ABSTRACT

Introduction: Uganda has the highest influx of refugees in the East African region. Adjumani district is a host to over 200,000 South Sudanese refugees. Emergency Nutrition Interventions (ENI) are provided to both the refugees and host communities at selected health facilities to boost their nutritional status. However, the effect of ENI on maternal and child health services indicators and newborn outcomes has never been evaluated. The main purpose of this study was to carry out a comparative study between facilities having emergency nutritional interventions especially maternal child health nutritional services and those facilities that do not provide the services in terms of service access utilization and health outcomes in Adjumani district

Methods and materials: This quasi-experimental study involved 232 postpartum mothers who were purposively sampled. Data was collected via researcher administered questionnaire, key informant interviews and observation. Quantitative data was entered in Epi-Data and analyzed in Stata using chi-square, Fisher's exact test, generalized estimating equation, with logit-link and binomial family for binary outcome, and log-link and Poisson family for numerical outcome, adjusted for significant covariates and clustering effect. While qualitative data was processed and analyzed in ATLAS.ti. Quantitative data was reported either in Adjusted Odds ratio (OR) or Risk Ratio (RR) with 95% confidence interval using publication quality tables. Conversely, qualitative data was coded and reported with quotations.

Results: A total of 232 mothers were considered in general analysis and 204 mothers (114 in the intervention and 100 in the control arm) had data fitted for generalized estimating equation. Living outside intervention area increased PNC use on sixth day (AOR=2.15 95%CI: 1.193-3.885 p=0.011) as well for PNC at six (6) weeks (AOR=3.24 95%CI: 1.77-5.92 p<0.001). Residing in rural setting reduced receiving OPV 2 /DPT 2 -HIB/Hep. 2/PCV 2 (AOR=0.16 95%CI: 0.034-0.783 p=0.024). Living outside intervention significantly reduced receiving OPV 2 /DPT 2 -HIB/Hep.2/PCV 2 compared to the reference group (AOR=0.29 95%CI: 0.083-0.986 p=0.047). Mothers aged >25 years was associated with lower odds of their children receivingOPV 3 /DPT3-HIB/Hep. 3/PCV 3 (AOR=0.50 95%CI: 0.290-0.857 p=0.012) and mothers staying outside had higher odds of having their children immunized with OPV 3 /DPT3-HIB/Hep. 3/PCV 3 (2AOR=2.64 95%CI: 1.182-5.914 p=0.018). The number of ANC attendance (RR, 0.87; 95% CI, 0.77-1.00), ever attending PNC visit (OR, 0.09; 95% CI, 0.02-0.45) as well as PNC attendance on the sixth day (OR, 0.06; 95% CI, 0.03-0.14) and in the sixth week (OR, 0.21; 95% CI, 0.11-0.40) were significantly lower in the control arm compared to intervention arm. Use of child health services (immunization) at 6—weeks (OR, 0.17; 95% CI, 0.06-0.53), 10 weeks (OR, 0.33; 95% CI, 0.15-0.73), and 14 weeks (OR, 0.33; 95% CI, 0.15-0.73) was significantly lower in the control arm compared to the intervention arm. Despite no differences in birth outcomes (birth weight, low birth weight, and premature delivery), participants in the control arm had significantly higher hemoglobin level than those in the intervention arm (RR, 1.12; 95% CI, 1.03-1.21).

Conclusions: The difference in facility service package especially in the area of nutrition led to inequitable use of maternal and child health services thus significant improvements were registered in the intervention health facilities while a decline was noted in the non-intervention health facilities. In the intervention arm, nutrition education will be helpful in improving hemoglobin levels. Mechanisms are needed at district level to reverse the disparity in use of maternal and child health services. Such strategies may include among others health education on importance of using existing maternal and child health services