Closing the Immunization Gap: A Quality Improvement Initiative to Increase Vaccine Uptake in Student Health

NYU Student Health Center

Kitty Chan, DO; Jasjot Kaur, RN; Melanie Pabon, RN; Madeline Herrera, RN; Yaderli Martinez; Alina Climova, PA; Timothy Wong; Jennifer Leach; Julie Shahroudi, EdD, MPA

> **"Young adults are less likely to receive preventive vaccines, even when recommended. College health centers can play a vital role in closing that gap."**
> National Vaccine Advisory Committee, 2020

PURPOSE

Young adults often forgo preventive care, including routine vaccinations, due to time constraints, mistrust, or misinformation. Yet college campuses are uniquely positioned to provide opportunistic, convenient preventive health services. This project sought to increase vaccination uptake at NYU's Brooklyn Student Health Center by addressing vaccine hesitancy, improving access, and embedding vaccine education into clinical workflows.

Our goals were to:

- Normalize vaccination as part of routine student care
- Reduce barriers through flexible and self-directed options (e.g., walk-ins, pop-ups, and multi-vaccine visits)
- Strengthen staff capacity and student-provider trust

We focused on four CDC-recommended adult vaccines: HPV, Tdap, Influenza, and COVID-19. Using iterative QI methods, we aimed to improve health outcomes, reduce preventable illness, and support student wellness and academic success.

IDENTIFY THE GOAL

This QI study aimed to improve adult vaccination rates at NYU's Brooklyn Student Health Center by addressing vaccine hesitancy, improving access, and integrating routine vaccination into clinical workflows. Using the Institute for Healthcare Improvement (IHI) Model for Improvement, we analyzed vaccine uptake by type and patient engagement metrics from September 2024 through January 2025, compared to the same period in the prior academic year.

Specific Aim:
Increase the number of vaccines administered at the Brooklyn SHC by at least 15%—from 921 to 1,059—between September 2024 and January 2025, compared to the same period in 2023–2024.

We also aimed to increase the percentage of patients who received at least one vaccine during their visit, and the average number of vaccines per vaccinated patient over the same period.

IDENTIFY THE GAP

National data show that young adults have some of the lowest rates of routine vaccination among adults, often due to time constraints, mistrust, or lack of access. Prior to this project, the Brooklyn Student Health Center administered 921 total vaccines between September 2023 and January 2024.

Despite offering vaccines onsite, uptake remained limited due to factors identified through staff reflections and process review:

- Missed opportunities during routine visits
- Limited access to walk-in or self-scheduled vaccines
- Low awareness and hesitancy, particularly for HPV and Tdap

We recognized that integrating vaccine education into clinical workflows and offering flexible access points could help close the gap between recommended preventive care and actual uptake.

CORRECTIVE ACTIONS

Pop-Up Clinics

- **Plan: Evaluate optimal days and appointment formats** for vaccine clinics.
- **Do: Monitor turnout** and unused slots by day**.**
- **Study: Thursdays had higher attendance than Fridays;** advance online booking was essential.
- **Act: Held clinics on Thursdays, enabled web-booking** in advance, **and posted signage** in the shared building lobby.

Expand Flu Clinics to Include Other Vaccines

- **Plan: Recommend HPV, Tdap, and COVID-19 vaccines** during flu shot appointments.
- **Do:** Many patients **agreed to receive multiple vaccines.**
- **Study: HPV was the most requested;** students were more likely to vaccinate when friends did too.
- **Act: Continued recommending additional vaccines** during flu visits and scheduled next doses on-site.

Vaccine Recommendations in Primary Care Visits

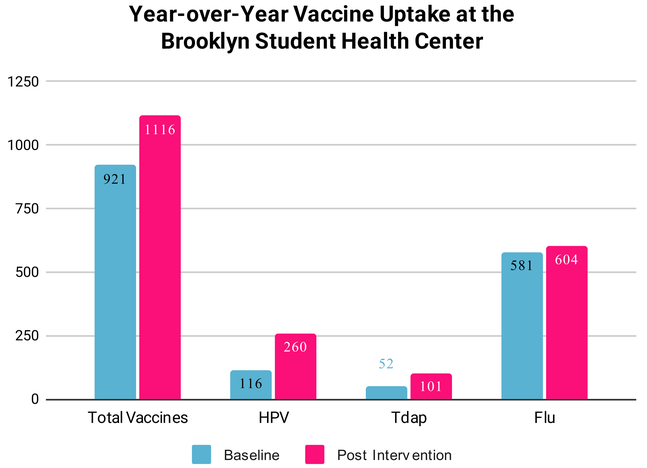
- **Plan: Leverage RN-led pre-visit planning** to identify needed vaccines.
- **Do: Nurses reviewed immunization history** and initiated vaccine conversations.
- **Study:** Patients received vaccines **before or after provider visits** depending on workflow.
- **Act: Maintained flexible RN-led conversations** and documentation.

Walk-In RN Vaccine Visits

- **Plan: Offer walk-in visits** for eligible vaccines (HPV, Tdap, flu, COVID-19).
- **Do:** Enabled **same-day** RN-administered **vaccine visits.**
- **Study:** Uptake was high **when patients had more scheduling options.**
- **Act: Continued the walk-in model** as staffing allowed.

These cycles demonstrated that education, access, and timing are key levers for vaccine acceptance among college students.

RESULTS & REMEASUREMENT



From September 2024 to January 2025, vaccine uptake and engagement at the Brooklyn Student Health Center improved across nearly every metric.

> **"A student who came in for a flu shot often left protected against multiple diseases—this reflects growing trust, flexibility, and convenience in care."**
> NYU SHC Nurse

Vaccine Uptake Highlights

- Total vaccines administered increased by 21.2% (from 921 to 1,116).
- HPV vaccine doses more than doubled, rising by 124% (116 to 260 doses).
- Tdap vaccine doses increased by 94% (52 to 101 doses).
- Flu vaccine uptake remained steady, with a 4% increase (581 to 604 doses).
- COVID-19 vaccinations declined by 12.2%, reflecting broader national trends (data not shown).

Patient Engagement

- 12.2% more students received vaccinations (from 781 to 876 patients).
- The percentage of patients receiving any vaccine rose from 49% to 54%, indicating improved integration into routine care.
- Average vaccines per vaccinated patient increased from 1.18 to 1.27, as more students opted to receive multiple vaccines during a single visit.

Sustainability

- Increased uptake of the HPV vaccine contributed to higher reimbursements, helping reinforce the sustainability of our nurse-led model.

COMMUNICATION

To ensure shared learning and sustained improvement, the results of this QI initiative were shared across multiple NYU SHC audiences using both in-person and virtual formats:

- Managers Meeting in March 2025
- Governing Body Meeting in April 2025
- All Staff Town Hall in May 2025

In addition:

- A summary of findings was posted on the SHC intranet for synchronous staff review and discussion.
- The project was presented at the Quality and Risk Committee (QUARK) in October and December 2024, and January and April 2025, allowing for cross-departmental discussion and input.
- These communication efforts helped reinforce vaccine promotion as a shared goal across clinical, operational, and leadership teams.

REFERENCES

- National Vaccine Advisory Committee. (2020). *Strengthening the effectiveness of national, state, and local efforts to improve vaccination coverage across the lifespan: Recommendations from the National Vaccine Advisory Committee.* U.S. Department of Health and Human Services. https://www.hhs.gov/sites/default/files/nvac-vaccination-across-lifespan-report.pdf