The outcome of Reminder Text Messages Intervention on Completion of Routine Immunisation in Rural Areas, Nigeria

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Background: Completing routine immunisation for infants, especially with measles and yellow fever administered at the ninth month, has been a challenge in Nigeria; strategies implemented to promote immunisation coverage yielded limited success. The use of reminder SMS in mobilising mothers of infants, especially in rural areas with lower immunisation coverage, was suggested. This study investigated the effect of reminder SMS sent to mothers in rural communities on routine childhood immunisation's full and timely completion.

Methods: A quasi-experimental design was adopted for this study, and 3500 mothers/infants pairs were recruited into the Intervention and Control groups at various Primary Healthcare Centres in six States and the Federal Capital Territory, Abuja, Nigeria. The intervention, reminder SMS, were sent to mothers in the intervention group three times weekly for ten months, and those in the control group received fliers on infant nutrition. We adopted mixed methods of data collection, significance level set at p=0.05.

Result: Most of the respondents were married (Control, 94.3%; Intervention, 95.5%), have experienced multiple births (Control, 79.0%; Intervention, 74.9%). The overall level of adherence to routine immunisation appointment dates and completion of all immunisations was higher in the intervention group (76.0%) compared with the Control (73.3%). We found a significant association between adherence to appointment dates and completeness of routine immunisation vaccine. The intervention group had a higher completion rate for measles and yellow fever vaccines (55.3%; 75.9%) than the Control group (26.8% and 23.9%). Qualitative findings revealed positive comments from mothers in the intervention group that the reminder SMS increased awareness of immunisation dates and assisted in readjusting their time which influenced timely completion.

Conclusion: Interventions using reminder SMS enhanced infants’ immunisation delivery. The study thus contributes to the evidence-based on the effectiveness and acceptance of reminder SMS for improved childhood immunisation and variation in different settings. Findings also provided trusted evidence for decision-making for child immunisation health outcomes and services and contributed to the body of literature, which is currently scarce. It has provided a better understanding of the mechanisms through which mobile phone technology supports community-based health care delivery.