
- Households with zero-dose infants were 13 times more likely to be from the poorest quintile than from the highest wealth quintile.
- The percentage of zero-dose children is higher at both extremes of maternal age compared to the middle age group.
- Mothers who have never received education were three times more likely to have zero-dose infants compared to those who have completed secondary level education.
- There was no statistically significant difference in the prevalence of zero-dose infants by gender.

Under-immunized infants

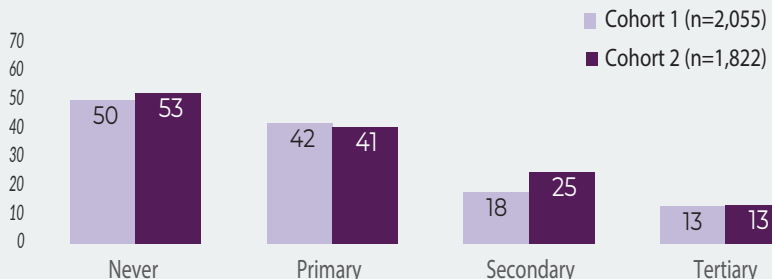
Percentage of under-immunized infants at 1 year, by wealth quintile



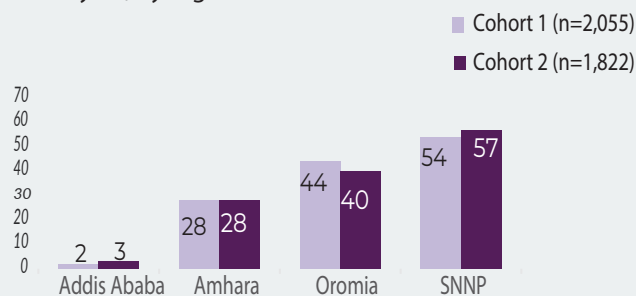
Percentage of under-immunized infants at 1 year, by age groups of the mothers



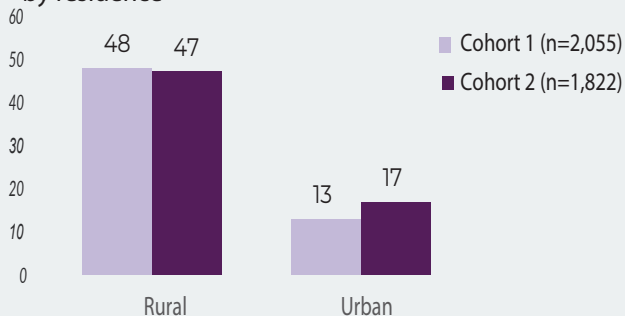
Percentage of under-immunized infants at 1 year, by educational status of the mother



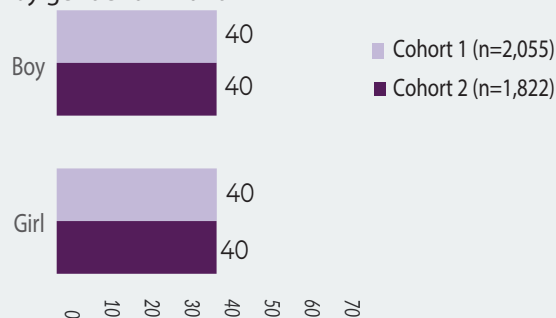
Percentage of under-immunized infants at 1 year, by region



Percentage of under-immunized infants at 1 year, by residence



Percentage of under-immunized infants at 1 year, by gender of infant



Key messages for Under-immunized infants

- The highest prevalence of under-immunized infants were found in SNNP region followed by Oromia region in both cohorts.
- One out of two rural infants was under-immunized, compared to one out of every six to seven urban infants.
- Households in the poorest wealth quintile are five times more likely to be under-immunized children compared to those in richest quintile.
- Half of infants born to mothers with no education were under-immunized, compared to those born to women with tertiary education.
- There were no statistically significant differences in the prevalence of immunized infants by gender.

What is PMA Ethiopia?

PMA Ethiopia uses mobile technology and a network of trained female resident enumerators (data collectors) to collect data to identify gaps in maternal and newborn care. Survey implementation is managed by Addis Ababa University, School of Public Health (AAU) in collaboration with regional universities, the Federal Ministry of Health and the Ethiopian Statistical Service. Technical support is provided by the William H Gates Sr. Institute for Population and Reproductive Health at the Johns Hopkins Bloomberg School of Public Health. The grant is managed by the Ethiopian Public Health Association (EPHA). Funding is provided by the Bill & Melinda Gates Foundation.

For more information visit <https://www.pmadata.org/countries/ethiopia>

¹Gavi. Reaching zero-dose children. 2021 [cited 2024 January 21, 2023]; Available from: <https://www.gavi.org/our-alliance/strategy/phase-5-2021-2025/equity-goal/zero-dose-children-missed-communities>

²Gavi, t.V.A., The Zero-Dose Child: Explained. Vaccines Work. 26 April 2021