

Improving HPV vaccination rates in adolescents

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PROBLEM STATEMENT

- Human papillomavirus (HPV) is the most common sexually transmitted infection in the U.S.
- Also transmitted by skin-to-skin contact or direct contact with something that previously touched infected skin or wart
- HPV-related cancers can take 20 years to develop
- HPV is the leading preventable cause of urogenital cancers
- HPV surpassed tobacco as leading cause of head, neck cancer
- HPV-related oropharyngeal cancers increased four to five-fold in the last decade
- Vaccinating 202 people against HPV prevents one case of HPV-related cancer
- Adolescents starting the vaccine at 9-to-10 years-old 22 times more likely to complete series by age 15 than those beginning at 11 or 12
- Series not complete by 15 years-old requires three injections; those needing more injections often fail to complete series, leading to inadequate protection against HPV-related disease and complications

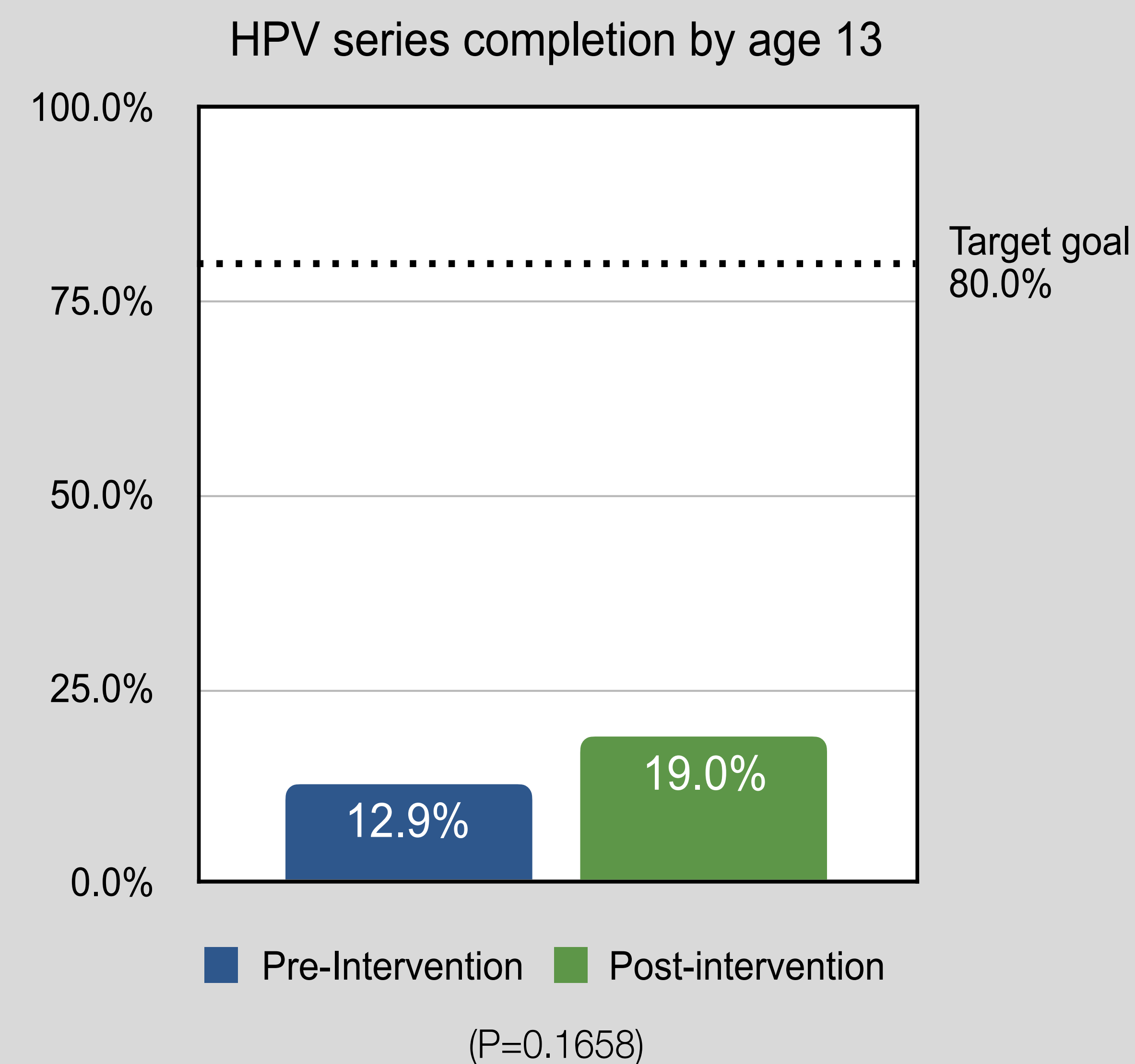
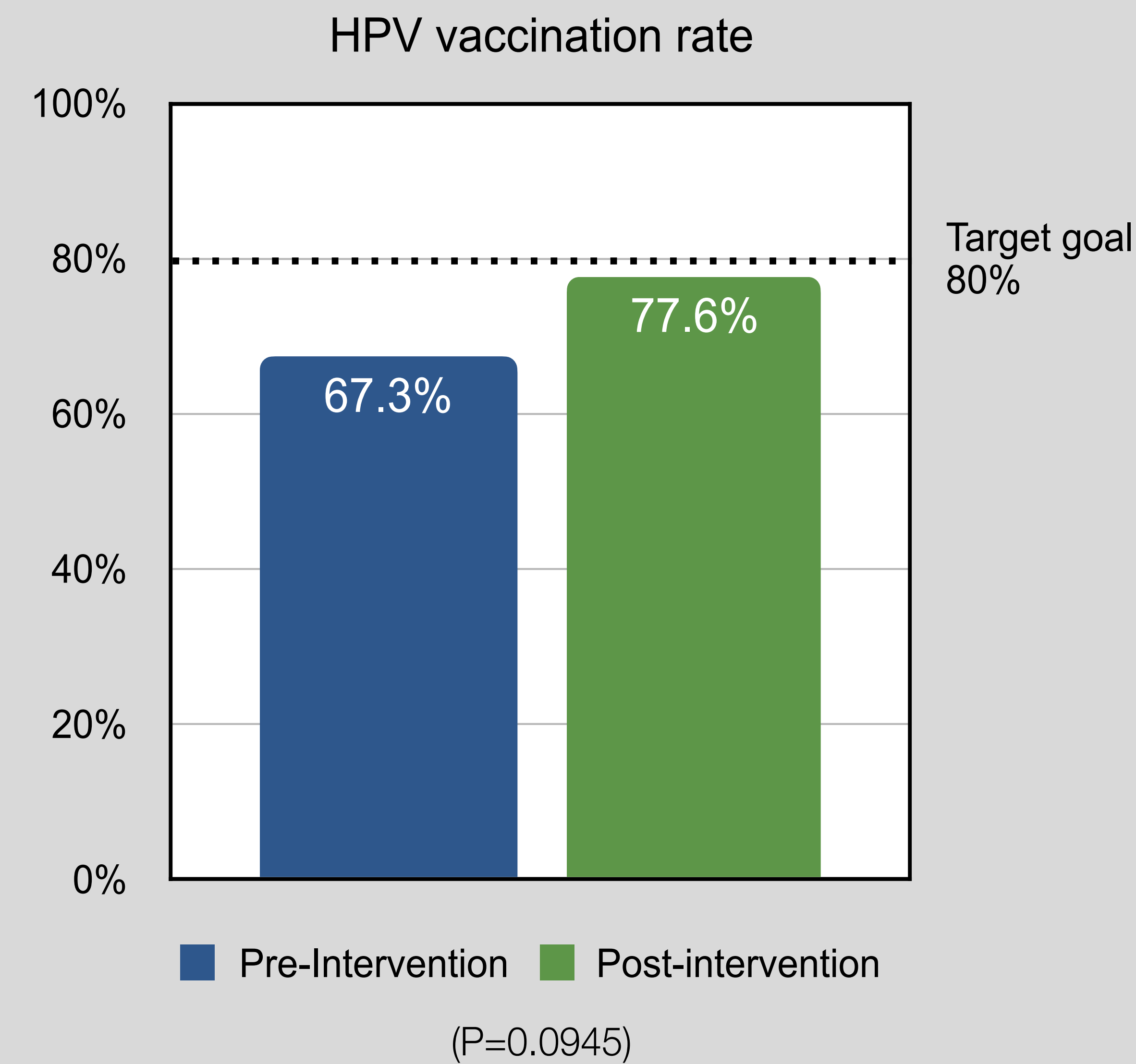
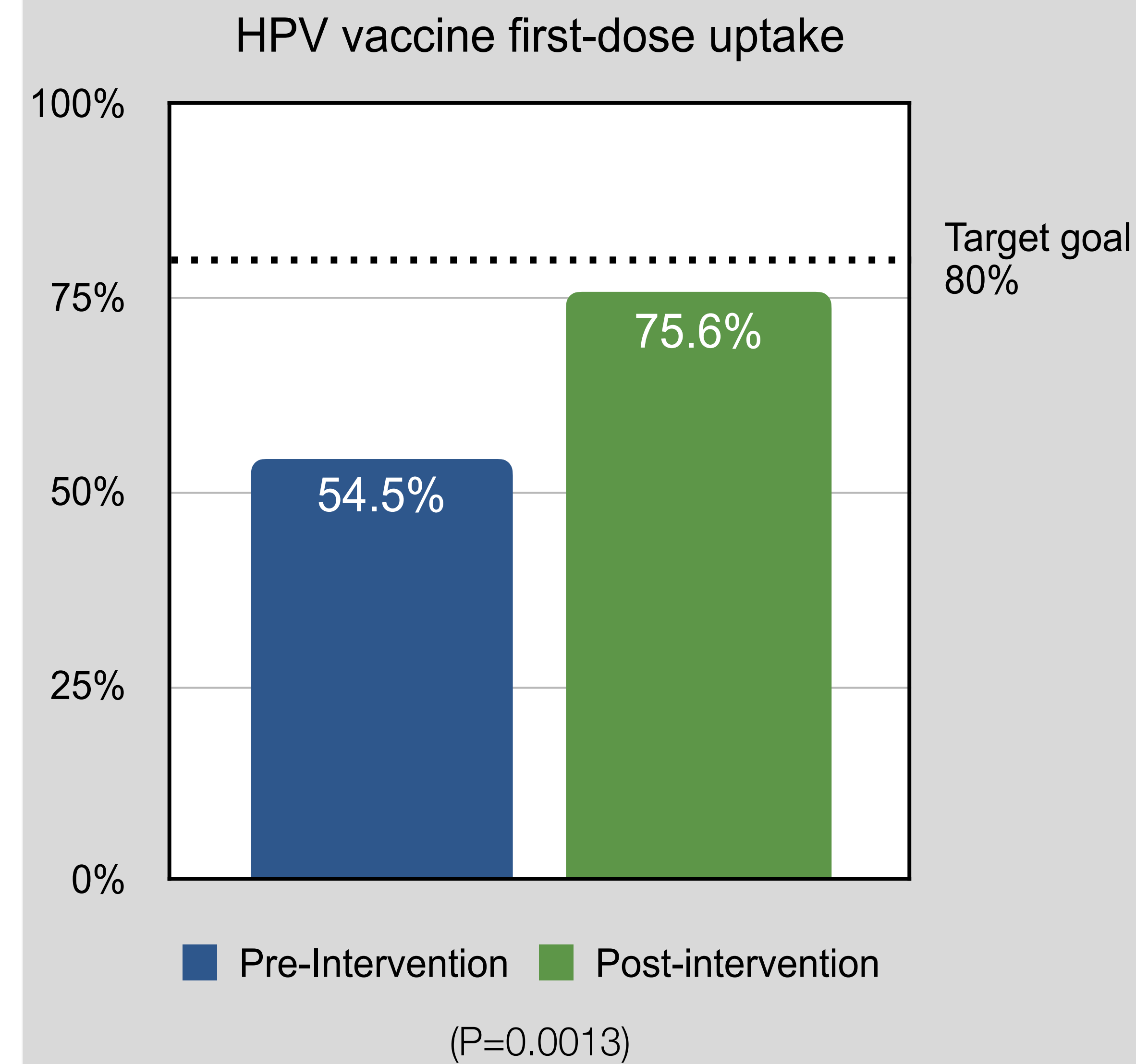
PROJECT PURPOSE

- Increase HPV vaccination rates 9-13-year-olds when completion is more likely, HPV exposure is less prominent
- Adolescents often become sexually active as teens, increasing their risk factors for HPV-related disease
- Goal of completing HPV series by age 13, meets HEDIS measure guidelines
- Improve vaccination rates, meet Healthy People 2030 HPV goals
- Project aims to evaluate impact of pre-appointment messaging with HPV vaccine Vaccine Information Sheet (VIS)
- The PICOT question is: Does implementing a QR code linking to the CDC VIS, sent via text message to parents of 9-to-13-year-old children before their appointment, improve HPV vaccination rates in 12 weeks compared to the 12 weeks preceding implementation?

MODEL/NURSING THEORY

- Nola J. Pender's Health Promotion Model (HPM) used as the framework for quality improvement project
- HPM suggests people more likely to engage in health promoting activities supported by respected influencers
- Interventions integrated with technology give parents knowledge about HPV vaccines before appointment.
- In conjunction with HPM, the intervention leads to parental knowledge of provider expectation. Support of the vaccine encourages participation in their health and wellness.

RESULTS



METHODS

Subjects (Participants)

- 9 to 13 year-old male and female adolescent patients

Setting

- Pediatric primary care in a community health clinic setting

Instruments/Tools

- HPV vaccine uptake for early adolescents pre- and post-intervention
- One sample test of proportion

Intervention and Data Collection

- EMR data extracted to evaluate percent of 9-to-13-year-olds receiving the HPV vaccine 12-weeks preceding intervention
- Vaccine eligibility determined (includes incomplete series, subsequent dose due, well child visit type, afebrile)
- Project intervention: text message with HPV VIS sent to the parent/guardian prior to visit; follow up at visit; survey assessing impact of message on decision to vaccinate
- Parent notified children over 9-years-old may be eligible to receive HPV vaccine at upcoming visit.

DISCUSSION

- Sustainable intervention to prepare families prior to the visit
- Vaccine schedule requires second dose 6-12 months after first in two-dose series for this age group; making completion rates related to the increased first-dose uptake unavailable during study period. Further study needed.
- Increased series completion and vaccination rates were observed during study period
- First dose uptake increase during study is statistically significant, further study is needed to assess effects on overall vaccination rates
- Provides parental awareness, opportunity to gather questions
- Opens discussion for provider at visit
- Utilizing technology to improve HPV vaccine uptake may be generalizable to other vaccines
- Viable method to reach target goals

IMPLICATIONS FOR ADVANCE PRACTICE NURSING

- Advanced Practice Registered Nurses (APRN) impact health promotion throughout the lifespan, supporting appropriate vaccine schedules impacts future population health
- The HPV vaccine is a primary prevention measure against HPV-related cancers.
- The project provides another opportunity for APRNs to improve vaccination rates, prevent future disease.
- APRNs can utilize this data to meet guidelines required by insurance plans, improving reimbursement,
- APRNs can use this data to improve HPV vaccination rates to meet Healthy People 2030 goals.
- The project provides support for further studies on use of technology integrated alerts for health prevention or management of chronic disease



REFERENCES