

Title: Vaccination status of preterm infants and factors influencing vaccination among their caretakers and health workers in South-western Uganda.

Abstract

Background: The national target of BCG and OPV0 is at 90%. Notably, vaccination is usually delayed in preterm infants who are at high risk for vaccine preventable diseases. The exact estimate of preterm babies vaccinated, the vaccines missed or delayed and drivers of this vaccination status are not well studied in Southwestern Uganda.

Aims: This study therefore determined the vaccination status of BCG and OPV0 in preterm infants, factors associated with, and facilitators and barriers to preterm infant vaccination among caretakers and healthcare workers in the Southwestern region.

Methods: We conducted a cross sectional quantitative and qualitative study between May and September 2023 at MRRH and HICH. We consecutively recruited 350 preterm infants and their caretakers as they attended the newborn follow-up clinic and extracted data from their medical records. We also conducted twelve key informant interviews with healthcare workers and three focus group discussions with caretakers. We described the vaccination status and logistic regression was used to determine associated factors. We used thematic content analysis to analyze facilitators and barriers to preterm infant vaccination.

Results: The median age of preterm infants was 13 weeks (IQR4-26) and the median birth weight was 1.6kg (IQR 1.3-1.8) at the time of the study. Two-thirds (66.6%) of our preterm infants had received both BCG and OPV0. More preterm infants (65.4%) had received BCG than OPV0 (28%). Increasing preterm infant age, regular maternal antenatal care attendance and hospital discharge recommendation of vaccination increased the likelihood of vaccinating a preterm infant. However, denial of vaccination at first presentation negatively influenced vaccination of preterm infants. Our qualitative findings showed that knowledge about vaccination, trust in healthcare workers and short post discharge review periods of preterm infants were key drivers of vaccination. However, fear of side effects, fear of exposing the baby to other people, the knowledge gap among healthcare workers and delayed decision-making by fathers hindered the vaccination of preterm infants.

Conclusion: The vaccination status of BCG and OPV0 among preterm infants in the greater part of Southwestern Uganda is below the national target. Healthcare workers involved in preterm infant care should ensure preterm infants are vaccinated before they leave the hospital.

