

Abstract

Background

Globally, vaccine preventable diseases are responsible for nearly 20 % of deaths annually among children <5 years old. Worldwide, many children dropout from the vaccination program, are vaccinated late, or incompletely vaccinated. We evaluated the impact of text messaging and sticker reminders to reduce dropouts from the vaccination program.

Methods

The evaluation was conducted in three selected districts in Kenya: Machakos, Langata and Njoro. Three health facilities were selected in each district, and randomly allocated to send text messages or provide stickers reminding parents to bring their children for second and third dose of pentavalent vaccine, or to the control group (routine reminder) with next appointment date indicated on the well-child booklet. Children aged <12 months presenting for their first dose of pentavalent vaccine were enrolled. A dropout was defined as not returning for vaccination ≥ 2 weeks after scheduled date for third dose of pentavalent vaccine. We calculated dropout rate as a percentage of the difference between first and third pentavalent dose.

Results

We enrolled 1,116 children; 372 in each intervention and 372 controls between February and October 2014. Median age was 45 days old (range: 31–99 days), and 574 (51 %) were male. There were 136 (12 %) dropouts. Thirteen (4 %) children dropped out among those who received text messages, 60 (16 %) among who received sticker reminders, and 63 (17 %) among the controls. Having a caregiver with below secondary education [Odds Ratio (OR) 1.8, 95 % Confidence Interval (CI) 1.1–3.2], and residing >5 km from health facility (OR 1.6, CI 1.0–2.7) were associated with higher odds of dropping out. Those who received text messages were less likely to drop out compared to controls (OR 0.2, CI 0.04–0.8). There was no statistical difference between those who received stickers and controls (OR 0.9, CI 0.5–1.6).

Conclusion

Text message reminders can reduce vaccination dropout rates in Kenya. We recommend the extended implementation of text message reminders in routine vaccination services.