Magnitudes and Drivers of Community Inequalities in Maternity Continuum of Care Completion in Nigeria: multilevel and sub-national analysis

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Background: Understanding sub-community differences in uptake of maternity continuum of care (CoC) especially in sub-Saharan Africa is significant for plan to achieve optimal pregnancy outcome and child survival. This study therefore applied multilevel analysis to investigate magnitude and drivers of the essential maternity CoC “antenatal care, skilled delivery and postnatal care” by subnational and community disparities.

Methodology: A secondary analysis of data as evidence from the 2018 cross-sectional nationally representative sample of 21,447 women, with history of at least 1 birth in the last five years preceding the survey. CoC completion was the outcome variable while explanatory variables were classified as demographics and autonomous factors, obstetrics and health seeking behavior, economic and community factors. Descriptive statistics describes factors, forward stepwise regression was performed to identified associated variables at 10% cutoff point and were subsequently included in the full multilevel analysis based on the -2logL significance. A multilevel complementary-log-log model was performed to determine the associated factors with CoC completion. All analysis was performed using Stata version 17.0 for data science at 95% confidence level.

Results: CoC coverage is 56.7% for optimal antenatal care, 37.4% for antenatal and skilled delivery, and 6.5% for CoC completion. However, completion is different by communities (4% in urban and 2.5% in rural). CoC completion was highest in Oyo subnational (4%) and lowest in Bayelsa state (<1%). Continuation and completion of maternity continuum of care are positively drive by; education (AOR=1.61, 95%CI=1.03–2.52), wealth (AOR=1.72, 95%CI=1.36 –2.18), healthcare decider (AOR=1.44, 95%CI=1.17–1.76) and tetanus toxoid vaccine taken in pregnancy (AOR=1.49, 95%CI=1.12–1.98) while traditional birth provider (AOR=0.04, 95%CI=0.02–0.07) negatively influenced CoC continuation and completion. intra-cluster correlation coefficient was 28.67% and 16.28% at the community and state level and thus justified the multilevel analysis.

Conclusions: Level of maternity continuum of care completion is very low and far below the WHO recommended level in Nigeria. CoC Completion is different by urban and rural sub-communities. Education, wealth, women healthcare decision power and tetanus toxoid vaccination drives continuation and completion of maternity care between communities. Community-specific strategies incorporating these factors into maternity packages will be supreme to strengthen maternal, newborn and child health.