A behavior change model to address caregiver hesitancy around COVID-19 vaccination. (Vaccine. 2022;16;40:5664-9)

This semi-structured telephone interview was conducted to better understand the perspectives of vaccine hesitant caregivers, and develop targeted recommendations for health care workers and policymakers to engage in more effective vaccine discussions. Twenty three caregivers were recruited from a Pediatric infectious diseases clinic, including a subset of patients referred to discuss vaccine hesitancy. Barriers and facilitators were mapped to the World Health Organization 3C’s (confidence, complacency, convenience) model of vaccine hesitancy as well as the COM-B (capability, opportunity, motivation) behavior change model. Barriers included mistrust in authorities, misperception of the risk of COVID-19 in children, and perceived health contra-indications and negative previous vaccine experiences. Facilitators included positive relationships with healthcare workers, the promise of a “return to normal”, and societal pressures to immunize. The authors concluded that efforts to increase vaccine uptake in the Pediatric population must target specific barriers and facilitators to immunization expressed by caregivers.

SMS reminders for childhood immunization in low income and middle-income countries (BMJ Global Health 2021;6:e005035)

Childhood vaccine delivery services in the low- and middle-income countries (LMICs) are struggling to reach every child with lifesaving vaccines. Short message service (SMS) reminders have demonstrated positive impact on a number of attrition-prone healthcare delivery services. Authors aimed to evaluate the effectiveness of SMS reminders in improving immunization coverage and timeliness in LMICs. PubMed, Embase, Scopus, Cochrane CENTRAL, CINAHL, CNKI, PsycINFO and Web of Science including grey literatures and Google Scholar were systematically searched for randomized controlled trials (RCTs) and non-RCTs that evaluated the effect of SMS reminders on childhood immunization and timeliness in LMICs. 18 studies (13 RCTs and 5 non-RCTs) involving 32712 infants (17135 in intervention groups and 15577 in control groups) from 11 LMICs met inclusion criteria. Pooled estimates showed that SMS reminders significantly improved childhood immunisation coverage (RR=1.16; 95%CI: 1.10 to 1.21; I²=90.4%). Meta-analysis of 12 included studies involving 25257 infants showed that SMS reminders significantly improved timely receipt of childhood vaccines (RR=1.21; 95%CI: 1.12 to 1.30; I²=87.3%).


This systematic review of randomized controlled trials was done to assess the safety and efficacy of coronavirus disease 2019 (COVID 19) vaccines in children and adolescents. PubMed, EMBASE, Web of Science, Cochrane Library databases, the International Clinical Trials Registry Platform (ICTRP), the Chinese Clinical Trials Registry (ChiCTR), and ClinicalTrials.gov website were searched to collect accessible randomized controlled trials (RCTs) about the safety and efficacy of human COVID-19 vaccines in children and adolescents until May 1, 2022. COVID-19 vaccines were evaluated in a total of 10 950 children and adolescents in seven published studies and over 49 530 participants in 26 ongoing randomized controlled trials. The overall, local, and systemic adverse events following immunization (AEFIs) reported in most trials were similar between the vaccine and placebo groups. Most of the reactions reported were mild to moderate, whereas a few were severe. Few clinical trials reported serious adverse events, but most of them were unrelated to vaccination. In terms of efficacy, the investigated messenger RNA (mRNA) vaccine was found to be 90.7%-100% efficacious in preventing COVID-19 among children and adolescents, revealing good efficacy profiles in this age group. Among children and adolescents, the safety of current COVID-19 vaccines is acceptable.


Modest improvements in household water, sanitation, and hygiene (WASH) and typhoid vaccination can reduce typhoid risk in endemic settings. A total of 62,756 persons residing in 80 clusters in a Kolkata slum were allocated randomly 1:1 to either the typhoid Vi polysaccharide (ViPS) vaccine or hepatitis A (Hep A) vaccine. Surveillance was conducted for 2 years before and 2 years after vaccination. Households were classified as having “better” or “not better” WASH. The prevalence of better WASH households in clusters was calculated using previously validated criteria. Protection by better household WASH, better household WASH prevalence, and ViPS vaccination against typhoid in all cluster members present at baseline was evaluated using Cox proportional hazard models. Overall, ViPS vaccination was associated with a 55% (P, 0.001; 95% CI, 35–69) reduction of typhoid risk and was similar regardless of better WASH in the residence. Living in a better WASH household was associated with a typhoid risk reduction of 31% (P 5 0.16; 95% CI, 16 – to 59) overall. The reduction was 48% (P 5 0.05; 95% CI, –1 to 73) in Hep A clusters, 6% (P 5 0.85; 95% CI, –82 to 51) in ViPS clusters, and 57% (P, 0.05; 95% CI, 15–78) in the population during the 2 years preceding the trial. This analysis highlights the importance of assessing the combination of WASH in conjunction with typhoid vaccines, and has implications for the evaluation of new-generation typhoid conjugate vaccines.

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