

#3. Economic Analysis of Implementing Five Strategies for Increasing COVID-19 Pediatric Vaccine Coverage

Conference theme(s): 5. Monitoring, assessment, and evaluation (e.g. economic analyses)

Preferred session type: Format II — Descriptive Summary, presentation

Proposed authors: AIM staff (Katelyn Wells PhD, Michelle Fiscus MD), CDC SME (Hilary Oliphant, MPH; Alaya Koneru, MPH; Jamison Pike, PhD) Mathematica (Jamison Pike MPA, Jeremy Biggs MPP)

Contact: Katelyn Wells kwells@immunizationmanagers.org

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Background: We identified five promising practices used during the COVID-19 public health emergency to improve COVID-19 vaccination uptake among children ages 6 months to 11 years: (1) conducting targeted outreach to Medicaid beneficiaries, including children, by linking Immunization Information System and Medicaid data; (2) partnering to connect opportunities to vaccinate children with the chance to address basic needs of families; (3) using mobile clinics to offer vaccine to children and others at community-based locations; (4) vaccinating children at home; and (5) reducing operational barriers to help pediatric providers vaccinate children. An economic analysis was conducted to assess potential future use.

Setting and population: For each practice, a hypothetical implementation scenario was developed for an average county in the United States with 116,000 residents and a target population of nearly 15,000 children ages 6 month through 11 years, of whom 11,700 were not fully vaccinated (regardless of vaccine formula).

Project Description: An economic analysis was performed to quantify possible costs and benefits for each of the promising practices, with the goal of informing more rigorous non-hypothetical economic analyses. We considered major benefits related to caretaker time, reduction in deaths, reduction in inpatient hospitalizations and other medical costs, and reduction in learning loss. Costs varied by practice but typically included costs associated with program administration, vaccination, training, outreach, wastage, refrigeration and storage, and staff time.

Results and lessons learned: Three practices—mobile clinics, basic needs, and targeted outreach—had a benefit-cost ratio greater than 1, indicating the benefits outweighed the costs. The mobile clinics practice has the largest benefit-cost ratio (3.14). While this practice had moderate-to-high implementation costs compared to some other practices (e.g., targeted outreach), it generated the greatest benefits due to its high vaccination rate. The reduced operational barriers for providers practice had the lowest benefit-cost ratio (0.70), implying that the costs outweigh the benefits.