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UNVEILING VACCINATION DISPARITIES

Findings from a Community-based Study of Children of Adolescent Mothers in the Eastern Cape, South Africa

Link to article

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STUDY OBJECTIVES

Estimate age-appropriate vaccination coverage and timeliness among children of adolescent mothers (10-19 years old), including adolescent mothers living with HIV (AMLHIV), in the Eastern Cape, South Africa.

BACKGROUND

- Children born to adolescent mothers are more vulnerable to infant mortality and morbidity than children of adult mothers (1,2).
- Timely vaccination is vital for reducing infant mortality and morbidity, especially for HIV-exposed infants, who are at an increased risk of poor outcomes from vaccine-preventable diseases (3).
- In South Africa, vaccination coverage reporting in administrative data is not disaggregated by maternal age and HIV-status.

METHODS

- Children (n=1080) born to of adolescent mothers (n=1015) were recruited through healthcare and community-based sampling strategies.
- Vaccination data were abstracted from 1,013 home-based child health records (2017-2019).
- Descriptive statistics were used to estimate age-appropriate vaccination coverage and timeliness, disaggregated by maternal HIV status, as follows:
  - **DTP3:** Proportion of children receiving all three doses of the Diphtheria-Tetanus-Pertussis vaccine by 12 months.
  - **Under-1 Coverage:** Proportion of children receiving all scheduled vaccinations by 12 months.[a]
  - **MCV2:** Proportion of children receiving measles vaccine dose 1 and 2 by 24 months.
  - **Timeliness:** Vaccinations were classified as timely if administered within 4 weeks of recommended age as per the vaccination schedule.

CONCLUSION

- Enhanced vaccination campaigns may be required for children of adolescent mothers, particularly for vaccines later in the schedule and for children of adolescent mothers living with HIV.
- Lowering vaccination age of the measles vaccine may have improved coverage and timeliness by capitalising on higher uptake of vaccinations earlier in the schedule.
- Research is needed to understand factors contributing to the decline in vaccine coverage and timeliness as children get older to inform effective interventions.

RESULTS

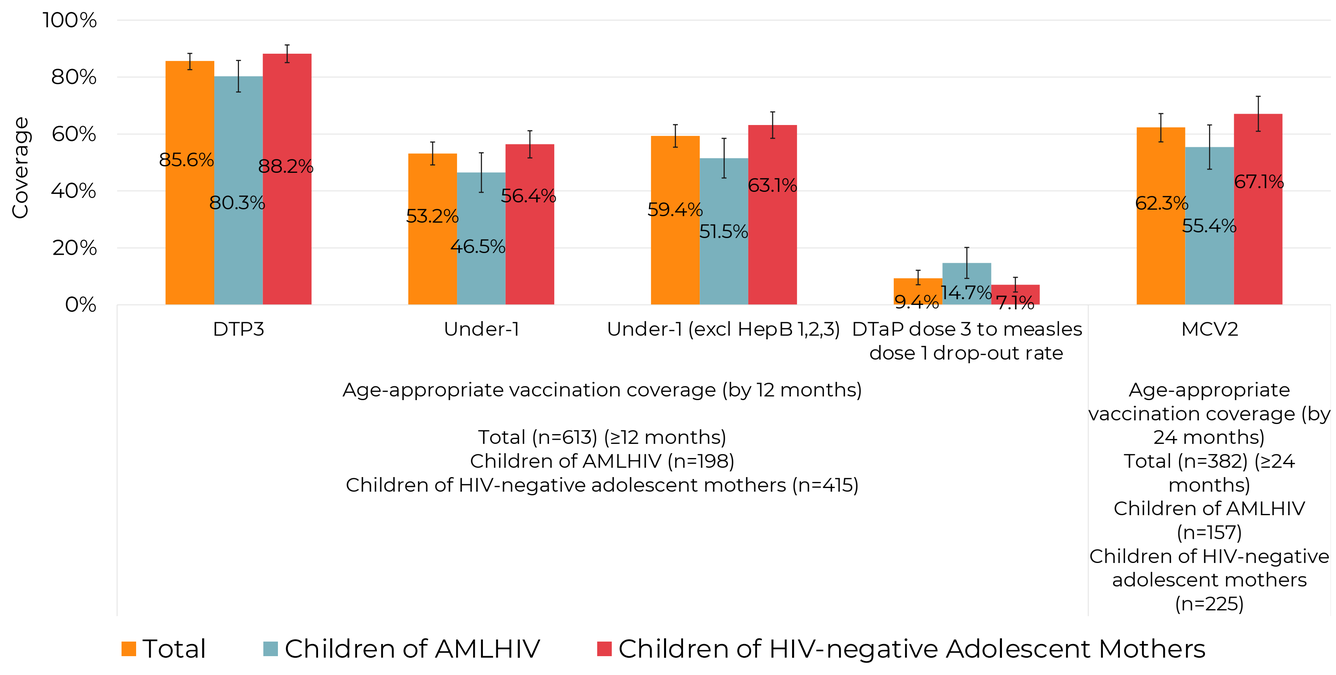

Figure 1: Childhood vaccination coverage indicators by maternal HIV-status

- Vaccination coverage and timeliness was highest for vaccines recommended up to 14 weeks.
- Vaccine coverage and timeliness declined with age.
- Children failed to reach national vaccination targets.
- Children of adolescent mothers living with HIV had lower vaccination coverage.

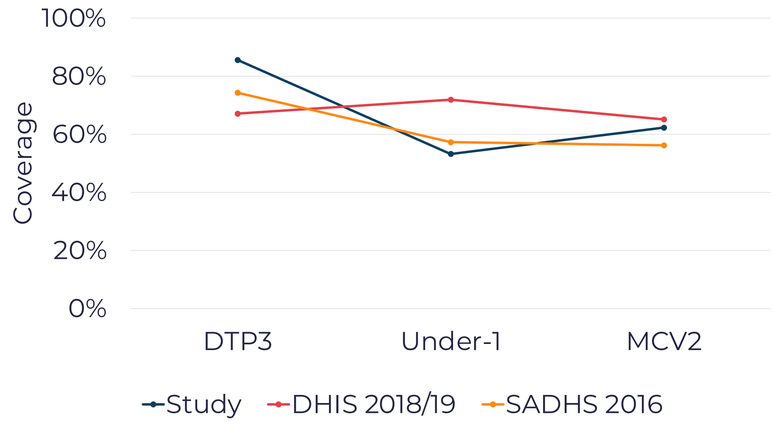

Figure 2: Comparison of DTP3, Under-1 and MCV2 vaccination coverage with DHIS and DHS reports

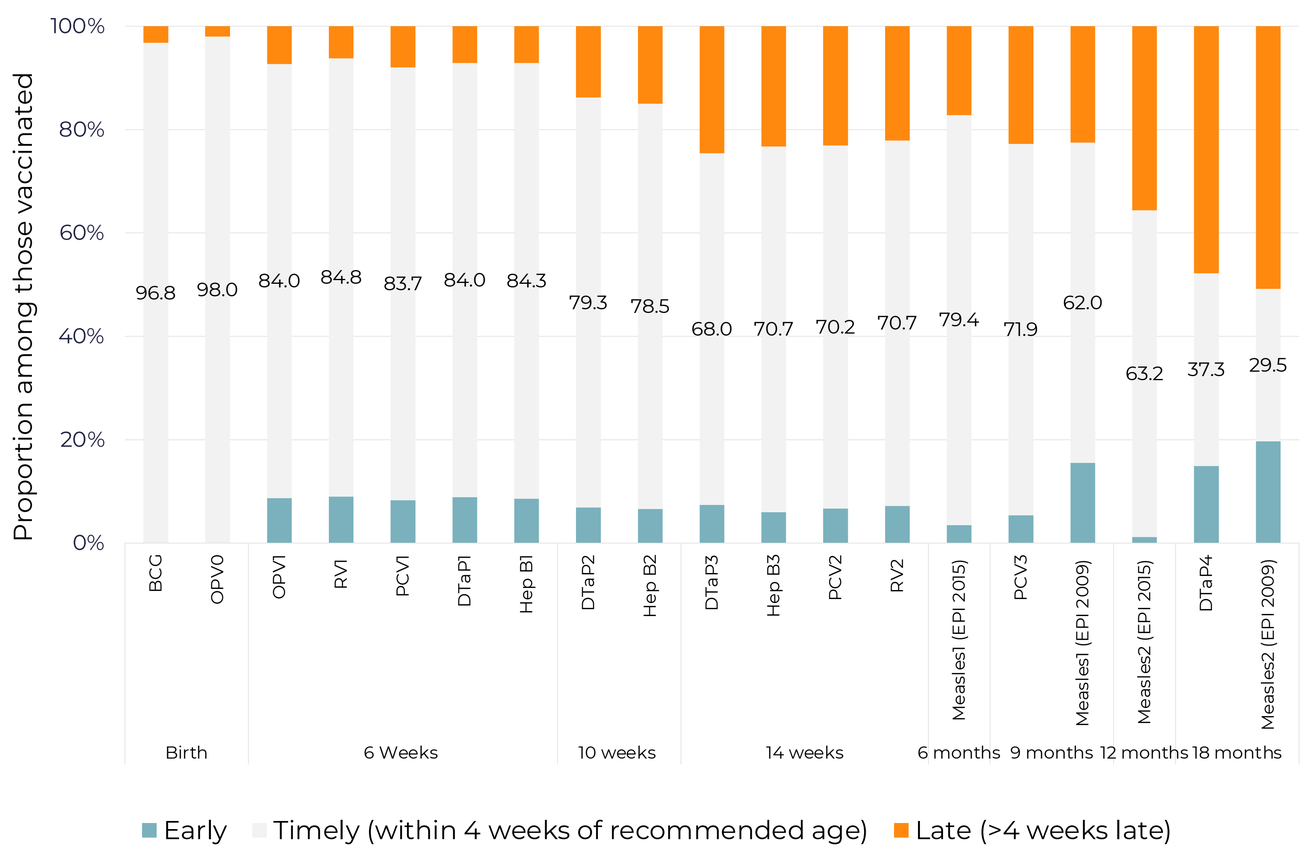

Figure 3: Timeliness of vaccination for all immunisations recommended up to 18 months in the South African EPI for vaccinated children (born 2009-2019)

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REFERENCES: (1) Finlay J.E., et al. The association of maternal age with infant mortality, child anthropometric failure, diarrhoea and anaemia for first births: Evidence from 55 low- and middle-income countries. BMJ Open. 2011. (2) Noori N., et al. Effect of adolescent pregnancy on child mortality in 46 countries. BMJ Glob Heal. 2022. (3) Jones C.E., et al. Maternal HIV Infection and Antibody Responses Against Vaccine-Preventable Diseases in Uninfected Infants. JAMA. 2011.

FOOTNOTES: [a]Under-1 vaccination coverage excluding Hep B dose 1, 2 and 3 is also reported due to known national stock-outs during the study period and to account for the replacement of the pentavalent (DTaP-IPV-Hib) vaccine with hexavalent (DTaP- IPV-Hib-HepB) after December 2015.

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