

Process Evaluation of a Catch-up HPV Vaccination Program Among College Students Attending Large Public University in the Southeastern United States

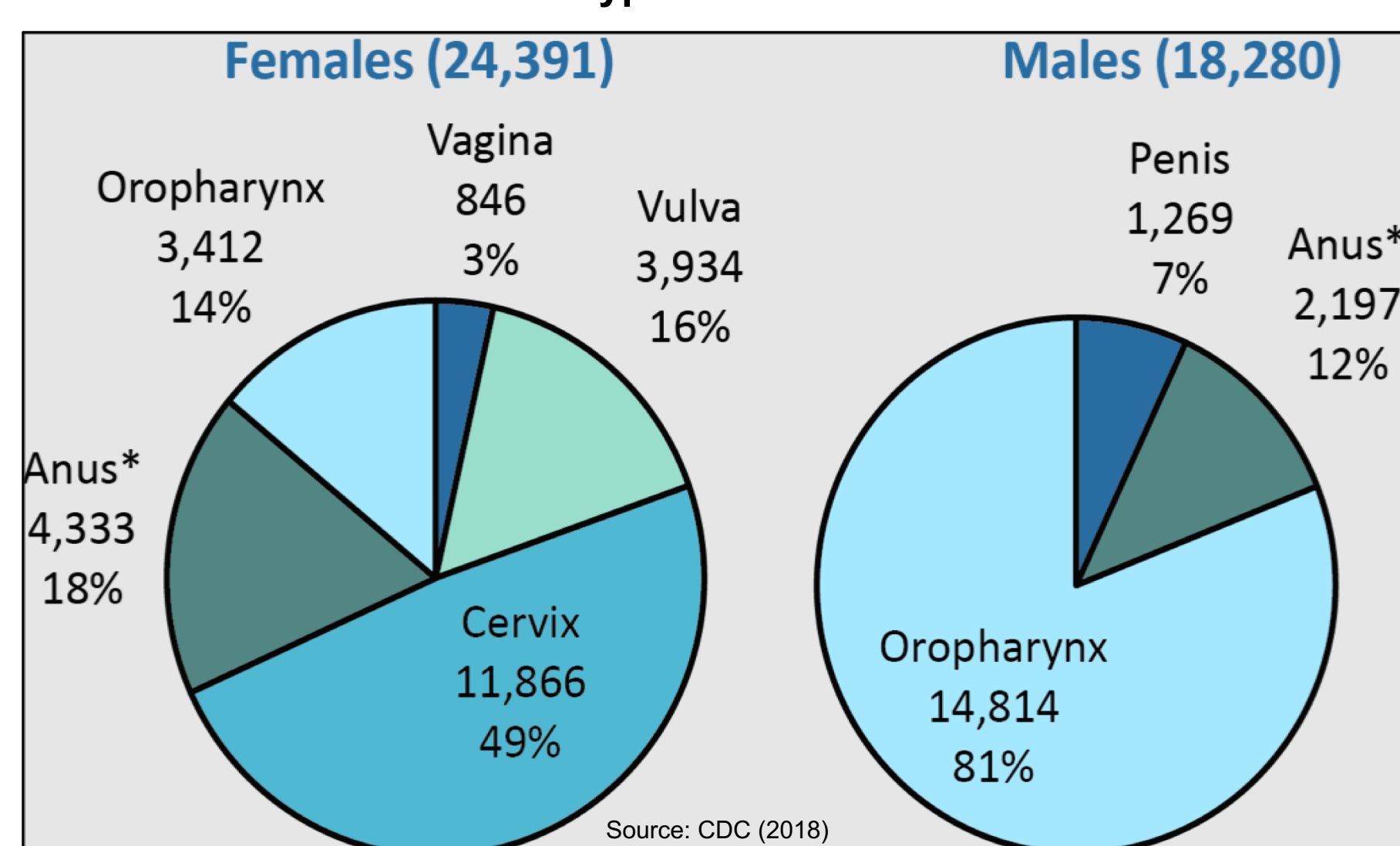
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Purpose

- To conduct a process evaluation of a quality improvement (QI) initiative to promote the use of Human papillomavirus (HPV) vaccine among college-aged catch-up population at a large public university in the Southeastern U.S., and to better understand the feasibility and challenges of such interventions.

Background

Annual rate and number of new HPV-associated cancer cases by sex and cancer type in the United States



- HPV-associated cancer incidence rates ranged by state from 7.9 per 100,000 (Utah) persons to 15.3 (Kentucky). In Florida, 14.27/100,000 people develop HPV-associated cancer each year.
- Healthy People 2020 HPV vaccination rate goal of 80% for females and males by 13 to 15 years of age.
- HPV vaccines are proven to prevent genital warts and some types of HPV-related cancers, yet they are considerably underutilized.
- Common barriers to low HPV vaccination completion include lack of knowledge, cost, and forgetfulness about subsequent doses.
- Among females and males aged 19-26 years who had not received HPV vaccination prior to age 19 years, 8.6% and 2.7% reported receiving their 1st dose of HPV vaccine at age 19-26 years, respectively.
- In 2017, 59% of college-aged students reported receiving vaccination against HPV.
- A Southeastern U.S. University has partnered with the local County Department of Public Health (DOH) to increase provision of HPV vaccines at the Student Health Center.
- 18-26 college-aged group is a significant catch-up vaccination population as this is a period for autonomous decision-making, high health care utilization, and other recommended prevention strategies.
- Total economic burden of preventing and treating HPV-related disease is estimated to be about \$8 billion/ year.

Method

Design

- Process evaluation of a QI initiative, utilizing the Florida State Health Online Tracking System and self-administered paper-and-pencil-questionnaire post-vaccination.

Setting

- Student health services (SHS) located at a large public Southeastern U.S. University in partnership with the local County DOH.

Sample

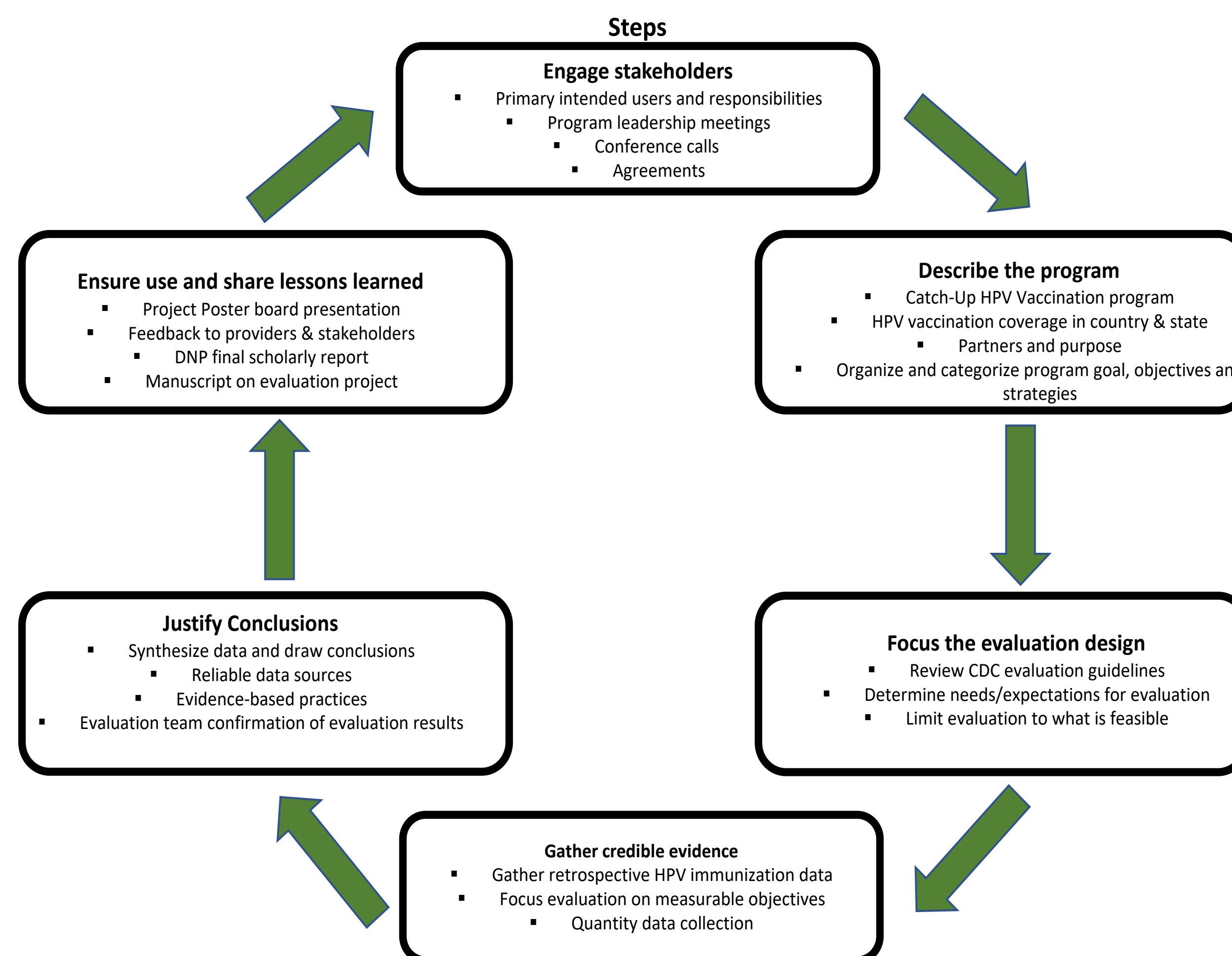
- Convenience sampling.
- College students aged 18-26 years who attended the University and voluntarily received at least one dose of an HPV vaccine from the campus student health center on March 28, 2018 (n=175).

Outcome measures

- HPV vaccine completion.
- Adherence of recommended HPV vaccine dose schedules.
- Patient satisfaction.

Program Evaluation

Centers for Disease Control and Prevention Framework for Program Evaluation



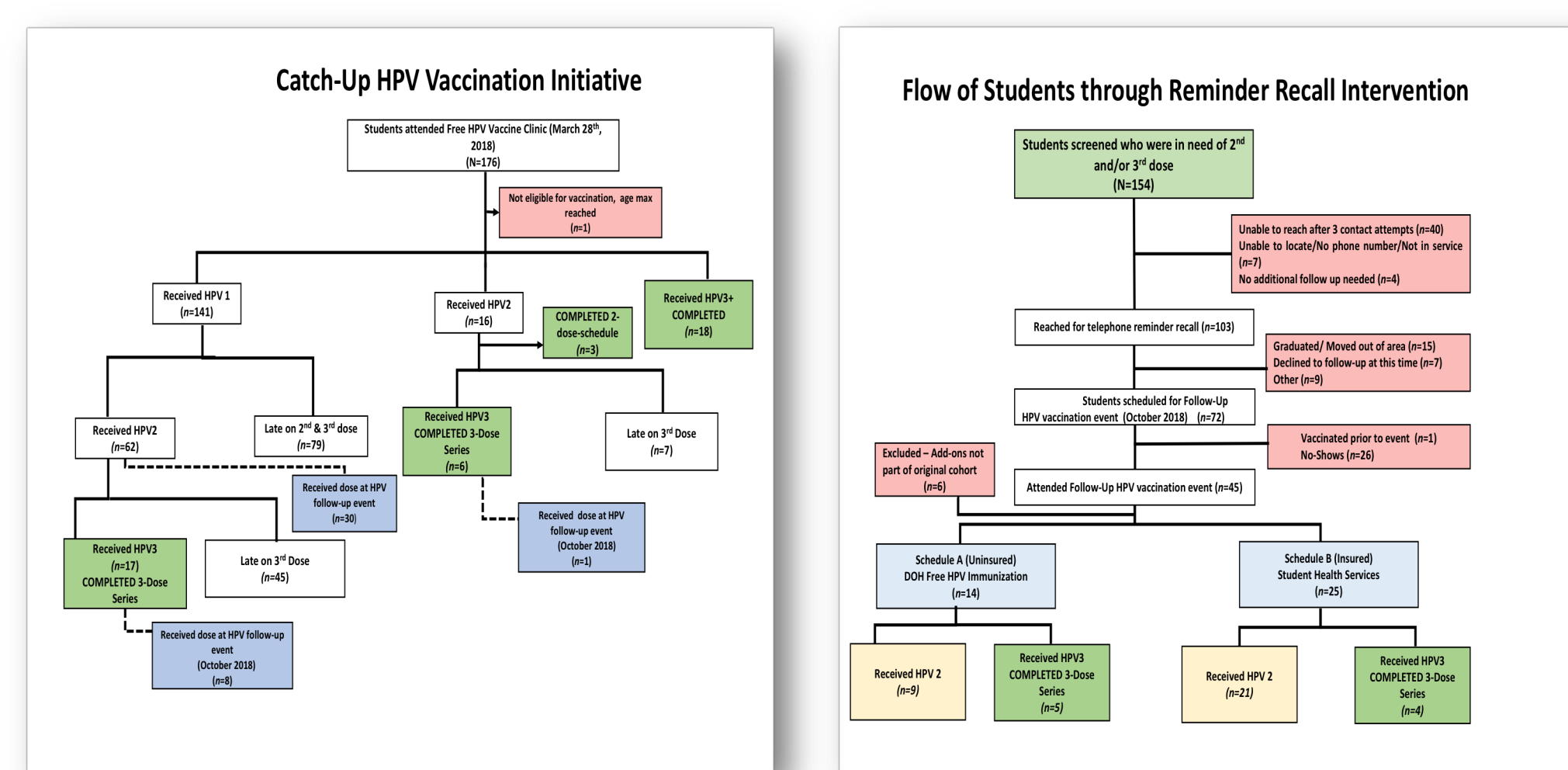
Adapted from CDC MMWR 1999;48 (No. RR-11)

Data analysis

- From August to October 2018, 175 state immunization identifiers (IDs) were reviewed utilizing the State Health Online Tracking System to assess immunization status and adherence to HPV vaccination guidelines.
- Descriptive statistics analyzed mean, frequency and percentages of desired variables. In Microsoft Excel, the formula functions were used to calculate categories and transform data into charts.
- Mean age of participants was 22.3 years (range 18-26 years).
- Participants were primarily female (68.5%), and the majority self-identified as White (28.5%).

Reminder-Recall Intervention

- From September to October 2018, 103/154 targeted students (67%) were contacted for telephone reminder-recall.
- 38% of eligible students (n=39) attended follow-up event.



Results

HPV vaccine initiation

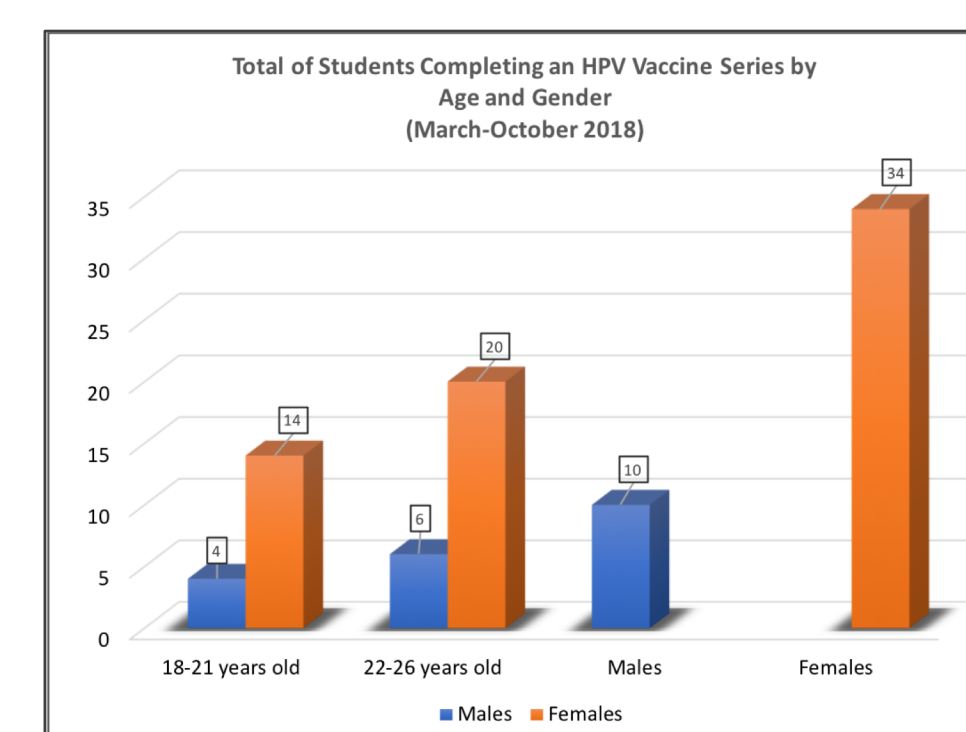
- 80% (n=141) of the full sample received their 1st dose of the HPV vaccine at the First Free HPV vaccination event (March 28th, 2018).
- 7.4% (n=13) received their 2nd dose.

Second and/or Third Dose of Vaccine

- All 141 patients that received 1st dose were eligible for the 2nd dose of the vaccine at the time of the initial immunization records review
 - 19% (n=27) had completed the 2nd dose (17 females, 10 males).
 - 15.4% of those who received HPV 2 had completed the 3rd dose. All males.

HPV vaccine completion

- 15% (n=23) completed the 3-dose vaccine series within the recommended schedule.
 - It is noteworthy that 7 students (7/23) completed series and two received 2nd dose after received phone reminder but before follow-up event.
- 85% (n=131) had not completed the vaccine series as of October 2018.
- 25% (n=44) of the full sample completed an HPV vaccine series.
 - 7 students received 4th dose of HPV which was considered extraneous and unnecessary for completion of the indicated antigen schedule.



Satisfaction Survey

- 100% participants who attended follow-up event completed survey.
- 96% reported to be very satisfied with the intervention and most reported that the reminders helped them to remember to get their subsequent vaccine doses.
- Satisfaction with the reminder recall intervention (96%) and decision to receive HPV vaccine (93%) was high.

References

- See available handout for references.

Discussion

- Concluded it is feasible to establish a catch-up HPV vaccination program at the local University.
- Process evaluation demonstrated that there were a significant proportion of college students eligible and willing to participate in the catch-up HPV vaccination program.
- Strengths: Initial high response rate (n=176) and low-cost electronic reminder-recall intervention.
- Findings suggest that implementation of reminder-recall systems can produce measurable improvements in factors related to HPV vaccine completion and adherence among U.S. college students.
- Identified two topics that likely require more explanation in vaccination program materials: vaccination cost and insurance coverage.

Limitations

- Absence of baseline catch-up HPV immunization rates and satisfaction data.
- In determining feasibility, it was noted that there is a lack of standardization in best practices to ensure vaccine series completion.
- In completing HPV vaccine series, there were difficulties with tracking and appointment scheduling.
- HPV vaccine funded by federal programs vs. private insurance.

Recommendations

- Schedule the 2nd dose at the time of 1st vaccination and assess feasibility of implementing standing-orders for 2nd and 3rd doses.
- Develop a protocol for pre-screening patients prior to immunization for staff to undertake proper assessment of eligibility for HPV vaccination.
- Implement evidence-based practices that have been demonstrated to improve vaccination coverage.
- More intensive annual program evaluation and updates with greater emphasis on age, sex/gender, and race/ethnicity is advisable.

Implications for Practice

- This process evaluation provides insight on the utility of partnerships to enhance student health centers vaccination processes.
- Developing a partnership between local health departments and university school systems is crucial to success of university/school based-vaccination clinics.
- Potential for additional immunization (QI) projects specifically targeting males.

Acknowledgements

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