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Title:

Effectiveness of Short Message Services Reminder on Childhood Immunization in Kadoma, Zimbabwe, 2013- A Randomized Controlled Trial

Background: Globally, non-attendance for immunization appointments remains a challenge to healthcare providers. A review of the 2011 consolidated monthly return form (T5) for Kadoma City revealed that annual OPV, Pneumococcal, and Pentavalent coverage was 74% at six weeks, 84% at 10 weeks and 74% at 14 weeks against a district target of 90% for all antigens at 6, 10 and 14 weeks. We investigated the effectiveness of SMS reminders on immunization coverage in Kadoma City.

Methods: A Randomized Controlled Trial was conducted. Women who delivered and were resident in Kadoma City were recruited. In the intervention group, SMS reminders were sent at 6, 10 and 14 weeks. In the non-intervention group no message reminders were sent. All women in both groups received routine health education on immunization schedule for their children and were issued with immunization cards post delivery. Data was analysed using Epi-Info 3.5.1

Results: A total of 304 participants were recruited, 152 in the intervention group and 152 in the non-intervention group. Immunization coverage was 97% for the intervention group and 82% for non-intervention group at 6 weeks ($p < 0.001$). At 10 weeks, immunization coverage was 96% for intervention and 80% for non-intervention group ($p < 0.001$). At 14 weeks it was 95% for intervention and 75% for non-intervention group ($p < 0.001$). Those who delayed receiving OPV1 were 82% for the intervention and 18% for non-intervention group. Median delay for intervention was 0 days ($Q_1 = 0$; $Q_3 = 0$) and 10 days ($Q_1 = 6$; $Q_3 = 17$) for non-intervention group.

Conclusion: Immunization coverage in the intervention group was significantly higher than in non-intervention group. Based on this evidence we recommended the use of SMS reminders to increase immunization coverage in Kadoma City.

Key Words: Randomized Control Trial, Immunization, Kadoma