

## Title: Multilevel Barriers to Adult Vaccination in an Underserved Community Clinic: A Quality Improvement Study (Oral)

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**Abstract**

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### Abstract

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**Background:** Despite clear evidence that vaccines reduce morbidity and mortality, adult vaccination coverage remains below target levels in many settings, including areas with publicly funded programs. Prior studies and systematic reviews have identified multiple barriers to adult immunization; particularly in underserved populations; such as limited awareness, concerns about vaccine safety or necessity, and inconsistent provider recommendations. Together, these findings underscore the importance of both patient-level factors and provider influence in determining vaccine uptake. A better understanding of patients' knowledge, attitudes, and perceived barriers may help identify targeted strategies to improve vaccination adherence within primary care.

**Objective:** To evaluate patient knowledge, attitudes, and perceived barriers toward recommended adult vaccines and assess resident physicians -reported challenges in vaccine counseling. A secondary objective was to measure the impact of a targeted educational intervention on patient understanding and vaccination intent.

**Methods:** The study titled "Multi-Level Barriers to Adult Vaccination" received approval from the Ethics and Hospital Research Committee at Jackson Park Hospital on July 3, 2025. The Principal Investigator is Dr. Sumalatha Khatroth.

This project was designed as a two-phase quality improvement study conducted at Jackson Park Clinic. In Phase 1, 80 adult patients were invited during clinic visits to complete an anonymous, paper-based survey. Survey participation was voluntary. Eligible participants were English-speaking adults aged 18 years or older who were cognitively able to complete the questionnaire; individuals under 18 years of age or with significant cognitive impairment were excluded. The survey assessed demographic characteristics, vaccine awareness, vaccination history, perceived barriers to immunization, and willingness to receive recommended vaccines, including influenza, COVID-19, Tdap, shingles, and pneumococcal (PCV20).

In Phase 2, 15 resident physicians completed a survey evaluating their frequency of vaccine counseling, confidence in addressing vaccine-related concerns, and perceived systemic barriers. A structured patient education intervention was subsequently implemented, followed by a post-intervention assessment measuring changes in patient understanding, confidence, and intention to receive recommended vaccinations.

**Results:** Patient awareness was greatest for the COVID-19 (95%) and influenza (92%) vaccines, followed by Tdap (65%), shingles (58%), and PCV20 (55%). Reported barriers included perceived lack of necessity (40%), concerns about side effects (30%), absence of a provider recommendation (20%), and cost (10%). Additionally, 65% of patients expressed interest in receiving more information.

Among resident physicians, 53.8% reported routinely discussing vaccines and felt confident counseling patients. The primary challenges identified were patient hesitancy (100%) and time constraints (46.2%). Following the intervention, 95% of patients demonstrated improved understanding, and 90% indicated willingness to receive vaccination within the next six months.

**Conclusions:** Findings indicate that limited patient awareness and understanding of recommended adult vaccines along with perceptions that vaccination is unnecessary and concerns about adverse effects

continue to pose significant barriers in underserved populations. Targeted educational interventions improved knowledge and short-term intent to vaccinate. Sustained improvement will likely depend on coordinated, multilevel strategies, including standardized patient education, clear and consistent provider recommendations, and primary care workflows that embed vaccination assessment and support.