Abstract citation ID: ofad500.2466

1935. COVID-19 mRNA Vaccination Reduces the Occurrence of Post-COVID Conditions in U.S. Children Aged 5-17 Years Following Omicron SARS-CoV-2 Infection, July 2021-September 2022

Anna R. Yousaf, MD[1]; Josephine Mak, MPH[2]; Lisa Gwynn, MBA, MSPH[3]; Robin Bloodworth, PhD, MPH[4]; Ramona Rai, MPH[4]; Zuha Jeddy, MPH[4]; Lindsay B. LeClair, MS, MPH[4]; Laura Edwards, MPH[4]; Lauren E.W. Olsho, PhD[4]; Gabriella Newes-Adeyi, PHD, MPH[4]; Alexandra F. Dalton, PhD[1]; Manjusha Gaglani, MBBS[5]; Sarang K. Yoon, DO, MOH[6]; Kurt Hegmann, MD, MPH[7]; Katherine Ellingson, PhD[8]; Leora R. Feldstein, PhD, MSc[1]; Angela P. Campbell, MD, MPH[1]; Amadea Britton, MD/SM[1]; Sharon Saydah, PhD[1]; [1]Centers for Disease Control and Prevention, Atlanta, GA; [2]Division of Healthcare Quality Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia; [3]Miller School of Medicine, University of Miami, Miami, Florida; [4]Abt Associates, Rockville, Maryland; [5]Baylor Scott & White Health, Temple, TX; [6]University of Utah School of Medicine, Salt Lake City, Utah; [7]U.Utah, SLC, Utah; [8]University of Arizona, Tucson, Arizona

Session: 176. Late Breaking Abstracts: COVID-19 & Friends
Friday, October 13, 2023: 1:57 PM

Background. An estimated 1-3% of children with SARS-CoV-2 infection will develop Post-COVID Conditions (PCC). This study evaluates mRNA COVID-19 vaccine impact on likelihood of PCC in children.

Methods. A multi-site cohort of children enrolled 7/21/2021-9/1/2022 underwent weekly SARS-CoV-2 screening tests and were surveyed via self- or parental report 12/1/2022-5/31/2023 regarding PCC (defined as ≥1 new or on-going symptoms lasting ≥ 1 month after infection). Multivariable logistic regression was performed to estimate the occurrence of PCC by vaccination status among children aged 5–17 years whose first PCR-confirmed SARS-CoV-2 infection occurred in-study with Omicron variant, who completed the survey >60 days from infection, and who were vaccine age-eligible at time of infection per ACIP recommendations. Vaccination status was categorized as vaccinated (at least primary series completed ≥14 days before infection) and unvaccinated (no vaccine doses before infection). Vaccination status was verified through vaccine registry and/or medical records.

Results. Of 622 participants surveyed, 5% (n=28) had PCC (Table 1) and 67% (n=474) were vaccinated (Table 2). Surveys were completed a median (IQR) of 203.7 days (119.0–293.0) after infection. Children with non-Hispanic Black race/ethnicity and good/fair/poor self-rated baseline health were more likely to report PCC. Children aged 12-18 years, Non-Hispanic Asian and White children, those reporting symptomatic SARS-CoV-2 infection, and those with excellent/very good self-rated baseline health were more likely to report vaccination When comparing children with and without PCC symptoms, COVID-19 mRNA vaccination was associated with a decreased likelihood of ≥1 PCC symptom (aOR 0.66, 95% CI 0.43-0.99), ≥2 PCC symptoms (aOR 0.52, 95% 0.32-0.83), and respiratory PCC symptoms (aOR 0.53, 95% CI 0.33-0.87) (Table 3).

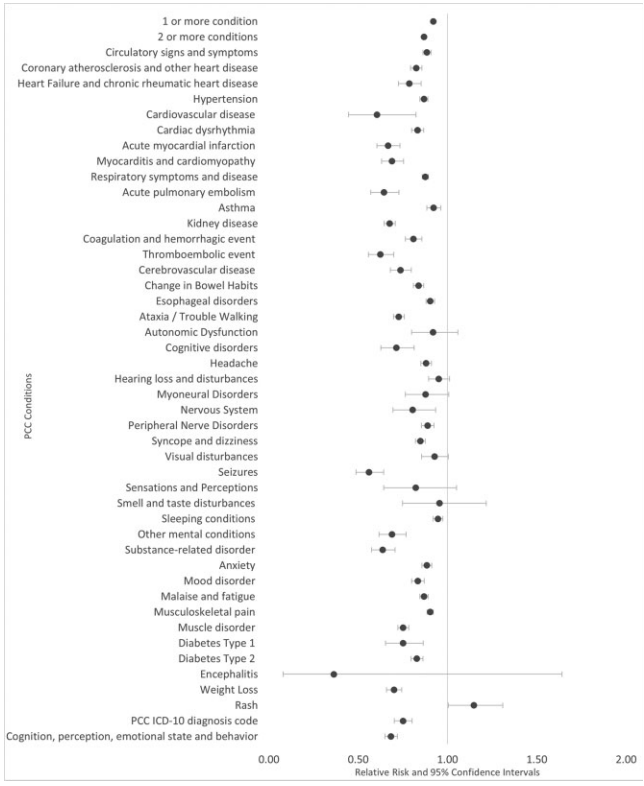

Figure 1. Relative Risk of Post-COVID Conditions among Patients who Received Paxlovid, Ages ≥50 (N=564,303)

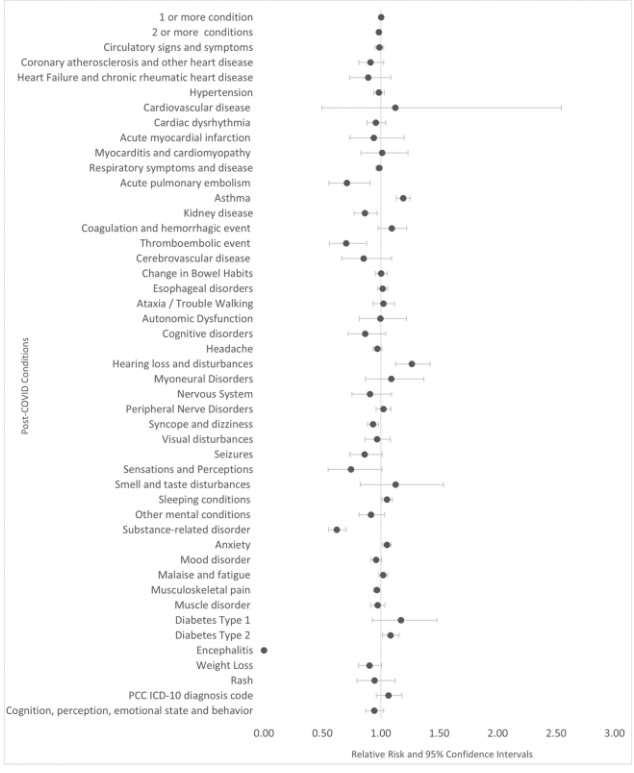

Figure 2. Relative Risk of Post-COVID Conditions among Patients who Received Paxlovid, Ages 18-49 (N=292,818)

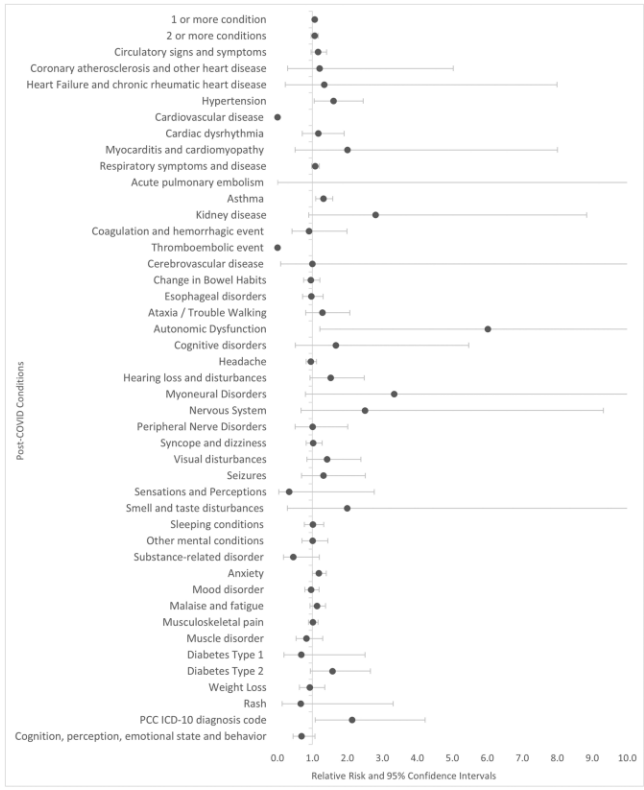

Figure 3. Relative Risk of Post-COVID Conditions among Patients who Received Paxlovid, Ages 12-17 (N=17,178)

Conclusion. In this study, mRNA COVID-19 vaccination appeared to be protective against PCC in children following Omicron SARS-CoV-2 infection. The adjusted ORs correspond to an estimated 34%, 48%, and 47% reduced likelihood of ≥1, ≥2, and respiratory PCC symptoms among vaccinated children, respectively. These findings support COVID-19 vaccination for children and may encourage increased pediatric vaccine uptake.

Disclosures. **Lisa Gwynn, MBA, MSPH**, Merck: Honoraria