

Abstract

Effect of Reminding Parents on Vaccination Dates Using Mobile Short Messages on the Routine Vaccination Coverage of Infants in Al Resafa-Baghdad, 2015-2016

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Abstract

Background: Vaccination is one of the most successful and cost-effective public health interventions. Public confidence in immunization is critical to sustaining and increasing vaccination coverage rates and preventing the outbreaks of Vaccine Preventable Diseases (VPDs). New innovative methods involving technologies need to be employed to increase the vaccine coverage. Technology use is widespread by patients and providers including text message, email, internet, social media and electronic health records.

Objective: To assess the effect of reminding parents on their children's vaccination dates using Short Message System (SMS) on the coverage rates of vaccines in the Primary Healthcare Centers (PHCs) in Baghdad, Iraq, 2015-2016.

Methods: An interventional study was conducted in six PHCs that were selected by simple random sampling technique from all PHCs in Resafa side of Baghdad of 4.8 million inhabitants. All Infants aged less than one year who missed any of the vaccines enlisted in the national immunization schedule in these PHCs were considered defaulters and included in the study. In three PHCs, the parents of those children received SMS reminders while the children in the other three PHCs were left for the routine defaulter tracing practices.

Results: There were 1299 defaulter children in the six PHCs during the study period; 625 infants were in the intervention PHCs and 674 infants in the non-intervention PHCs. Prior to the intervention, there was no significant difference in the vaccines' coverage between the two groups. After the intervention, the coverage rates among the intervention versus non-intervention groups were: OPV1 (67.1% vs 42.9%; $P < .001$), OPV2 (58% vs 47.1%; $P < .001$), OPV3 (67.4% vs 31.9%; $P < .001$), Penta1 (67.1% vs 42.9%; $P < .01$), Penta2 (67.4% vs 31.9%; $P < .001$), and Measles (69.6% vs 21.6%; $P < .001$), respectively. The average cost per respondent defaulted infant was US \$0.3.

Conclusions: The use of SMS in the PHCs to remind parents with defaulters' infants proved effective in improving the vaccination coverage rates.

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