

Improving Human Papillomavirus Vaccine Rates Among Adolescents

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PROBLEM STATEMENT

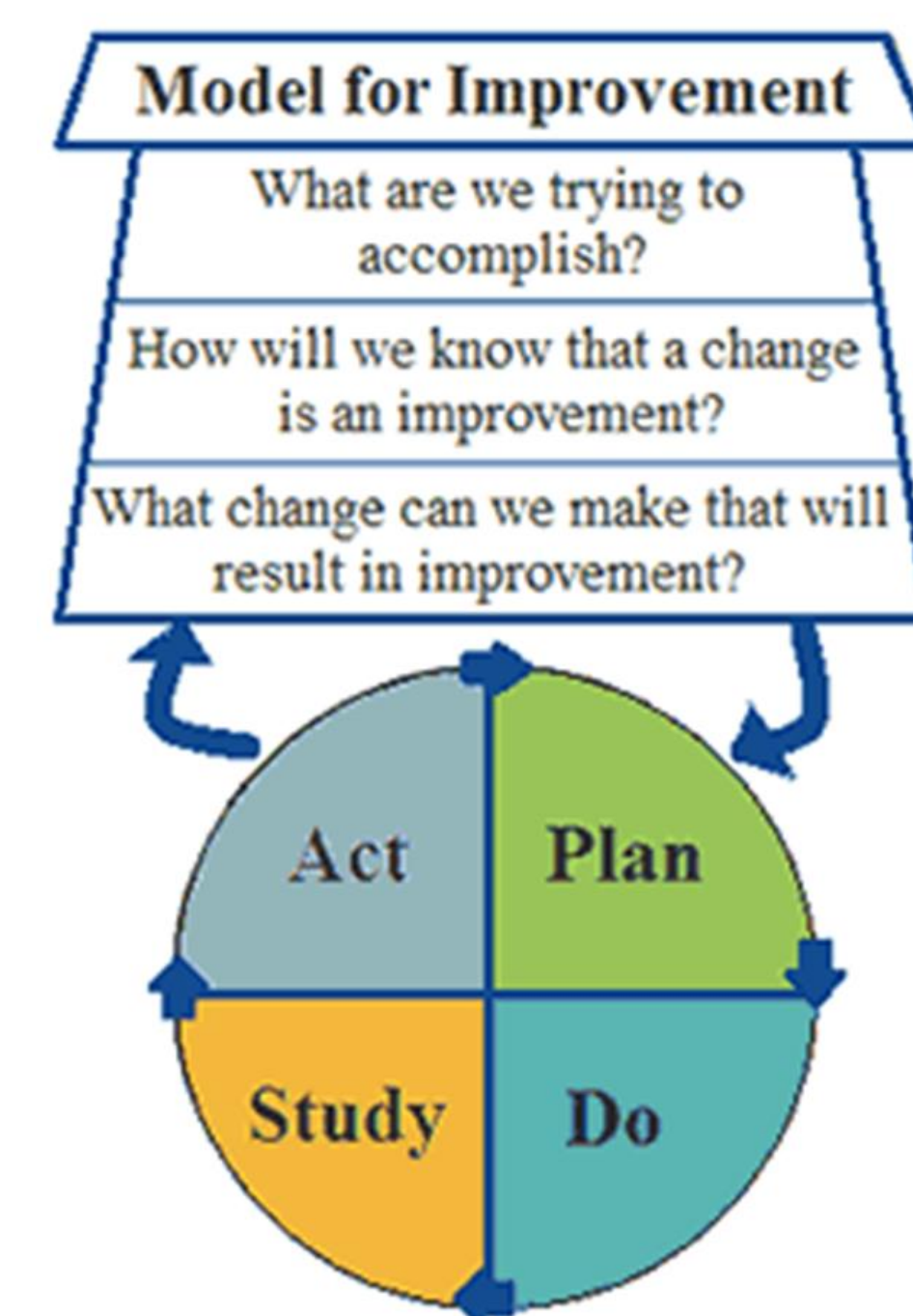
- Human papilloma virus (HPV) is the cause of cervical cancer and five other types of cancers
- The HPV vaccine is safe and effective, yet adolescent rates in the United States remain low (Markowitz et al., 2018)

PROJECT PURPOSE

- Improve adolescent HPV vaccine rates to prevent HPV-related cancers
- Aim was to narrow the gap between the current adolescent HPV vaccine rate of approximately 35% to the national goal of 80%
- Does implementation of a HPV vaccine office protocol improve vaccine rates of adolescents in a primary care setting, when compared to current practice, over a 90-day period?

MODEL/NURSING THEORY

- The Model for Improvement from the Institute for Healthcare Improvement (IHI) guided this quality improvement (QI) project (IHI, n.d.-a.)
- Nola Pender's Health Promotion Model provided the theoretical framework
- Focuses on health promoting actions and aspects embedded in decision-making that nurses can identify and use to influence patients' behaviors



METHODS

Subjects

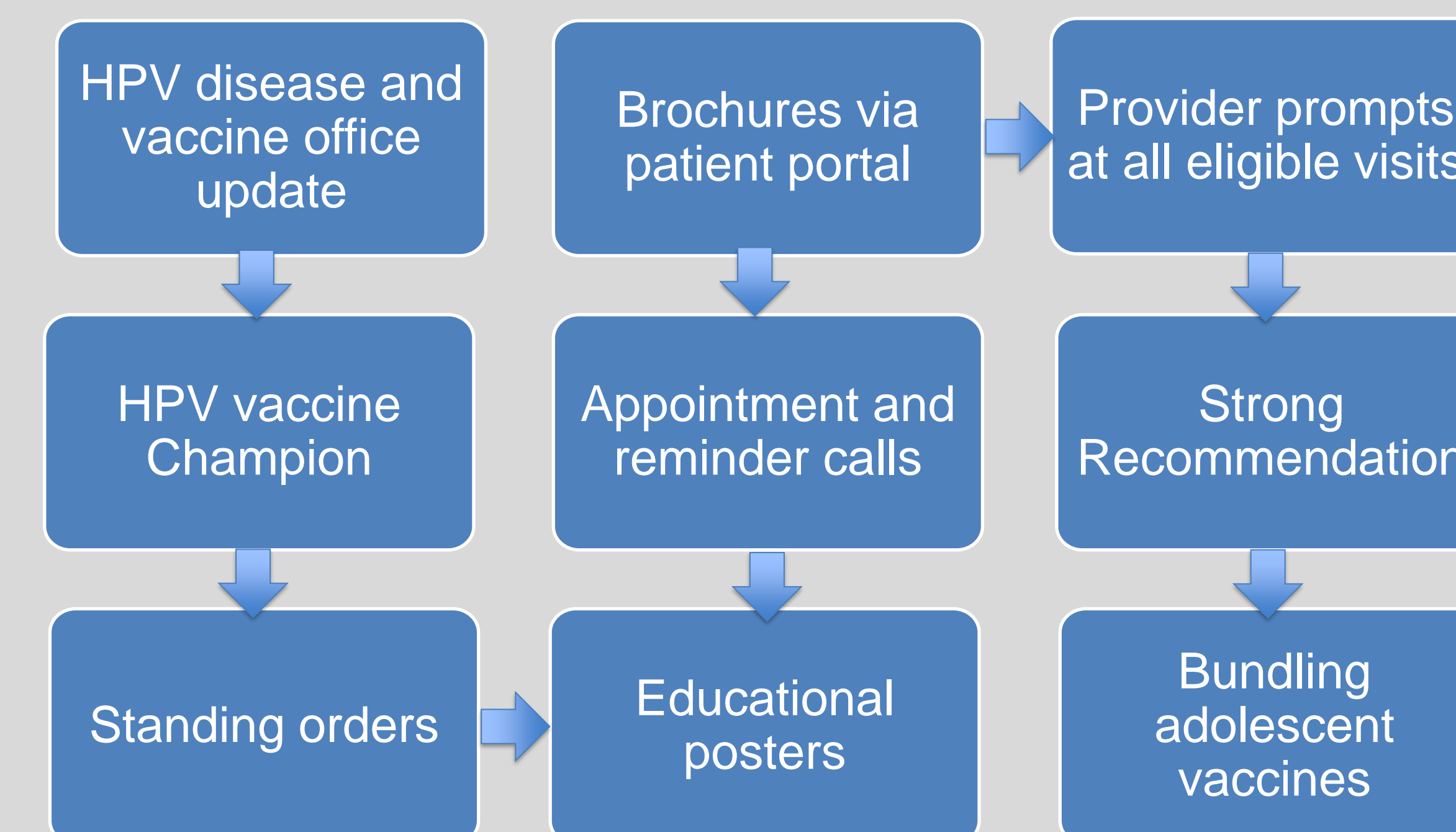
- Adolescent's age 11-17 eligible for the HPV vaccination. Exclusion of pregnant patients and allergy to the vaccine

Setting

- Pediatric primary care office located in southern Florida

Intervention and Data Collection

- The intervention involved implementing an HPV vaccine office protocol
- Education provided to providers, nurses, and staff on evidenced-based strategies for recommending the vaccine
- Standing orders, reminder calls, posters and brochures in placed
- A Vaccine Champion (VC) was appointed



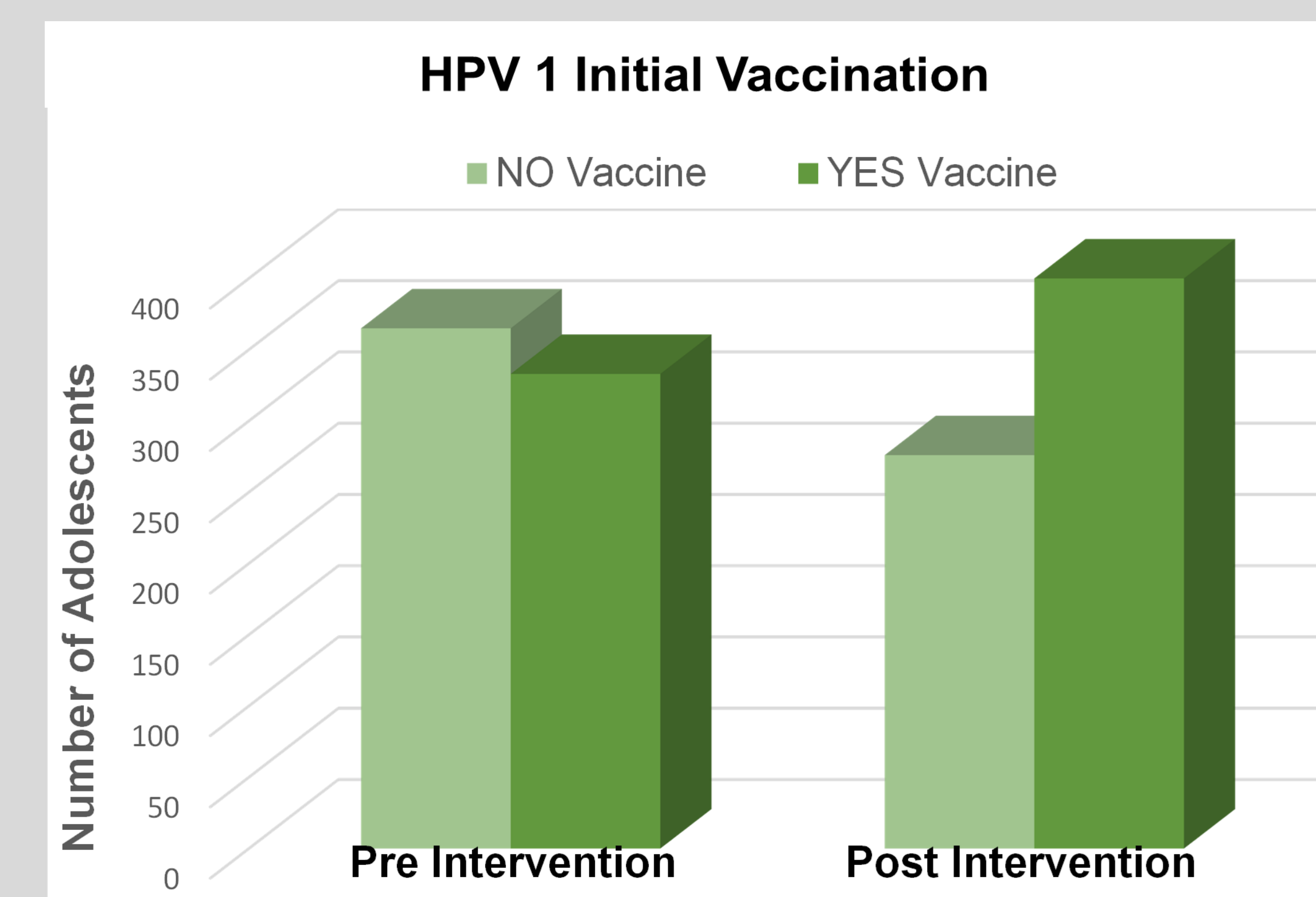
Data Analysis

- Chi-Square test was used to determine statistical significance
- Pre and post-intervention, initial and subsequent doses to achieve vaccine completion rates were gathered from the electronic health record over a 90-day period

RESULTS

- Statistical Significance for initial HPV vaccine was determined by a Chi-square test
- ($\chi^2 (1, N = 1374 = 18.13, p \leq .05)$)

| | Pre-Intervention | Post-Intervention | Total n |
|-------------|------------------------|------------------------|---------|
| No Vaccine | 365 (325.63) [4.76] | 276 (315.37) [4.91] | 641 |
| Yes Vaccine | 333 (372.37) [4.16] | 400 (360.63) [4.30] | 733 |
| TOTAL | 698 | 676 | 1374 |



- Clinical significance was observed for all doses: HPV 1 by 11.3%, HPV 2 by 7%, and HPV 3/complete series by 6% over 90 days
- Descriptive statistics revealed no difference between gender, or between Medicaid vs. commercial insurance in HPV vaccination rates, both pre and post-intervention
- Missed opportunities to give the vaccination (first or second dose) were reduced by 4% over 90 days

DISCUSSION

- Implementation of evidenced-based interventions combined into an Office Protocol increased HPV vaccination rates
- Statistically significant increase was seen in the initial HPV vaccination rate over 90-days
- Increased rates were seen in all doses of the vaccine, although not statistically significant for #2 and #3. Having a positive impact on increasing the initial dose was the goal, as it was seen as the most challenging for the practice

LIMITATIONS

- Difficulty in obtaining HPV vaccine stock left one week during the project without vaccine
- Patient volume may not have been optimal as the project occurred during coronavirus pandemic

IMPLICATIONS FOR ADVANCE PRACTICE NURSING

- Advanced Practice Nurses can effectively implement and lead QI initiatives to improve HPV vaccination rates of adolescents in a primary care setting

SUSTAINABILITY

- Ongoing monthly data collection of HPV vaccination rates with results relayed to staff
- A folder of resources, orientation, duties, and project materials was developed for the VC and the practice

REFERENCES

- Please scan the QR code for a full list of references



The implementation of an HPV Vaccine Office Protocol increased vaccination rates of Adolescents in a primary care setting