**Evaluation of rotavirus vaccine shedding in nasal swabs from children concurrently shedding rotavirus vaccine in stool in the PREVAIL birth cohort**

Slavica Mijatovic-Rustempasic1, Julia M. Baker1, Claire P. Mattison1,2, Mary C. Casey-Moore1, Rachel M. Burke1, Daniel C. Payne5, Ardythe Morrow4,6, Shannon Conrey4,6, Mary Allen Staat3,4, Monica McNeal3,4, Umesh Parashar1, Rashi Gautam1 andMichael D. Bowen1

1 Division of Viral Diseases, US Centers for Disease Control and Prevention

2 Cherokee Nation Operational Solutions

3 Department of Pediatrics, University of Cincinnati College of Medicine

4 Division of Infectious Diseases, Cincinnati Children’s Hospital Medical Center

5 Division of Foodborne, Waterborne, and Environmental Diseases, US Centers for Disease Control and Prevention

6 Department of Environmental and Public Health Sciences, University of Cincinnati College of Medicine

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**Introduction**. The Pediatric Respiratory and Enteric Virus Acquisition and Immunogenesis Longitudinal (PREVAIL) Cohort is an endemic respiratory and enteric pathogens surveillance study comprising 245 mother–child pairs residing in Cincinnati, Ohio. The overall aim of the current study was to evaluate the potential for respiratory transmission of Rotavirus A (RVA) vaccine strains. This sub-analysis examined RVA detection in nasal swabs from children shedding rotavirus vaccine strains in stool.

**Methods**. Nasal swabs and stool samples were collected from children weekly from birth up to 2 years of age. Nasal swabs were selected for testing if 1) a stool sample was collected from the same child within 1 day of the nasal swab and 2) the matched stool sample was positive for RVA vaccine strain. Specimens were tested with real-time RT-PCR assays for wild-type RVA and vaccine (Rotarix® and RotaTeq®) strain detection. Vaccination information was abstracted from state and provider records.

**Results**. A total of 249 nasal swabs were analyzed from 66 infants, comprising 25 Rotarix® vaccinees, 41 RotaTeq® vaccinees, and 1 infant with a mixed vaccination series. Most nasal swabs, 170 (68%), were collected after a child received one dose, 44 (18%) after two doses, and 31 (12%) after three doses of either rotavirus vaccine, while 4 (2%) were collected on the date of rotavirus vaccination. Out of 82 Rotarix® vaccine positive stool samples, 75 (91%) matched nasal swabs were RVA negative, while 7 (9%) were RVA positive but non-typable due to a low viral load in the sample. Out of 167 RotaTeq® vaccine positive stool samples, 160 (96%) matched nasal swabs were RVA negative, while 7 (4%) were RVA positive (2 typed as RotaTeq® vaccine strain and 5 were non-typable). Combining both Rotarix® and RotaTeq® vaccine positive stool samples, 94% of the matched nasal swabs tested RVA negative.

**Conclusion**. Regardless of the vaccine product or vaccine dose, the results of this study indicate that RVA is not efficiently shed in respiratory secretions among children shedding vaccine strains in stool. Whether this holds true for infants shedding wild-type RVA strains will be the subject of future investigations.