

Improving Human Papilloma Virus (HPV) Vaccine Uptake in College-Age Students at a Large Public University in the United States

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Purpose

Conduct an evidence-based quality improvement project to increase HPV vaccine uptake among eligible college students, as part of a longitudinal project to increase HPV vaccine coverage to $\geq 80\%$

• 42.3% of eligible Floridians up-to-date on HPV vaccine

Objectives:

- Increase vaccine uptake by 10% from the January 2019 event
- Increase uninsured student vaccine uptake to 80% of Department of Health (DOH) supplied vaccines
- Increase follow-up vaccine uptake by 10% from the January 2019 event

Background

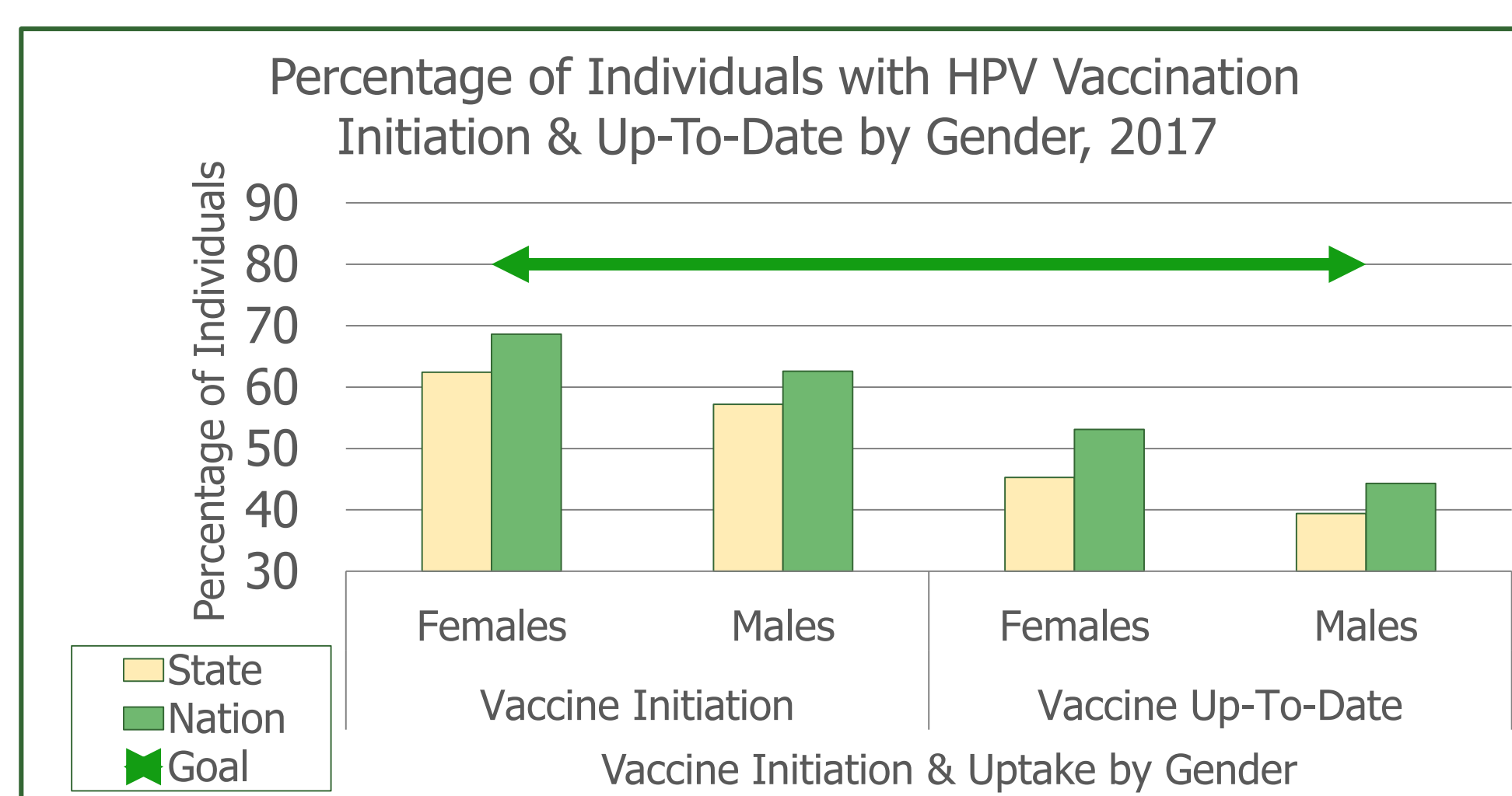
14 million new HPV infections annually
 • 49% of new cases in individuals 24 years or younger
 • Florida 4th has highest HPV-related cancer rate in United States

10% of HPV infections are not resolved
 • 25% of Americans either are asymptomatic carriers, develop genital warts, or develop HPV related cancer

Gardasil-9 vaccine is > 97.9% effective against 9 strains
 • CDC endorses all persons ages 11-26 receive series
 • FDA approved use in through age 45 in October 2018

Healthy People 2020 goal: $\geq 80\%$ coverage; need for herd immunity

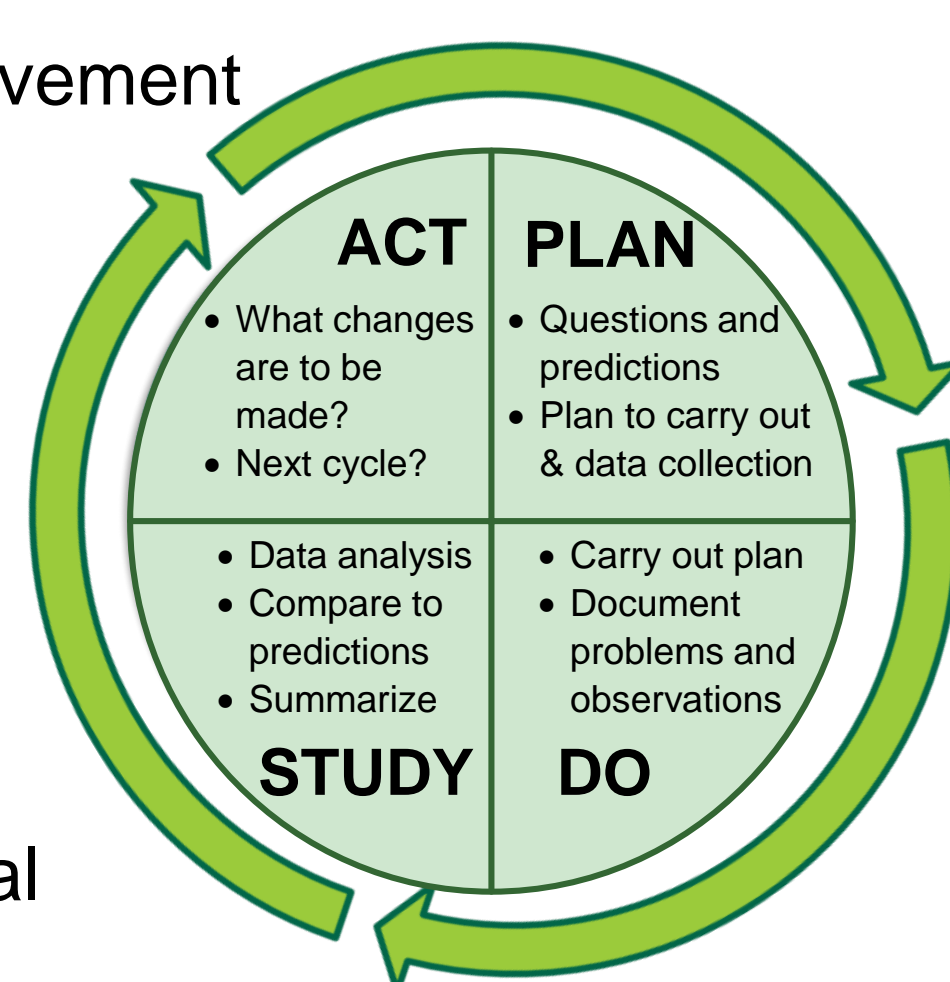
• Series completion rates around 50% nationally
 • Florida's coverage is below national average and goal



Framework

Institute for Healthcare Improvement
 Plan- Do-Study-Act

- Quality improvement through incremental changes.
- Develop evidence-based plan to address need
- Plan implementation
- Results evaluation
- Identify and apply additional changes



Review of Literature

PLAN

PICOT: Among students at the University, will an evidence-based campus outreach education campaign improve HPV vaccination uptake during the campus vaccine drive?

Evidence evaluation: Applying *John Hopkins Nursing Evidence-Based Practice: Model and Guidelines*

- Studies included: n=10, each rated A, high quality
 - Level II evidence (quasi-experimental studies), n=2
 - Level III evidence (non-experimental studies), n=8

Key themes:

- **Parent or medical personnel recommendation:**
 - Both influence healthcare decisions
 - Almost three-quarters of college-age males report willingness to vaccinate if recommended by healthcare provider
 - One study revealed 80% of unvaccinated report no provider HPV recommendation

Knowledge and beliefs

- Decreased vaccination intent/uptake associated with:
 - Lack of understanding of HPV transmission
 - Minimal insight of associated risks
 - Misconception not needed until sexually active
- Increased vaccination intent/uptake associated with:
 - Perceived risk to self or loved ones
 - Remorse related to virus transmission
 - Perceived social acceptance
 - Education and awareness campaigns
 - Barrier removal (convenience, accessibility)

Convenience

- Half of individuals who initiated, but were not up-to-date on HPV vaccine reported convenience as barrier

Proposal: Join education addressing evidence with free vaccine event and highlight convenience/ accessibility

Methods

DO

Setting: Large, public, metropolitan 4-year university

Participants: Volunteers, enrolled at University, 18-26 years, who need HPV vaccine

Design: Two-part education program

- Outreach education table
- Free screening of documentary about HPV and cervical cancer, *Someone You Love*, in partnership with the DOH

Data: Two anonymous surveys based on the *Kirkpatrick Model* and de-identified statistics from HPV vaccine drive

Analysis: Descriptive statistics generated with MS Excel



Results

STUDY

Three measurable objectives of the project were exceeded

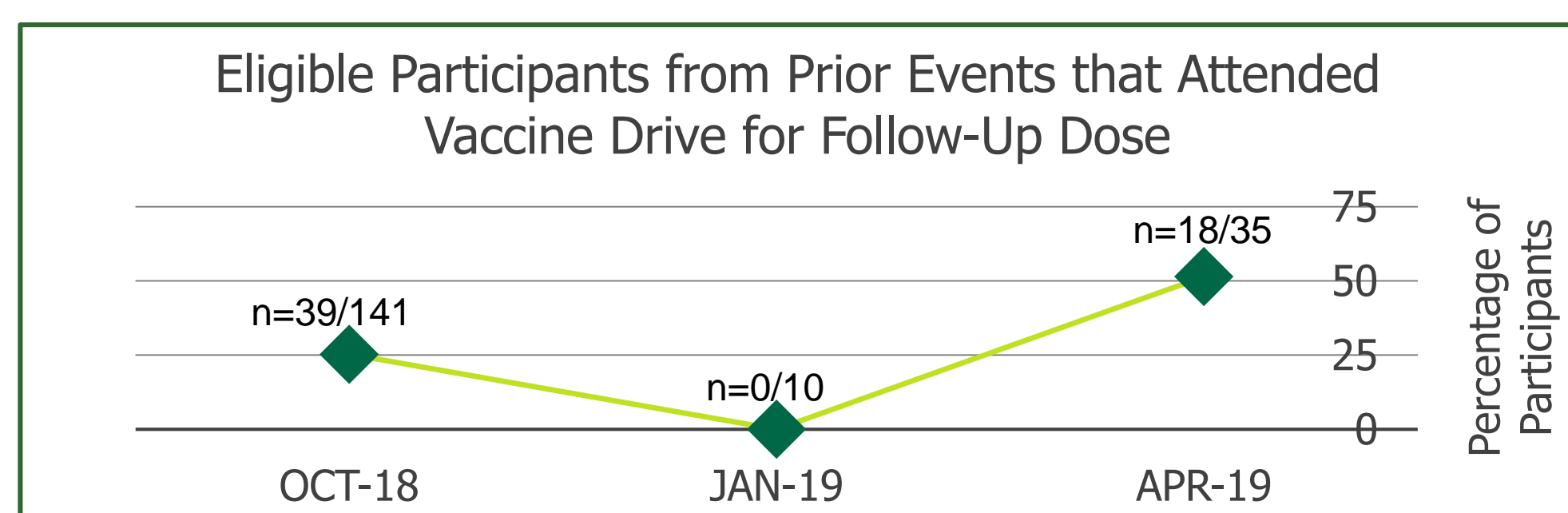
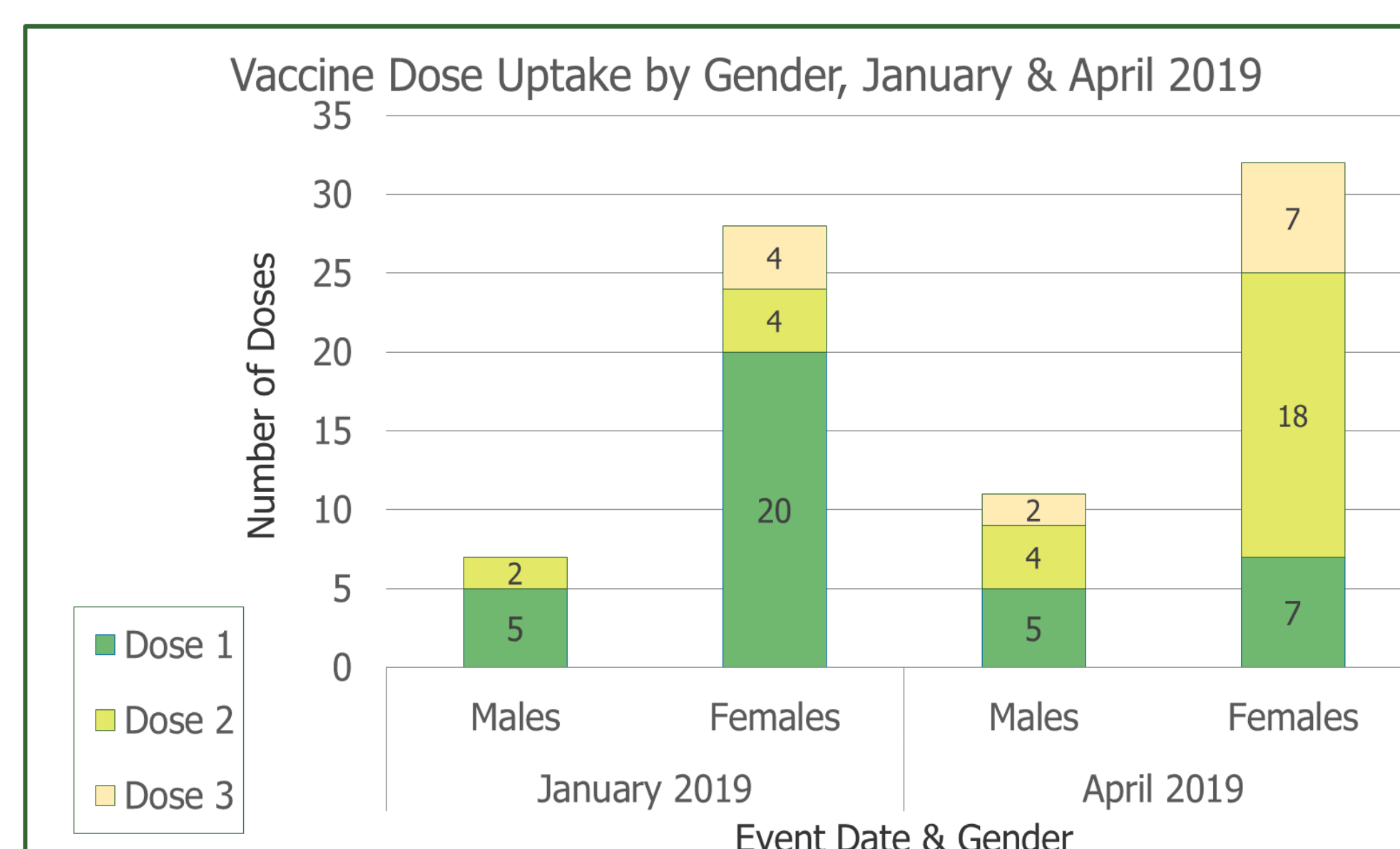
- Vaccine **uptake increased by 22%**
- **86% of the available HPV vaccines were utilized**
- **Follow-up doses** accounted for 72% (n=31) of doses given, representing a **310% increase**

Reported program participation: 84% (n=37),

- **86% (n=32) stated education led them to get vaccine**
- Mode scores for education relevance (n=19) and satisfaction (n=29) was "very" for both measures
- 16% (n=6) reported education was somewhat relevant
- 22% (n=8) eight reported being somewhat satisfied
- Information amount rated "just right" by 97% (n=36)

Interim survey (n=44), participant recommendations:

- Event types: Health fairs (n=18), Education tables (n=17)
- Time of day: 11a-2p (n=25), 2p-5p (n=11), 5p-7p (n=11)
- Days: Wednesday (n=15), Tuesday (n=14), Friday (n=13)
- Suggestions: Increase advertising, engage social media, provide outreach in high traffic areas (library, recreation center).and/or at regularly scheduled events



Discussion

STUDY(cont.)

Individuals new to a vaccine event comprised 58% (n=25) of participants at the April 2019 vaccine drive.
 • Only source about vaccine event was either the HPV outreach table at the student center or SHS

Repeat participants comprised 42% (n=18) at April 2019 drive (51% of eligible returnees)
 • No repeat participants January 2019 (n=0/10 eligible)
 • Appointment reminders sent for April event

Results comparison:

- McCutcheon et al. (2017) saw 12% increase in HPV vaccine uptake after presentation to college students
- 22% increase in HPV vaccine uptake between the January and April vaccine events
- One possible explanation: proximal time of vaccine event relative to the HPV outreach education table

Coordinators' reflections:

- Repetitive weekly traffic on same day as same site
- Records check augmented vaccine status awareness

Recommendations

ACT

Continue:

- Education outreach table
- Vaccine record checks at education outreach table
- Appointment reminders at time of vaccination
- Phone reminder call to make appointment
- Text appointment reminder

Improvements:

- Vary table locations and times
- Utilization of social events
- Add education outreach events on Fridays

Additional considerations:

- Volunteers to input vaccine records in state database
- Wait-list for events to call in if cancellations
- Development of a route for anonymous questions

Limitations

Lack of attendance for the educational documentary

Competition for student interest with multiple rotating retail and service entities within and around the student center

Project and vaccine event held after Spring Break and during midterms which may have caused schedule conflicts

References



Available via QR code or upon request

