Spread Love not Warts

Implementation of a successful HPV vaccine quality improvement program at Salem State University.

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Disclosures

I, Kimberly L. Daly, DNP, have been asked to disclose any significant relationships with commercial entities that are either providing financial support for this program or whose products or services are mentioned during my presentations.

I have no relationships to disclose.

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Objectives

- Identify 3 effective strategies to increase HPV vaccination rates
- Identify common barriers to vaccination
- Explain the rationale for vaccinating youth at ages 11 or 12
- Recognize the CDC recommendations for administering the HPV vaccine to both boys and girls
- Discuss the role of campus health center efforts to increase HPV vaccination efforts on campus
- Identify resources relevant to current immunization practice

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HPV: Background Knowledge

- HPV is the most common sexually transmitted infection
  - 80% of women will be infected by age 50
- Estimated 14 million new cases of HPV annually in U.S. alone which translates to $5-8 billion spent on treatment and prevention
- HPV cancer prevalence reported at @33,000 (U.S.)and 610,000 globally each year
  - 4.8% total worldwide cancer burden

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Sources: CDC, 2013; CDC, 2012; Chesson, et al., 2012; Forman et. al, 2012; Hu, et al., 2008

HPV: Background Knowledge

- HPV infection can result in genital warts and cancer (vulvar, cervical, anal, penile, oropharyngeal)
  - Oropharyngeal cancer rates will surpass cervical cancer by 2020
- Safe, effective vaccine provides protection against most significant and oncogenic strains
- Nationally, only 40.2% of females and 8.2% of males aged 19-26 reported having received at least 1 dose of the vaccine (CDC, 2014)
  - In MA 64% females age18-26 rec. at least one dose. For men age 18-26 in Massachusetts it was 38%.

Sources: CDC, 2014; Chaturvedi et al., 2011, Markowitz et al, 2013; BRFSS, 2014

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9vHPV vaccine

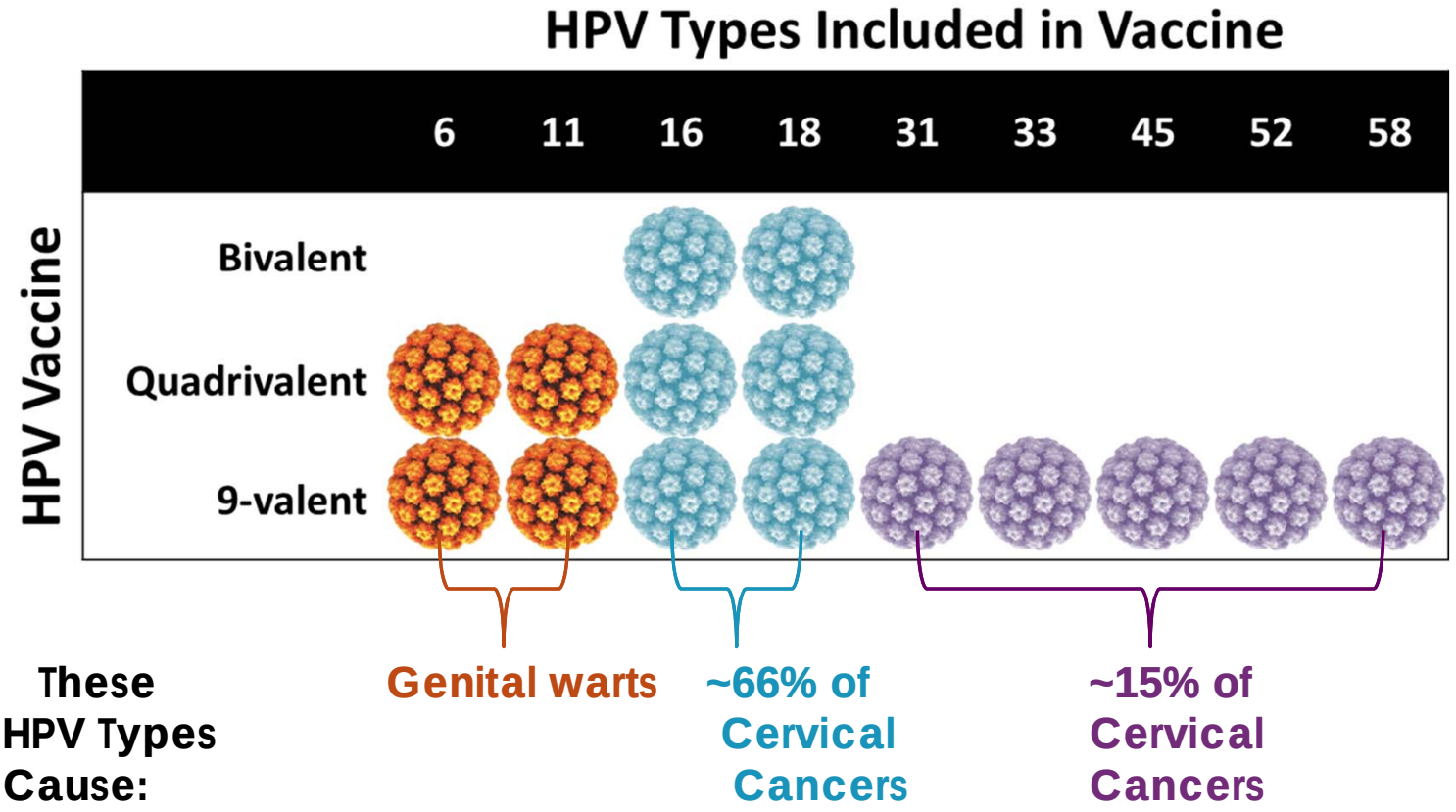
- Virus like particles (VLP) vaccine that targets 5 additional risk types
  - 6, 11, 16, 18, 31, 33, 45, 52, 58
- Available December 2014
  - 3 dose schedule
  - The second dose should be administered 4 to 8 weeks (minimum interval of 4 weeks) after the 1st dose; the 3rd dose should be administered 24 weeks after the 1st dose and 16 weeks after the 2nd dose (minimum interval of at least 12 weeks).
  - Not given during pregnancy
- Most common side effects: pain, erythema, swelling at site

Estimated % of cancers attributed to HPV in the U.S

Cancer	HPV attributable % (95% CI)	HPV attributable 16/18% (95% CI)	HPV attributable 31/33/45/52/58% (95% CI)
Cervical	91 (88-92)	66 (63-69)	15 (12-17)
Vaginal	75 (63-84)	55 (43-67)	18 (11-30)
Vulvar	69 (62-75)	49 (41-56)	14 (10-20)
Penile	63 (52-73)	48 (37-59)	9 (4-17)
Anal			
Male	89 (77-95)	79 (66-88)	4 (1-13)
Female	92 (85-96)	80 (70-87)	11 (6-19)
Oropharyngeal			
Male	72 (68-76)	63 (59-68)	4 (3-7)
Female	63 (55-71)	51 (43-59)	9 (6-15)

Adapted from S. Lett presentation handouts at Dana Farber Cancer Summit November 6, 2015

HPV Vaccine Comparison



CDC, 2015

Updated ACIP Recommendations

Age

- Routine vaccination at age 11 or 12 years*
- Vaccination recommended through age 26 for females and through age 21 for males not previously vaccinated
- Vaccination recommended for men through age 26 who have sex with men (MSM) or are immunocompromised (including persons HIV-infected)

Formulation by gender (assuming availability)

	9vHPV	4vHPV	2vHPV
Females	✔	✔	✔
Males	✔	✔	

*vaccination series can be started at 9 years of age
MMWR 2015;64:300-4

HPV Vaccination is Routinely Recommended

- HPV vaccination is recommended for both females and males ages 11-12 years
  - HPV vaccine series should be completed before the 13th birthday

Routine immunization for 11- and 12-year-olds includes HPV vaccination.
Clinicians should recommend HPV vaccine on the same day and in the same way as the other vaccines for preteens.

MMWR, August 29, 2014, Vo1 63, #RR05

HPV Vaccine Recommendation

Girls & Boys can start HPV vaccination at age 9

Preteens should finish HPV vaccine series by 13th birthday

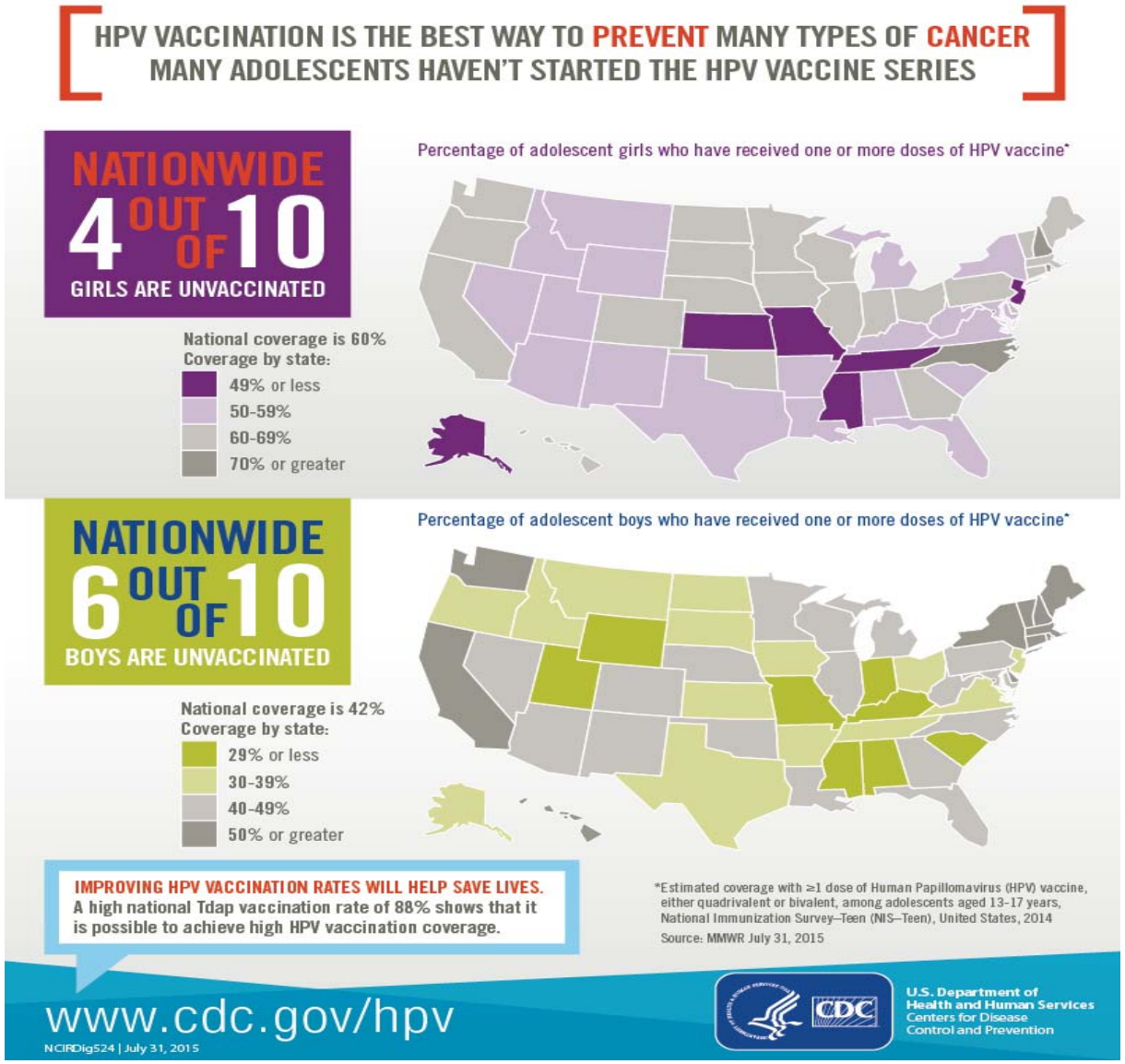
Plus girls 13-26 years old who haven't started or finished HPV vaccine series

Plus boys 13-21 years old who haven't started or finished HPV vaccine series

MMWR 2015;64, 300-4

Evidence-Based HPV Disease Prevention

HPV Vaccine



cdc.gov/hpv

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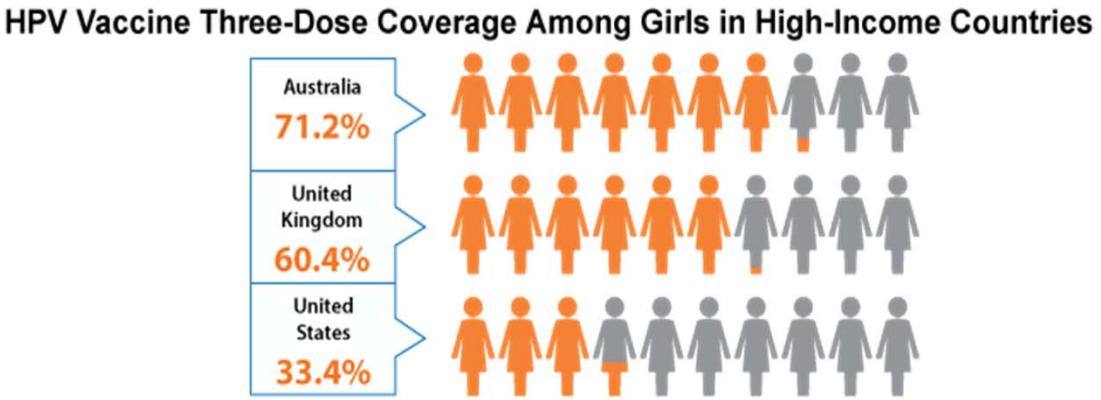
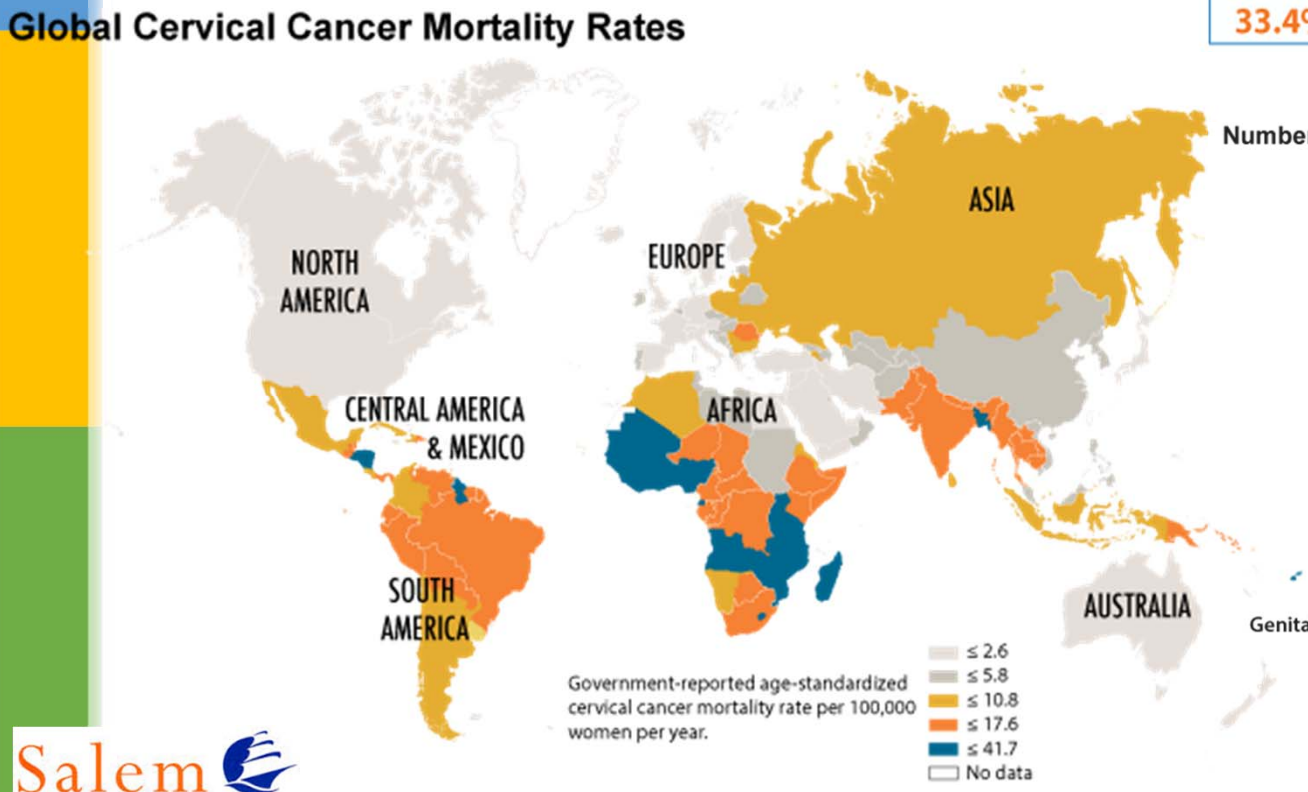
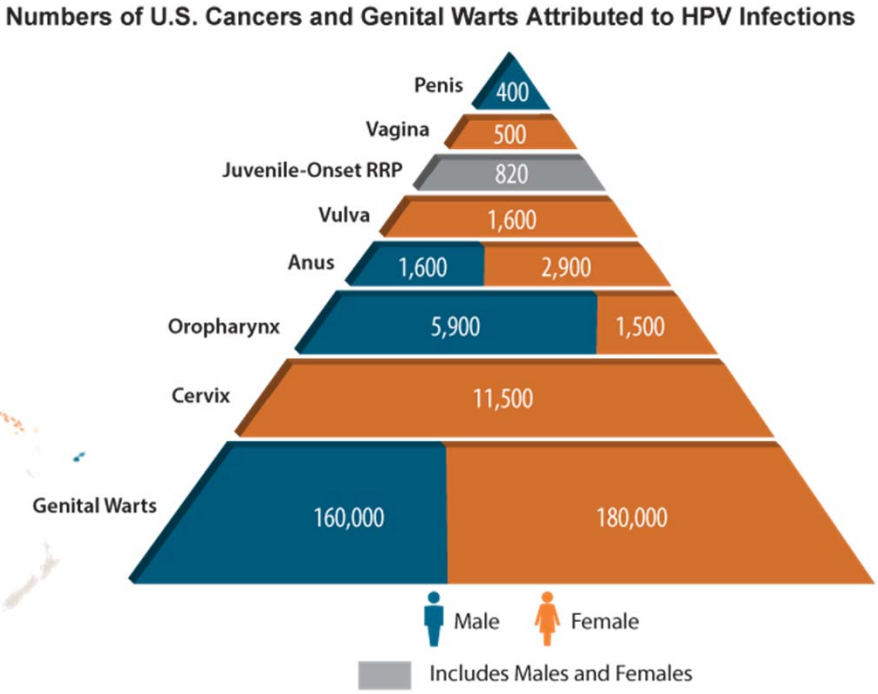
cdc.gov

Global Picture







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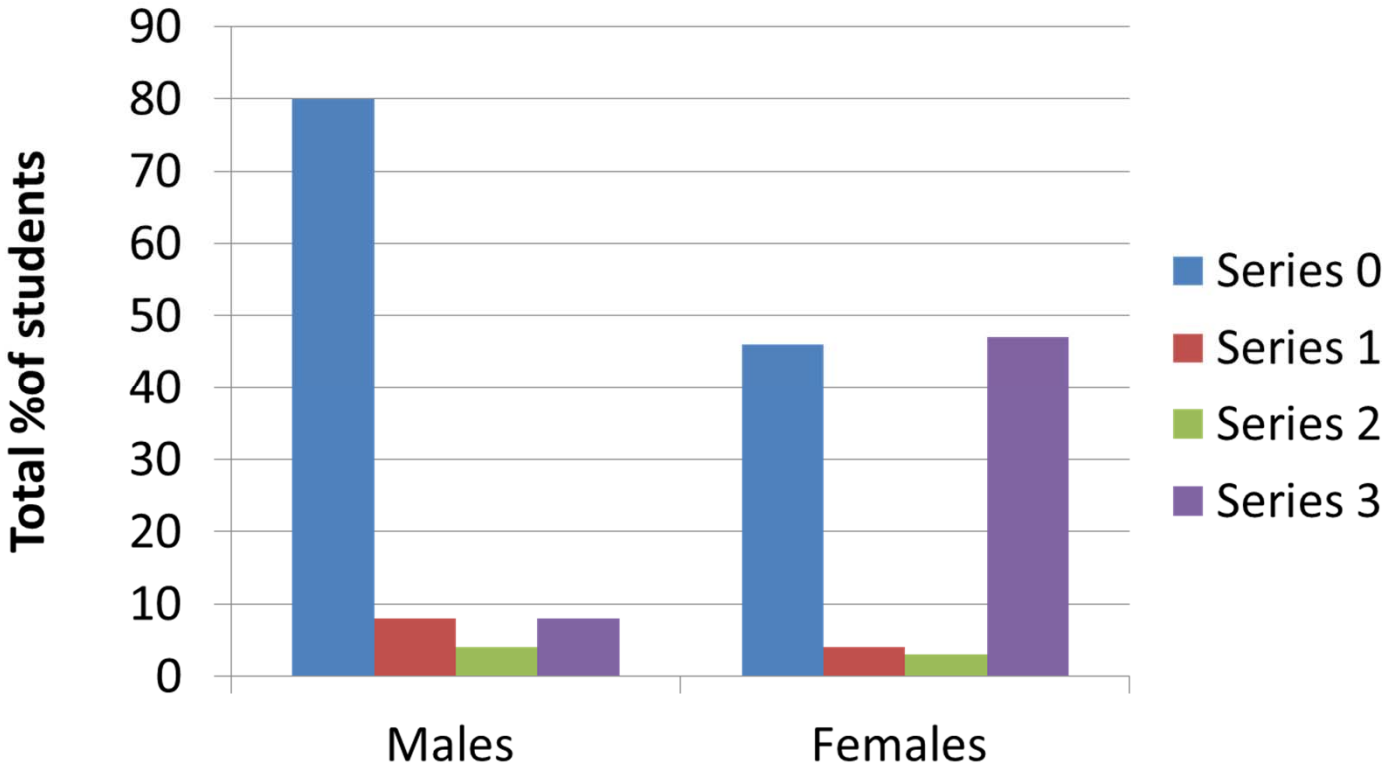
Setting

- Student Health Services employs 4 FT NPs, 2 admin. staff
- 10,000 students enrolled
- 2,500 reside on campus
- 500 international students from 69 countries
- Average 5,000 patient visits per year

Local Vaccine Data



Self-reported HPV vaccine history collected at the student health services, spring semester 2014

Overarching goal-

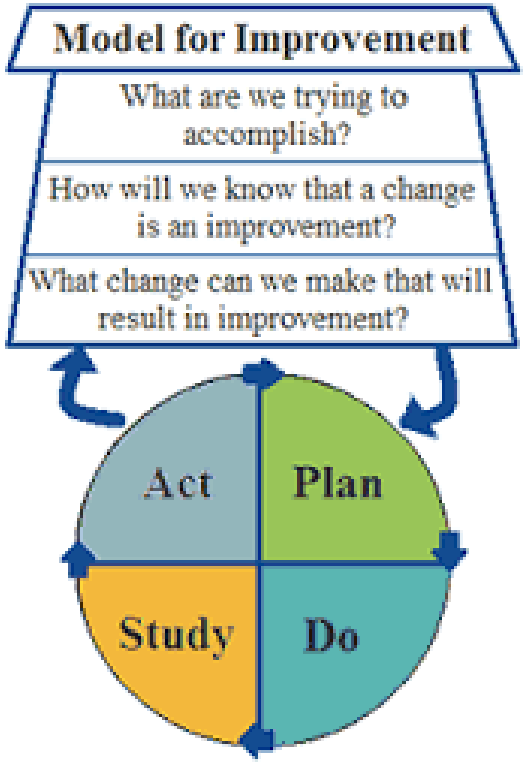
To increase campus Human Papillomavirus (HPV) awareness and vaccination rates in the student population of males and females age 18-26 during the fall semester, 2014.

Model for Improvement

www. ihi.org

Quality Improvement (QI)

Plan-Do-Study-Act



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Inclusion Criteria

- All males and females, aged 18-26, visiting the health services during the 16 week fall semester, 2014, regardless of visit type, with no prior HPV vaccine series completion or medical exemption for vaccination.

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Aims

1. Prevent missed opportunities for providing HPV vaccine during all clinical encounters by utilizing the EHR for providers and appointment reminders for patients.
2. Increase the frequency of HPV vaccine recommendations during all patient encounters
3. Increase community exposure to HPV vaccine awareness and accessibility through multi-component marketing and communication strategies

Objectives

1.1 During the intervention, 80% of all charts will note provider acknowledgement

1.2 During the intervention, 100% of eligible follow up appointments will be scheduled at initial visit.

2.1 During the QI, 80% of all charts meeting inclusion criteria will receive HPV vaccine recommendation.

3.1 ≥50% of vaccine acceptors will report level of somewhat important- very important as motivation for vaccination based on social marketing campus exposure in a feedback survey.

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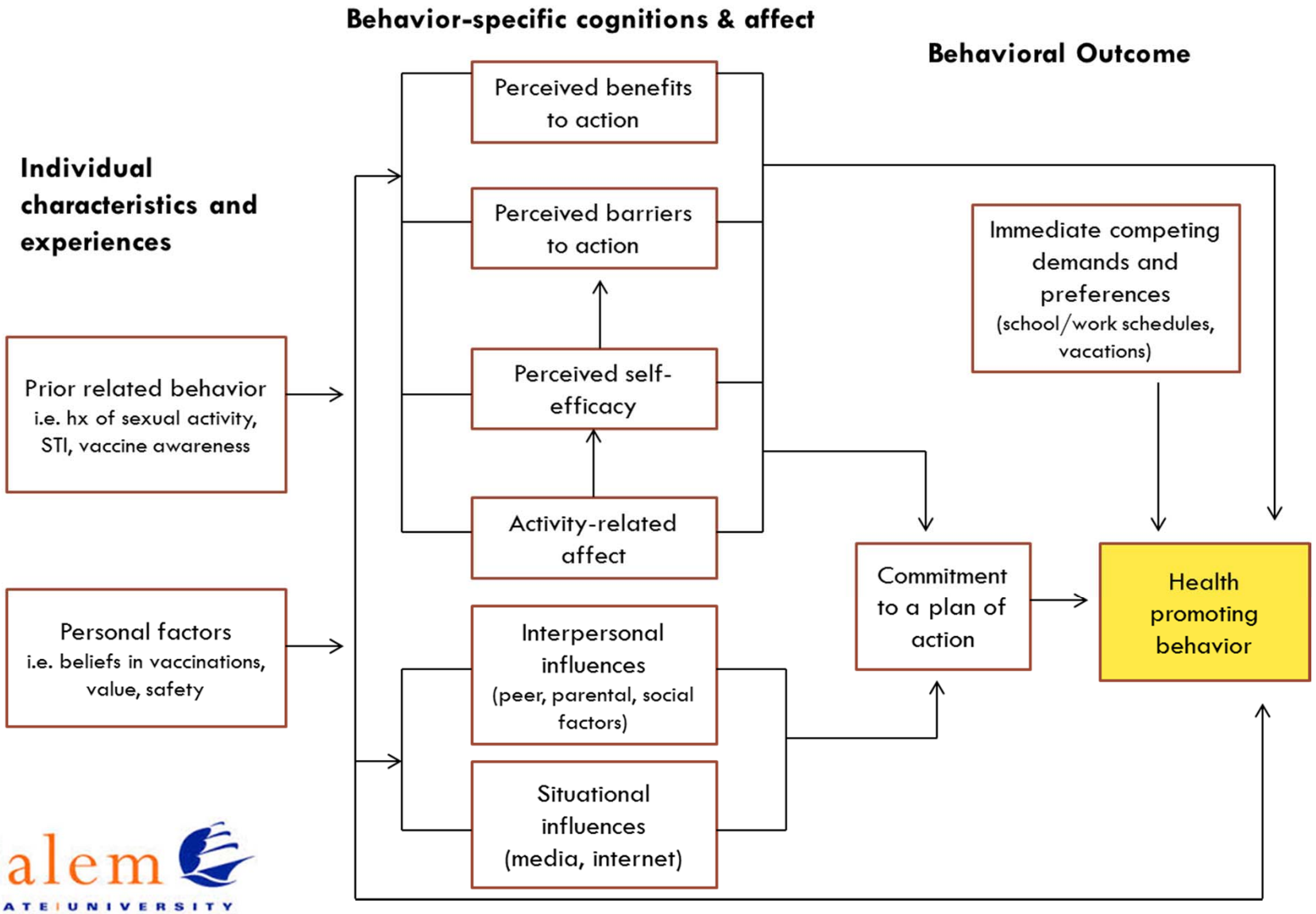
Pender's Health Promotion Model



Source: Pender, Murdaugh, & Parsons, 2011

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5 A's framework: Patient-Provider Communication

- Ask/Assess- Have you completed the HPV series? What concerns do you have?
- Advise- I think the HPV vaccine is important for you and here is why…
- Agree- Shared decision making with patient to vaccinate
- Assist- Provide immunization at time of visit
- Arrange- Schedule follow up and use reminders

Whitlock, et al., 2002

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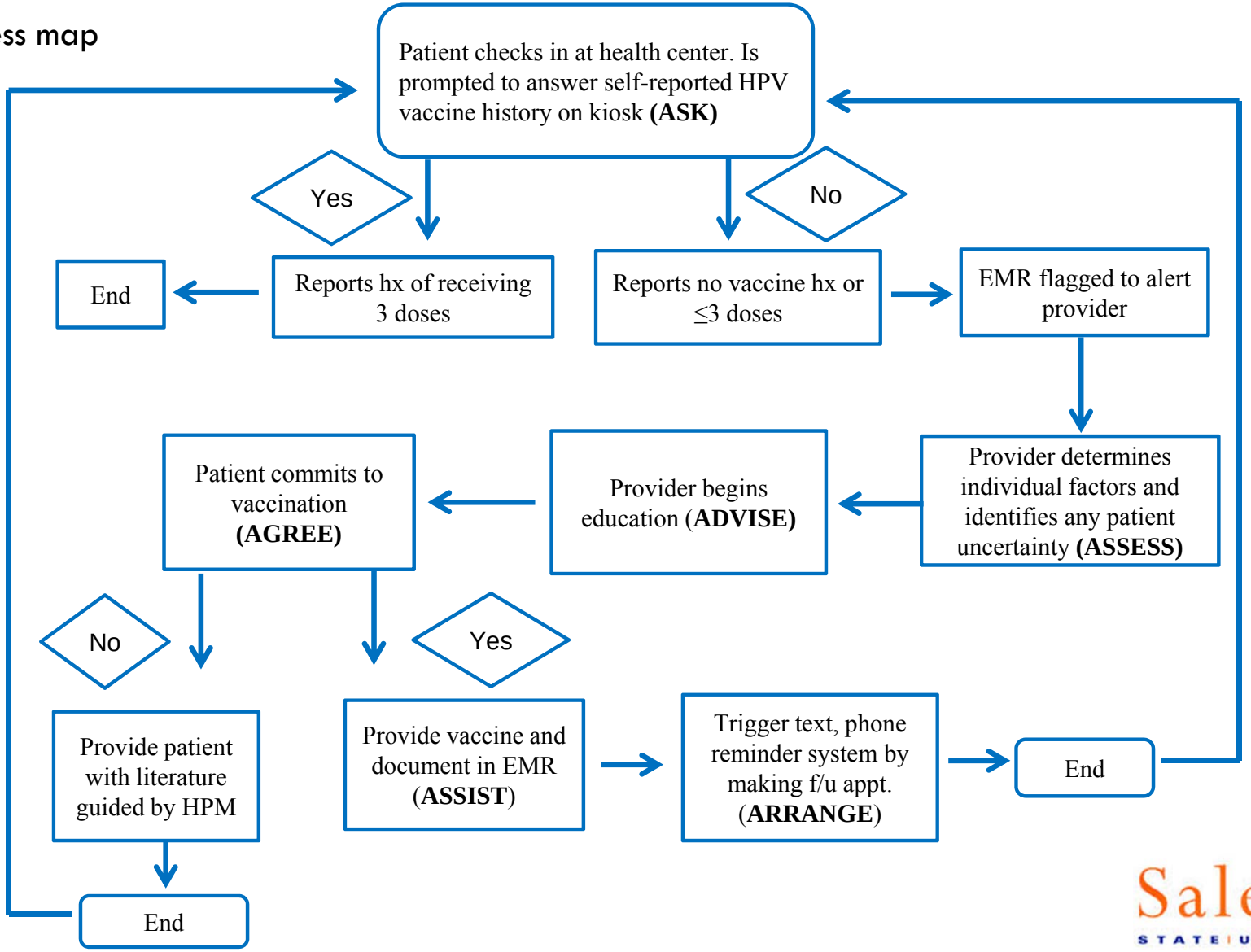
5 A's process map



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Intervention: Acknowledgement and Provider Reminders

- All EHR templates (SOAP notes) edited to include measurable indicators
- Inclusion criteria: aged 18-26, male or female, no documented series completion, no medical contraindication

Objective:

Patient check-in survey and/or immunization history reviewed at or before the visit?

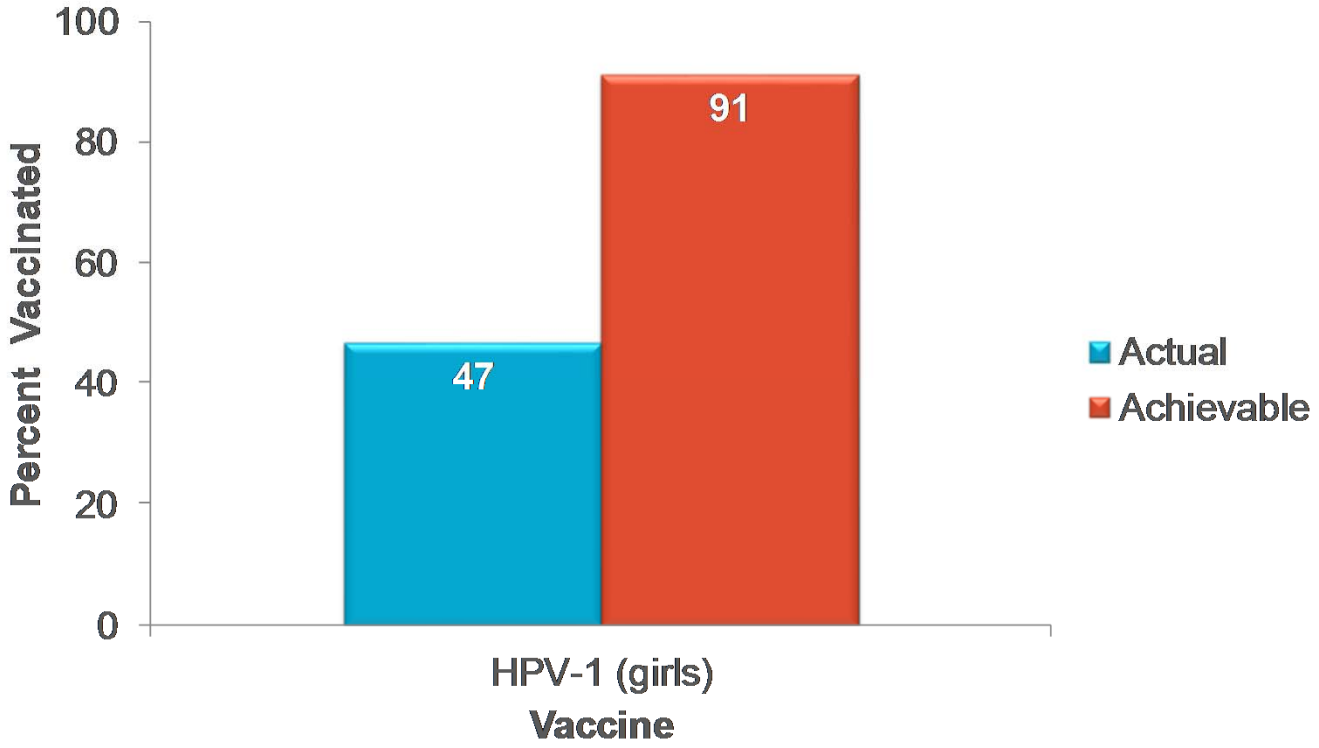
□ Yes □ No

Plan:

Strong HPV vaccine recommendation provided during the visit?

□ Yes □ No □ NA (does not meet inclusion criteria or is medically exempt)

Impact of Eliminating Missed Opportunities by Age 13 Years in Girls Born in 2000



Missed opportunity: Healthcare encounter when some, but not all ACIP-recommended vaccines are given. HPV-1: Receipt of at least one dose of HPV. MMWR. 63(29);620-624.

Strong HPV vaccine recommendation

TIPS FOR COUNSELING COLLEGE STUDENTS ABOUT HPV

Healthcare provider recommendation is one of the most important factors which influence HPV vaccine decision making for college students. Recommending the HPV vaccine series the same way you recommend other immunizations, such as the flu vaccine, can have a huge impact. Start the conversation by saying, "I see that you have not have started/completed the HPV vaccine series. I think these are really important for you and I want to talk to you about why".

Research States	College students' report that receiving a strong recommendation for the HPV vaccine from their health provider is one of the most important factors influencing their vaccine decisions. Failing to provide this recommendation is a missed opportunity, and one of the most commonly cited reasons for not getting the vaccine.
Try Saying	It's important to understand that the HPV infection is one you will almost definitely be exposed to in your lifetime. This is why both men and women should get vaccinated. When the HPV vaccine is given before exposure, it can prevent certain cancers and genital warts. We know that this vaccine is both safe and incredibly effective. That's why I'm recommending that you receive the HPV vaccine today.

Intervention: Patient Reminders

- Subsequent HPV vaccine appointments scheduled at 1st encounter
  - Text reminders sent
  - Email reminders sent
- Spreadsheet to track immunized students. Missed students received
  - Secure email message reminders
  - Phone Reminders

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Intervention: Increase community exposure to HPV awareness and vaccine availability

- Spread Love not Warts campaign
  - Contest: student logo design
  - Marketing, communications, social media
  - Bathroom stall posters
  - Campus outreach
  - Facebook, Twitter
  - SLNW concert

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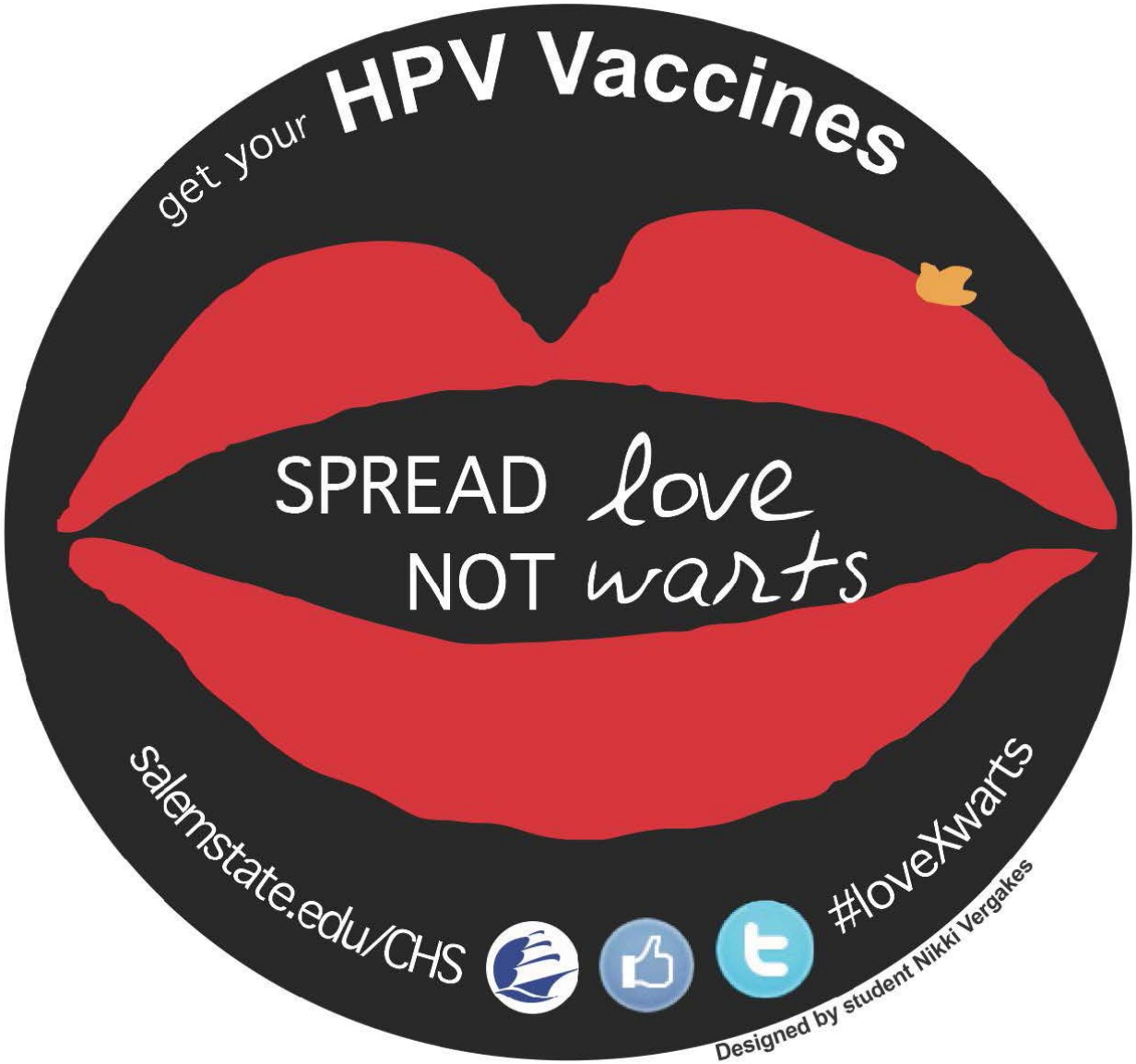

Campus Campaign to increase student awareness

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MANY PEOPLE DON'T KNOW

THAT THEY MIGHT HAVE IT.

LEARN ABOUT THIS COMMON INFECTION.

Human Papillomavirus (HPV)

If you've ever been sexually active, here's what you need to know.

HPV is spread by skin- skin contact during intimate moments. Nearly **every** person who engages in sexual contact with another person during their lifetime will be exposed to HPV. **Most** will have no symptoms. HPV causes genital warts, and more importantly, cancer. A **safe and effective** vaccine can help protect both **men and women** against the most serious types of HPV.

For more information visit the counseling and health services (CHS) website salemstate.edu/chs/26991.php.
To make an appointment for your vaccine visit the student health portal chsportal.salemstate.edu or call CHS at 978.542.6413.

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FACT AT LEAST 70% OF SEXUALLY ACTIVE PEOPLE WILL GET HPV.

TALK TO YOUR HEALTH CARE PROVIDER ABOUT HOW THIS COMMON VIRUS CAN AFFECT YOUR HEALTH.

There are many different types of human papillomavirus (HPV), a common virus. Some types can infect the genital area of men and women. They are passed on by skin to skin contact. Most people who have intimate contact will get genital HPV- and not even know it. Usually, genital HPV is harmless. It has no symptoms. And it goes away on its own. But, genital HPV infection can cause problems such as genital warts and cancers that occur "below the belt." HPV is also the most common cause of oral-throat cancers.

The surest way to prevent HPV is not to have sex. If you decide to be sexually active, limit the number of partners you have. Condoms are not 100% effective in preventing all types of HPV infection. The HPV vaccine has been shown to be both safe and effective in protecting against some of the most serious types of HPV infection.

Both men and women should get vaccinated with the HPV vaccine.
Both men and women should know about the link between HPV and genital warts and cancer.
Women should talk to their health care provider about getting a pap test.
And partners should talk openly about HPV. Spread Love not Warts.

For more information visit the counseling and health services (CHS) website salemstate.edu/chs/26991.php.
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HUMAN PAPILLOMAVIRUS (HPV)

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Bathroom Stall Campaign

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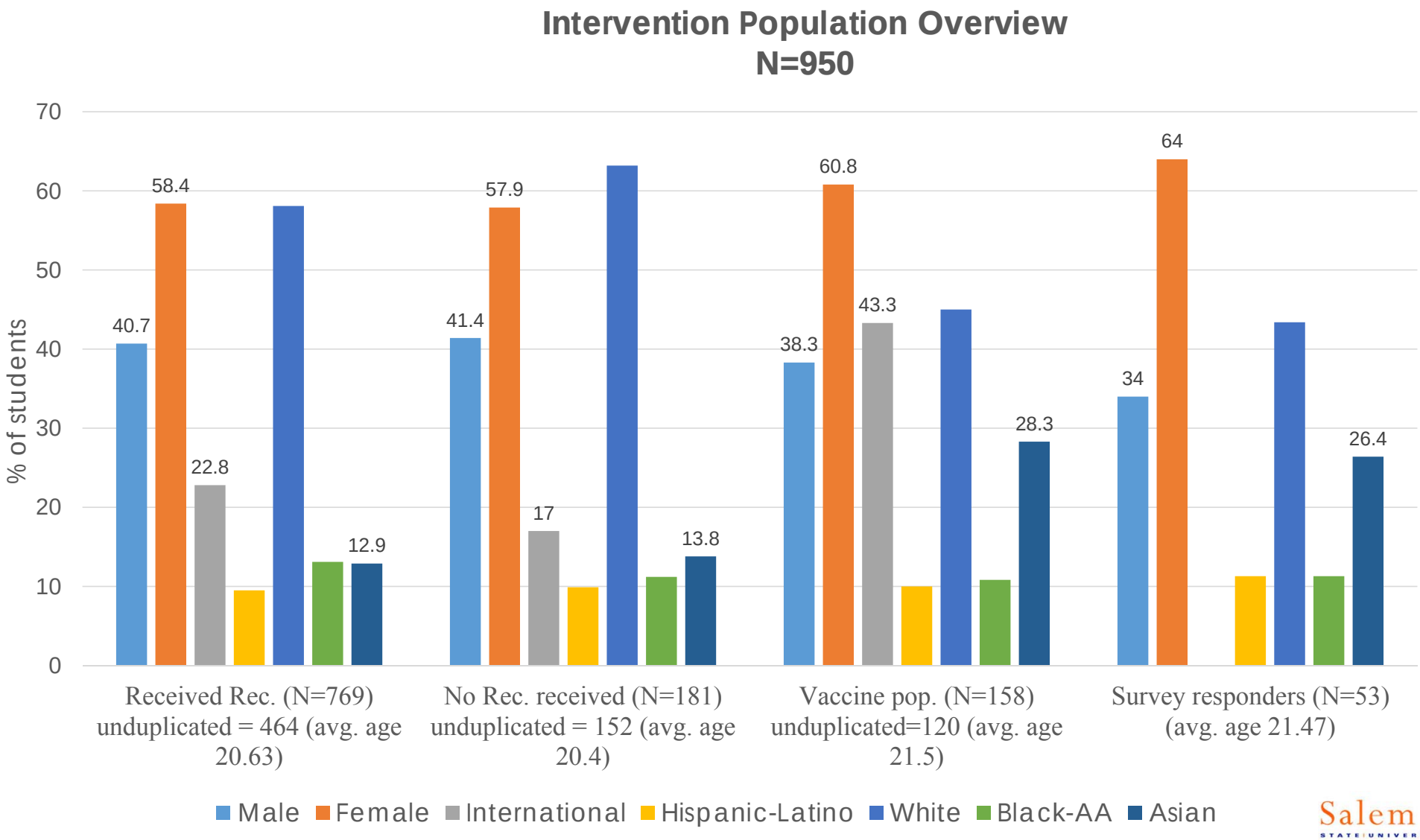
Methods Summary Table

Aim	Intervention	Evaluation Methods	Goal
Prevent missed opportunities	EHR template reminders to acknowledge vaccine history	EHR reports of provider adherence to protocol	80% of notes will indicate provider acknowledgement
Increase patient reminders	Schedule f/u appt. to trigger email/text reminders	Chart audits for adherence to protocol	100% off follow up visits will be scheduled at initial visit
Increase the frequency of vaccine recommendation	EHR template reminders to provide vaccine recommendation	EHR reports of provider adherence to protocol	80% of eligible patients will receive recommendation
Increase community awareness	Campus wide marketing and communication	Anonymous feedback survey for reported motivations	≥50% will indicate somewhat –very important motivation

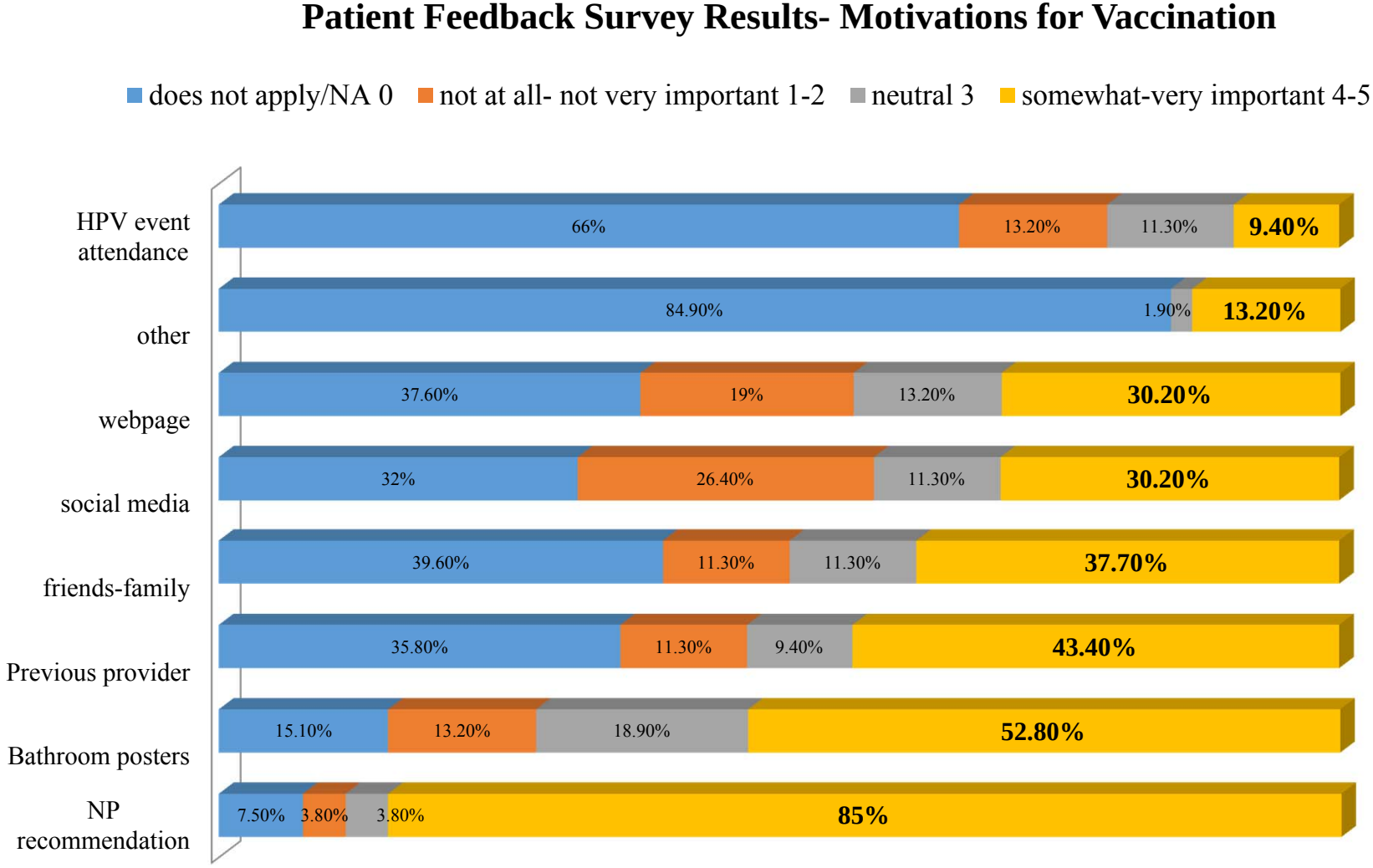
Provider based objectives and outcomes

Total # visits to health center during fall semester, 2014
N=2041
Inclusion pop. N=950
	Yes
	# (%)
		No
		# (%)
			NA based on inclusion criteria
			# (%)

Objective 1- Provider acknowledged HPV vaccination history at every clinical encounter	1877 (92%)	164 (8%)	-----
Objective 2- Provider gave strong HPV vaccine recommendation if patient met inclusion criteria	769 (38%) **81% after NA removed	181 (9%) **19% after NA removed	1091 (53%)
Objective 3- Follow up appointment made for subsequent HPV vaccine doses at initial appointment	135 (84.5%) **92.5% after NA removed	11 (7%) **7.5% after NA removed	12 (8%)


Intervention Population Overview
N=950
% of students
70
60
50
40
30
20
10
0
40.7
58.4
22.8
12.9
41.4
57.9
17
13.8
38.3
60.8
43.3
28.3
34
64
26.4
Received Rec. (N=769) unduplicated = 464 (avg. age 20.63)
No Rec. received (N=181) unduplicated = 152 (avg. age 20.4)
Vaccine pop. (N=158) unduplicated=120 (avg. age 21.5)
Survey responders (N=53) (avg. age 21.47)
Male
Female
International
Hispanic-Latino
White
Black-AA
Asian

Patient Feedback Survey Results- Motivations for Vaccination



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Summary

- A total of 158 HPV vaccines administered over the 16 week intervention
  - Represents a 13 fold increase from previous semester
  - 120 individual patients vaccinated
    - Disparate groups reached (International and males)
  - 8% series completed (n=12)
  - 80% received follow-up dose on-schedule

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Limitations and Considerations

- Difficult to obtain accurate baseline HPV vaccine history
- Insurance barriers
- Competing clinical demands
- Schedule challenges for follow up visits
- Consider campus culture when budgeting
- Long term internal enthusiasm may wane

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Interpretations and Conclusions

- Evidence-based interventions effective
  - Males and international students impacted
- Patient motivations consistent with previous findings in the literature
- Limited additional resources required
- Easily replicated at other student health centers

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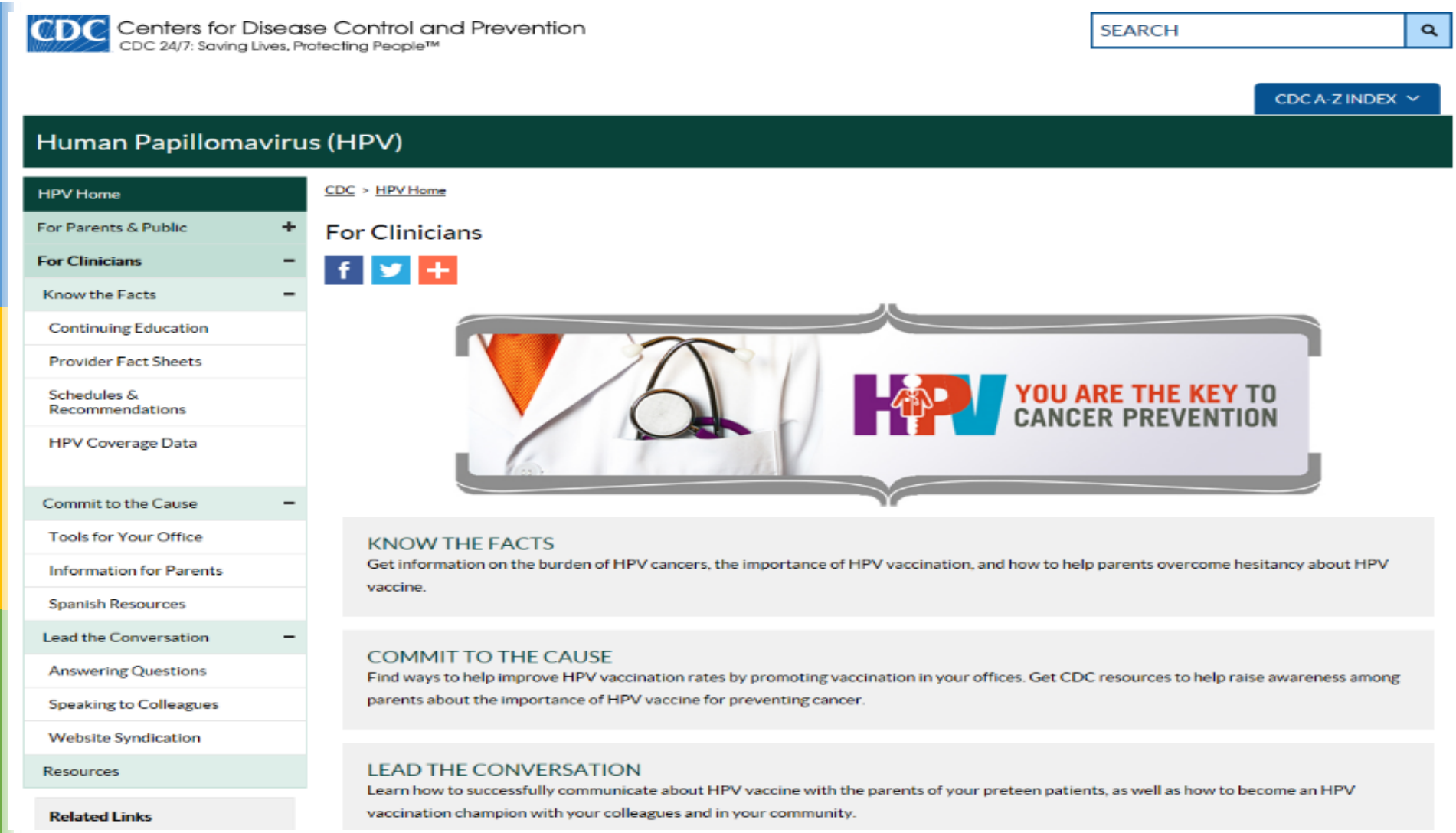
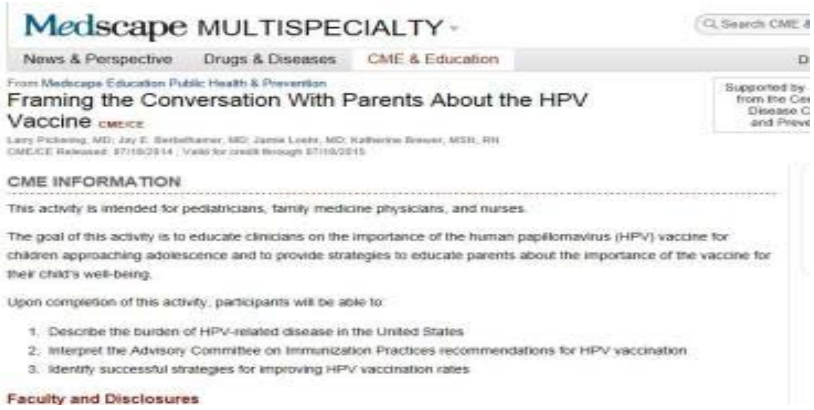
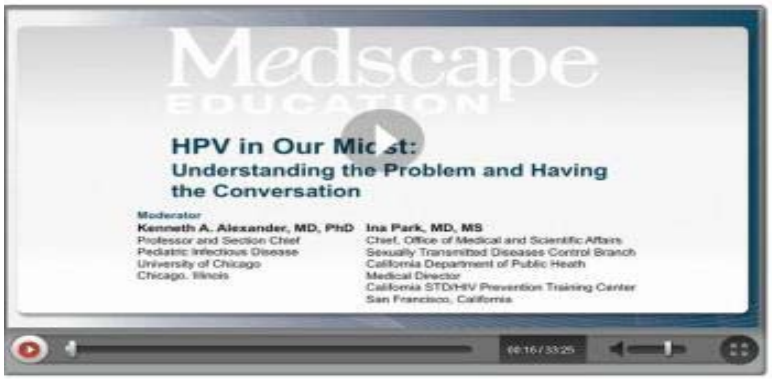
Resources to support Immunization Practices



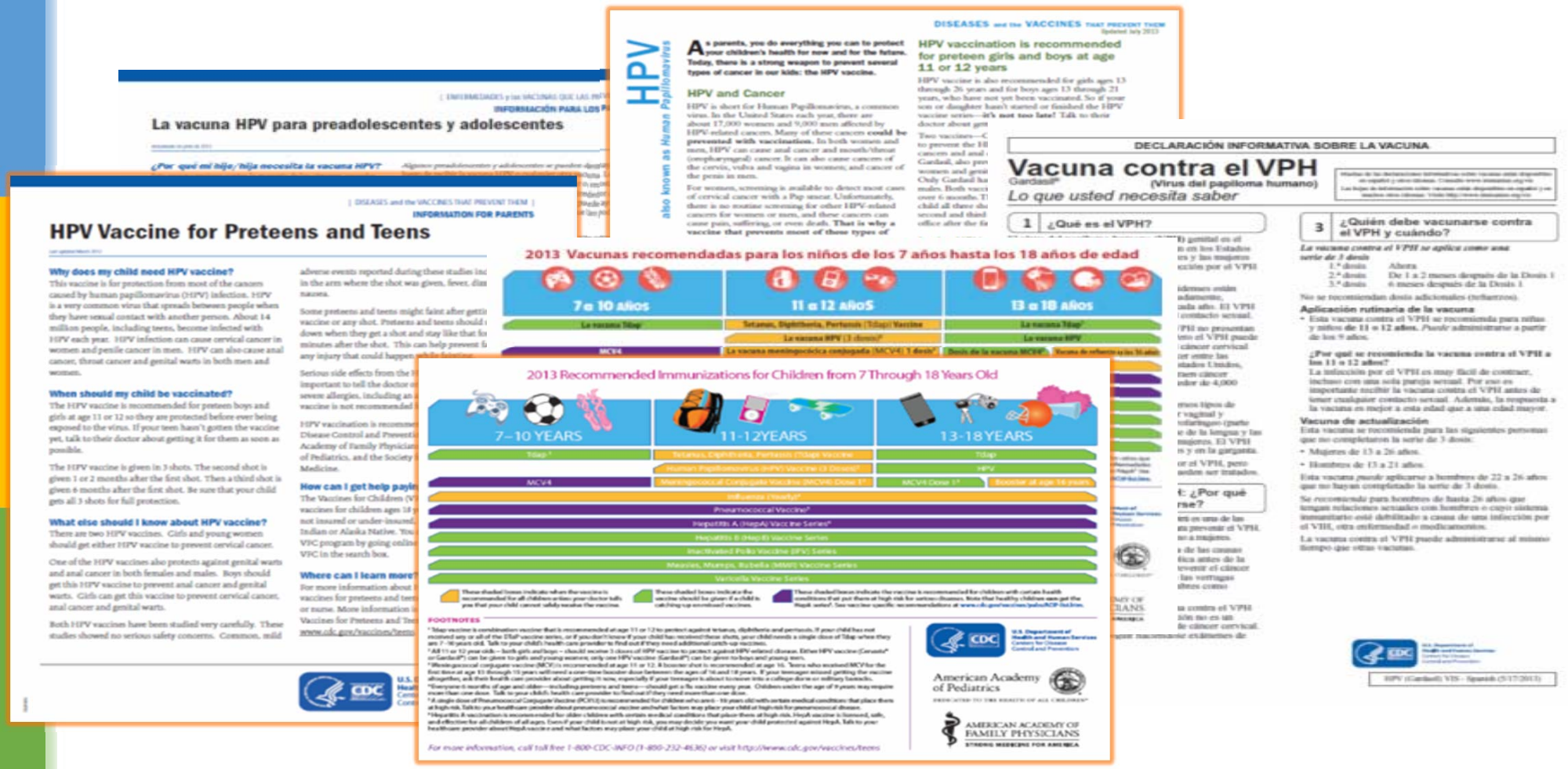
www.cdc.gov/hpv

Continuing Education

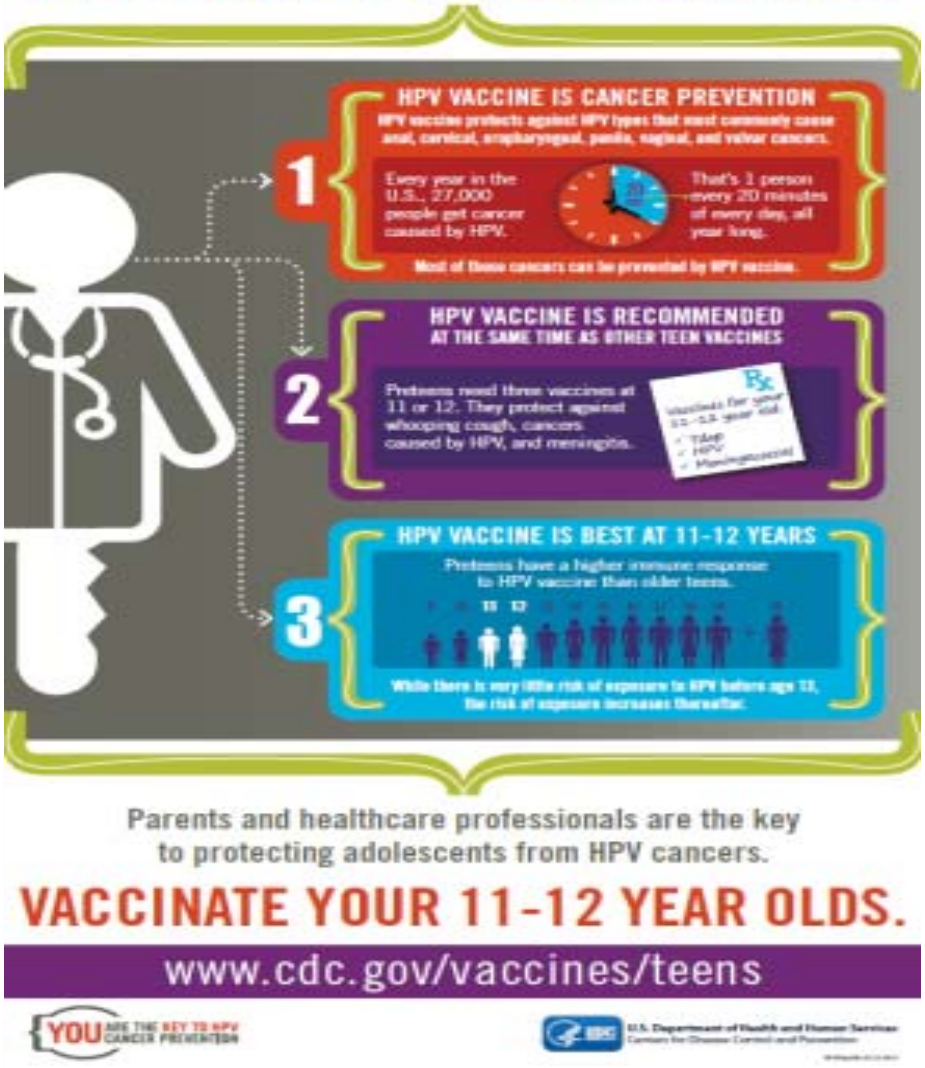




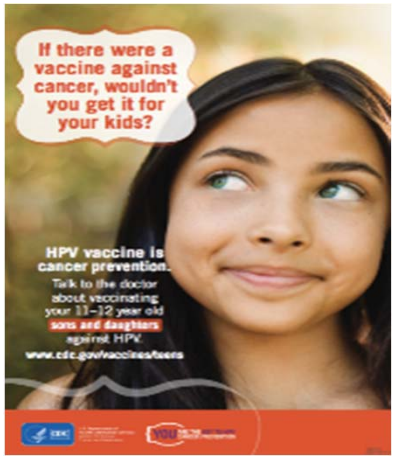
Factsheets for Parents in English & Spanish



cdc.gov/vaccines/who/teens/infographic/hpv-cancer-prevention.html



Free posters available for ordering in the following sizes: 8.5x11, 11x17, 18x24



Want to know when we have new resources and tools?

Send us an email to request our newsletter:

PreteenVaccines@cdc.gov

We can help provide speakers for grand rounds and continuing education events, as well.

CDC Webinar event May 19

https://cc.readytalk.com/cc/s/registrations/new?cid=hsx0yr705cpy

HPV VACCINE IS CANCER PREVENTION

And YOU are the key!

#WeCanStopHPV

Comments and Questions?

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