Child Health Research Institute

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Usability of a Mobile Device-Based Vaccine Uptake Tool for Pediatric COVID-19 Vaccinations

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COVID-19 vaccine recommendations for pediatric populations keeps expanding, increasing the number of eligible children for vaccination. Caregivers, however, remain hesitant about vaccinating younger children aged 6 months to 11 years. The implementation of an app from a trusted source for all Pediatric COVID-19 vaccination questions, called the Mobile Vaccine Uptake (MoVeUP) App, sought to address the need of relevant targeted information with calls to action. The MoVeUP App utilizes information from previous qualitative interviews to identify relevant topics and concerns for parents and caregivers of varying vaccine hesitancy, but the app itself was created with only input from a community advisory board. Best practice for mobile Health app Agile design states that apps should undergo beta testing with your target demographic. Therefore, before testing the efficacy of the intervention, the acceptability and the usability of the app needed to be optimized with the end users similar to the future participants of the study. Will users similar to our target demographics find the MoVeUP App and General Health App (the control) find both apps acceptable and easy to use? Nineteen end users from identified under-vaccinated groups of interest (Rural and Urban English-Speaking, Spanish-Speaking, and not non-Hispanic white) were recruited from among people interested in research participation from sites in Delaware, South Carolina, Nebraska New Mexico, and Oklahoma. Participants were randomized to seeing either the interventional app (MoVeUP app) or the control app (General Health app) first and asked to navigate through the various pathways with simple questions to assess content. After navigation, they completed a survey incorporating questions from the NASA Task Load Index to measure mental load while completing tasks and a modified Usefulness, Satisfaction, and Ease of use (USE) Questionnaire, to measure user satisfaction and ease of use. Fourteen participants completed the study - 3 rural and 8 urban English-speaking and 1 English-speaking Not NHW, and 2 Spanish-speaking and not NHW. The most agree with MoVeUP App statements related to "Satisfaction" (6.4±0.51), "Simplicity" (6.3±0.63), and "Easy Mistake Recovery" (6.3±0.63). The most disagreed with statements related to "App Necessity" (5.4±1.4), "Effortlessness" (5.5±0.66), and "Inconsistencies in Information" (5.5±1.3). Participants overall reported satisfaction with the MoVeUP app. Opportunities for improvement were identified through these interviews and implemented by the study for launch later in the year.