

Improving Pediatric Influenza Vaccination Rates Through a Perioperative Vaccination Program

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Abstract Background Information: According to the Center for Disease Control (CDC) the risk of developing potentially severe complications related to influenza infection, increases amongst children who are less than five years of age and those who have a chronic illness (Albalawi et.al., 2024). The American Academy of Pediatrics (AAP) recommends that all children above 6 months of age and without medical contraindications receive the flu vaccine annually to help mitigate hospitalizations and death (Bryant, 2024).

Objectives of Project: Despite CDC and AAP recommendations for annual vaccination in children over six months, uptake remains suboptimal. In 2024, U.S. flu vaccination rates for children under 2 approached 70%, but declined steeply in older age groups. Vaccine hesitancy remains a persistent barrier, with 19.5% of caregivers expressing concerns. In response, Children's Hospital of Philadelphia (CHOP) launched a perioperative influenza vaccination program inspired by earlier efforts at Colorado Children's Hospital.

Process of Implementation: A collaborative team—including nursing, anesthesia, surgery, infectious diseases, pharmacy, and digital health—designed a nurse-led model emphasizing caregiver education, staff training, and EHR integration. Using Plan-Do-Study-Act cycles, the program expanded across perioperative and sedation services. REDCap and Epic tools tracked vaccine uptake and caregiver-reported barriers. Perianesthesia navigators contacted families 3–5 days pre-surgery for vaccine counseling. OR nurses received training in vaccine administration and EHR workflows. Vaccines were documented as "pending" and administered post-anesthesia induction to minimize disruption. The initiative emphasized safety, teamwork, and consistent communication.

Statement of Successful Practice: In 2023, 255 flu vaccines were administered out of 3300 patients (8%) who were offered a vaccine. As of January 2025, 1880, flu vaccines were administered across all inclusive sights. Amongst outpatient procedures, 982 patients were vaccinated out of 2824 eligible children (34.8%). 30% of patients who received a vaccine reported they would not have otherwise obtained the vaccine for their child. Of note in 2024-2025 the most common reason reported for declining the vaccinations was "I just don't want it". 6 patients reported low-grade fevers not requiring further intervention or care visits.

Implications for Advancing the Practice of Perianesthesia Nursing: A perioperative flu vaccination program, grounded in multidisciplinary collaboration and nurse-led caregiver engagement, significantly improved vaccine uptake in pediatric patients. Strategic communication, workflow integration, and stakeholder alignment were key to program success.