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The effect of sms reminder on improving routine childhood immunization coverage and timeliness: a case of gurage zone, snpr, ethiopia, 2021, a randomized controlled trial study

Fisha Alebel GebreEyesus

Wolkite University, Ethiopia

Introduction: The vaccination coverage in Ethiopia is still below the required level, contributing to measles outbreaks and deaths from vaccine-preventable illnesses. So, this necessitates developing a new and cost-effective strategy which effectively utilized to achieve better compliance with children's immunization schedules which ultimately enhances vaccination uptake and coverage. So this study aimed to assess the effect of SMS reminders on improving routine childhood immunization coverage and timeliness: in the Gurage zone, SNNPR, South-West, Ethiopia

Methods: A two-arm, parallel, randomized controlled trial study was employed among 408 mother-infant pairs. Using sealed and opaque envelopes, mother– infant pairs in selected health institutions were allocated to either the intervention group (receiving short message service reminders and health education) comprising 204 mother–infant pairs or the control group (receiving the routine health education only) comprising 204 mother–infant pairs. The units of randomization were mother–infant pairs randomized into one of the two study arms with a 1:1 ratio. Data were cleaned, coded and entered into EpiData version 4.1 and was exported to STATA statistical software for analysis. Initially, descriptive statistics was computed. A two-sample test of proportion and log-binomial regression analyses was used to compare the outcomes between the study groups. The statistical significance of variables was declared if p-value ≤ 0.05

Result: A total of 400 study participants were recruited, 200 for the intervention group and 200 for control group. We have found that a higher proportion of infants in the intervention group received penta1 199 (99.5 %) vs penta 2, 192(96%) vs. 157 (78.5%) and penta 3, 172(86%) vs 133 (66.5%) compared with control group. At 14 weeks, 172 (86%) and 133 (66.5 %) risk ratio (RR) 1.29, 95% CI (1.15-1.45; $p < 0.001$) in the intervention and control groups received

penta 3 vaccines. Besides this 159(79.5%) and 123(61.5%) RR 1.29, 95% CI (1.13, 1.47; $p < 0.001$) in the intervention and usual care group received penta 3 vaccines timely.

Conclusion: Our study showed that use of an SMS reminder system can improve immunization coverage, and timeliness and strengthen the quality and effectiveness of an immunization program.

Recent Publication

- Berihun, Bihon et al. "Vitamin A supplementation coverage and its associated factors among children aged 6-59 months in West Azernet Berbere Woreda, South West Ethiopia." *BMC pediatrics* vol. 23,1 257. 23 May. 2023, doi:10.1186/s12887-023-04059-1
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- GebreEyesus, Fisha Alebel et al. "Health care providers' preparedness and health care protection against the third wave of COVID-19 pandemics in a resource-limited setting in Southwest Ethiopia: a multi-center cross-sectional study." *The Pan African medical journal* vol. 44 53. 26 Jan. 2023, doi:10.11604/pamj.2023.44.53.31428

Biography

Fisha Alebel Gebre Eyesus is a passionate healthcare professional working in the Department of Paediatrics and Child Health Nursing at Wolkite University's College of Medicine and Health Science in Ethiopia. With a focus on improving child health, Fisha plays a vital role in teaching, research, and community outreach programs. Through dedicated efforts, Fisha strives to enhance healthcare delivery, promote health education, and implement preventive measures for children. Fisha's commitment, expertise, and compassion make a significant impact on paediatric healthcare in Wolkite and contribute to the overall well-being of children in Ethiopia.

fishalebel@gmail.com