

## **Introduction**

The COVID-19 pandemic posed major challenges to public health, while the COVID-19 vaccine contributed to their mitigation. Nonetheless, vaccine hesitancy among caregivers of pediatric patients presents a significant obstacle to achieving widespread immunization. This research project aimed to investigate underlying reasons for this hesitancy, focusing on parental demographics, the influence of social media, and perceptions of vaccine efficacy and safety.

## **Methods**

In this study, surveys were administered at the Pediatrics office at Crozer-Chester Medical Center in Upland, PA, targeting caregivers of children aged 5-18 during well-child appointments. After obtaining verbal and written consent, caregivers filled out a survey encompassing a range of topics including demographics, parental COVID-19 vaccination status, social media usage, and attitudes towards vaccination. Then, R programming was used to conduct baseline demographics analysis for the 272 survey respondents and uncover any associations between vaccine-hesitancy and specific demographics and other secondary outcomes of interest.

## **Results**

The study identified statistically significant positive associations between child vaccination status and caregiver age, vaccination status, and social media use ( $p < 0.0001$  for all). No significant associations were observed between caregiver gender, race, or education level and child vaccination status. Caregivers' primary reasons for not vaccinating their children included concern for potential long-term side effects (35.9%), distrust in the vaccine (14.9%), procrastination (14.2%), rapid vaccine development (11.7%), and child reluctance to get vaccinated (11.3%). They reported greater comfort in vaccinating if there was evidence of an absence of long-term side effects (26.2%), at their child's insistence (8.9%), by school requirement (7.4%), if they received trusted answers to questions (6.4%), or by doctor recommendation (5%).

## **Conclusion**

The study demonstrates caregiver age, personal vaccination status, and social media use significantly influence decisions regarding pediatric COVID-19 vaccination. Caregiver concerns about potential long-term side effects and vaccine distrust emerged as major factors in vaccine hesitancy. These findings underscore the need for targeted communication strategies addressing specific concerns and misconceptions. Strengthening trust in vaccines through evidence-based information, particularly around long-term safety, and healthcare professionals and educational institutions, could prove pivotal in improving vaccination rates among the pediatric population.