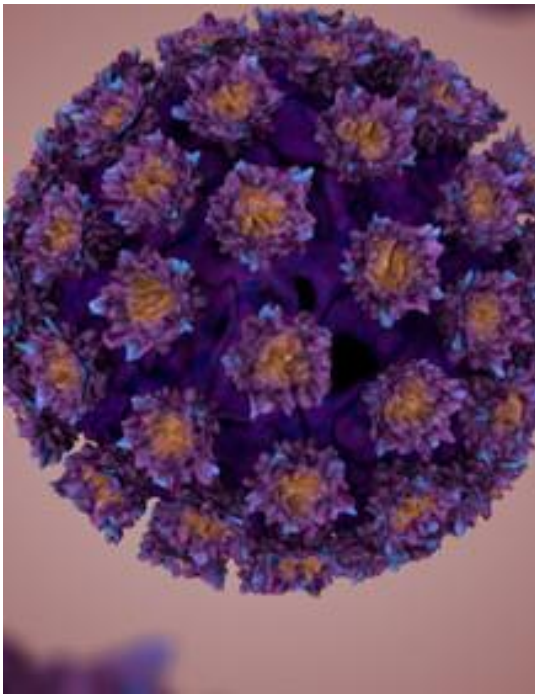


Strategies to Increase HPV Vaccination in a Pediatric Primary Care Setting

2023 HPV Vaccination Summit
June 7, 2023

Therese Bernstein, DNP, APRN, CPNP, FNP-BC

Magnitude of Human Papilloma Virus (HPV) Infections



42M people are currently infected

>14 thousand new infections each year

- 50% of new infections occur in **15-24 yr. olds**

37,300 new cases of HPV related cancers

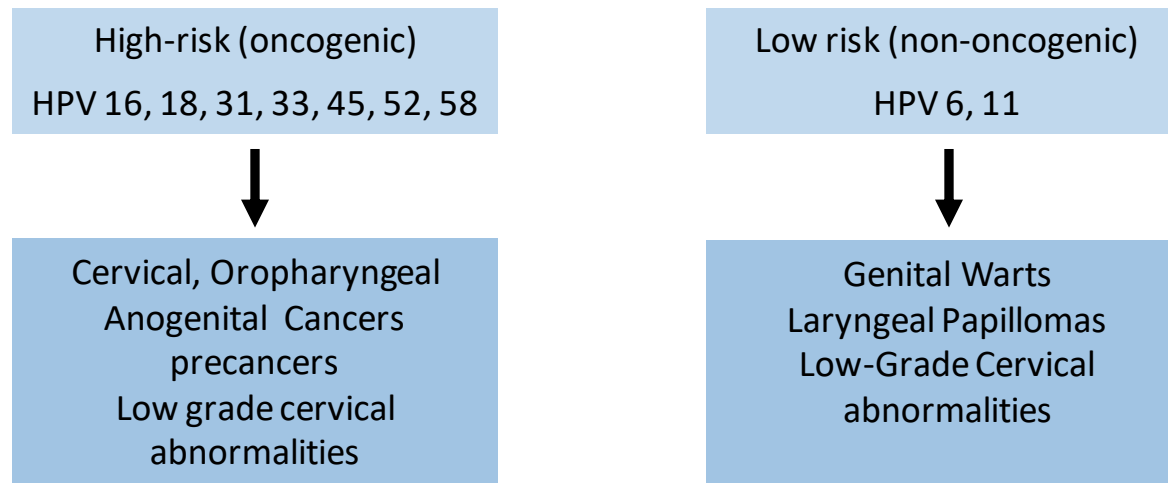
- 90% of Cervical Cancers
- 70% of Oropharyngeal Cancers
- 70% Vaginal/Vulvar Cancers
- 60% Penile Cancers

HPV Vaccine: Gardasil 9



Highly Effective in Preventing HPV Infections, and Cancers

Mucosal Sites of Infection
40 types



Gardasil 9 - Recommended vaccination age between 11 and 12



HPV Vaccine



Cancer Prevention

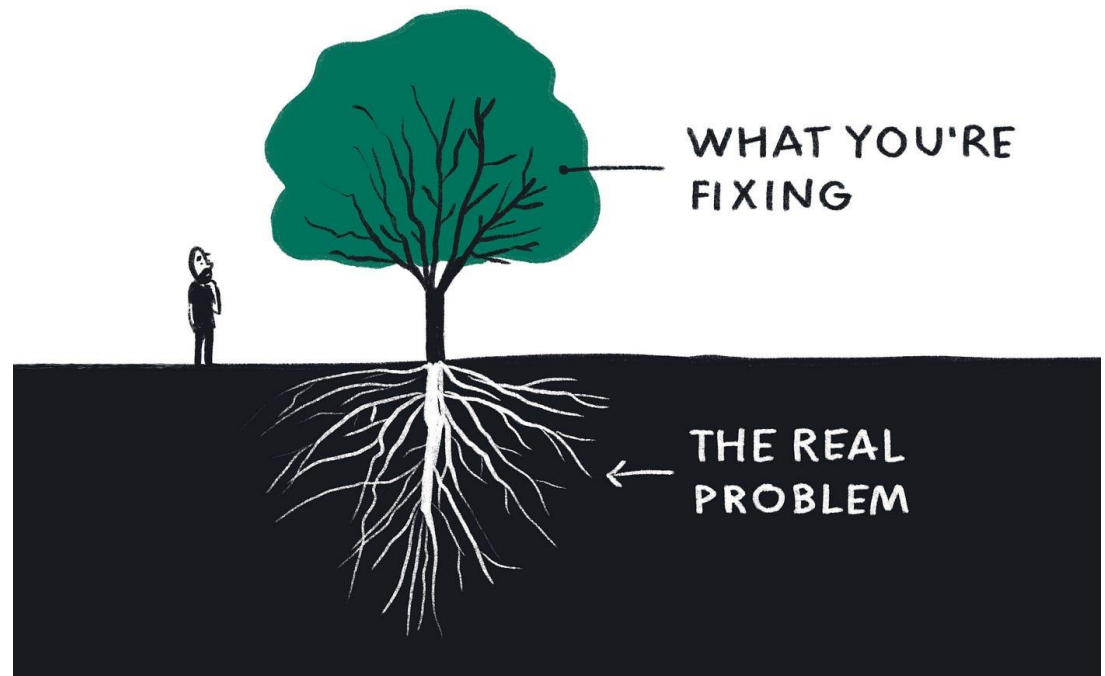
Today's Reality

Healthy people 2030

- Target - 80% vaccination rate

2018 National Immunization Survey - Teen

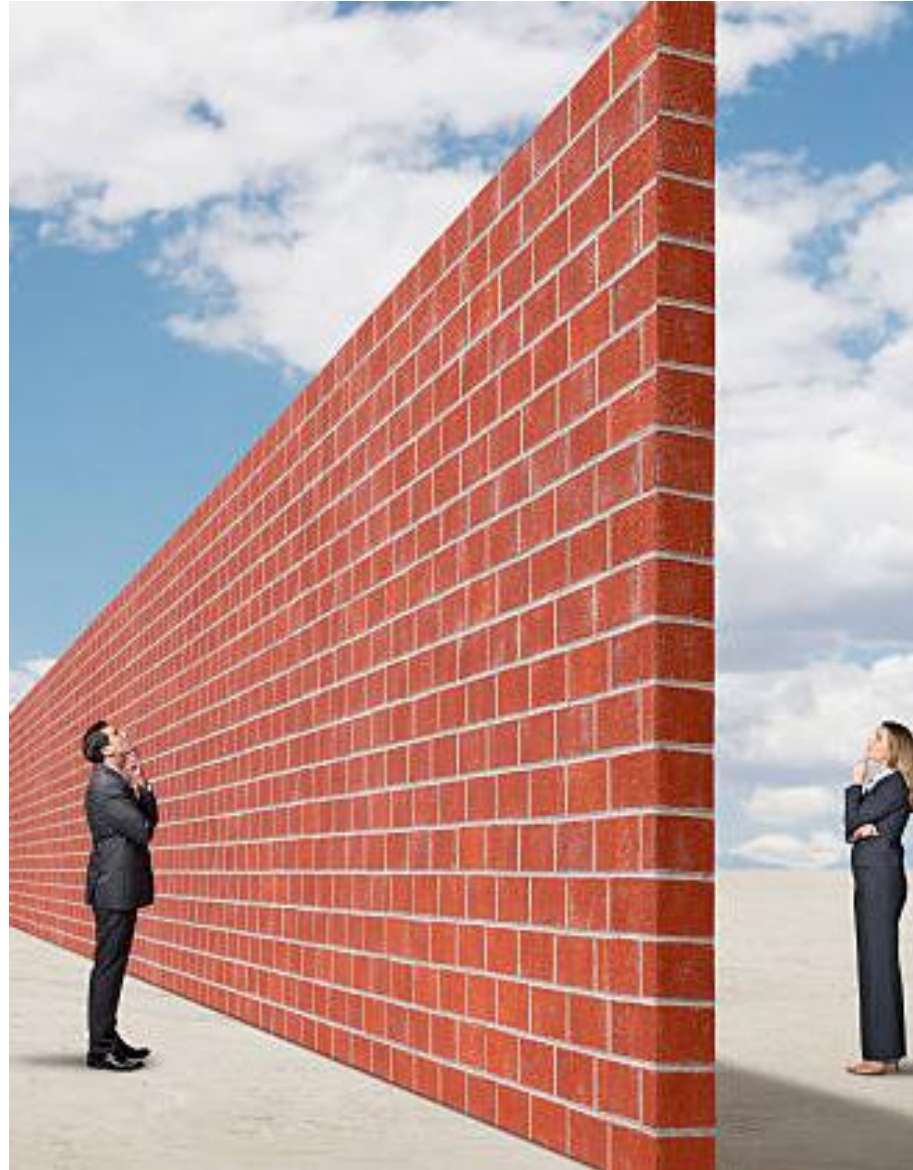
- 51% fully vaccinated
- 68% had only 1 dose



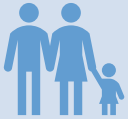
Inadequate Teen HPV Vaccination Rates

Barriers to HPV Vaccine Uptake

- Parental Hesitancy
- Knowledge
- Provider Recommendation & Communication
- Vaccine Schedule / System



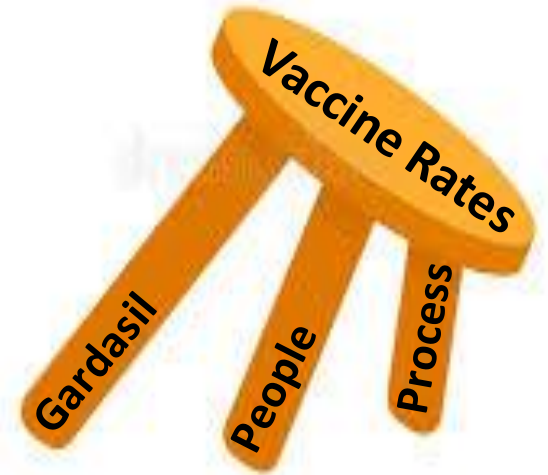
Evidence Supports Action



Parental Education

The Problem:

A three-legged stool relies upon evenness and balance for support. If one or more of the legs are slightly short, the stool becomes wobbly and is of no use.



The Strategy for Success

Implement a QI project to
increase HPV vaccine uptake in
11- & 12-year-olds

Setting

Greenwich Pediatric
Associates 

Comprehensive Pediatric services to children from birth to adolescents

Established over 50 years ago in Old Greenwich, CT

4 Board Certified Pediatricians & 1 Certified Pediatric Nurse Practitioner

Serves Lower Fairfield and Westchester County

Participates in most insurance plans to make accessible to all

Design Principles

Timeline:

- Provider educational session
 - November 19, 2020
- Project duration
 - November 20, 2020 to February 20, 2021

Design:

- Pre/post design

Sample:

- Convenience sample
- All 11 and 12-year-olds
- Sample size post visit: pre:73 post:55
- Inclusion Criteria:
 - No previous HPV vaccination
- Exclusion Criteria:
 - Already started HPV vaccination series



Project Goals

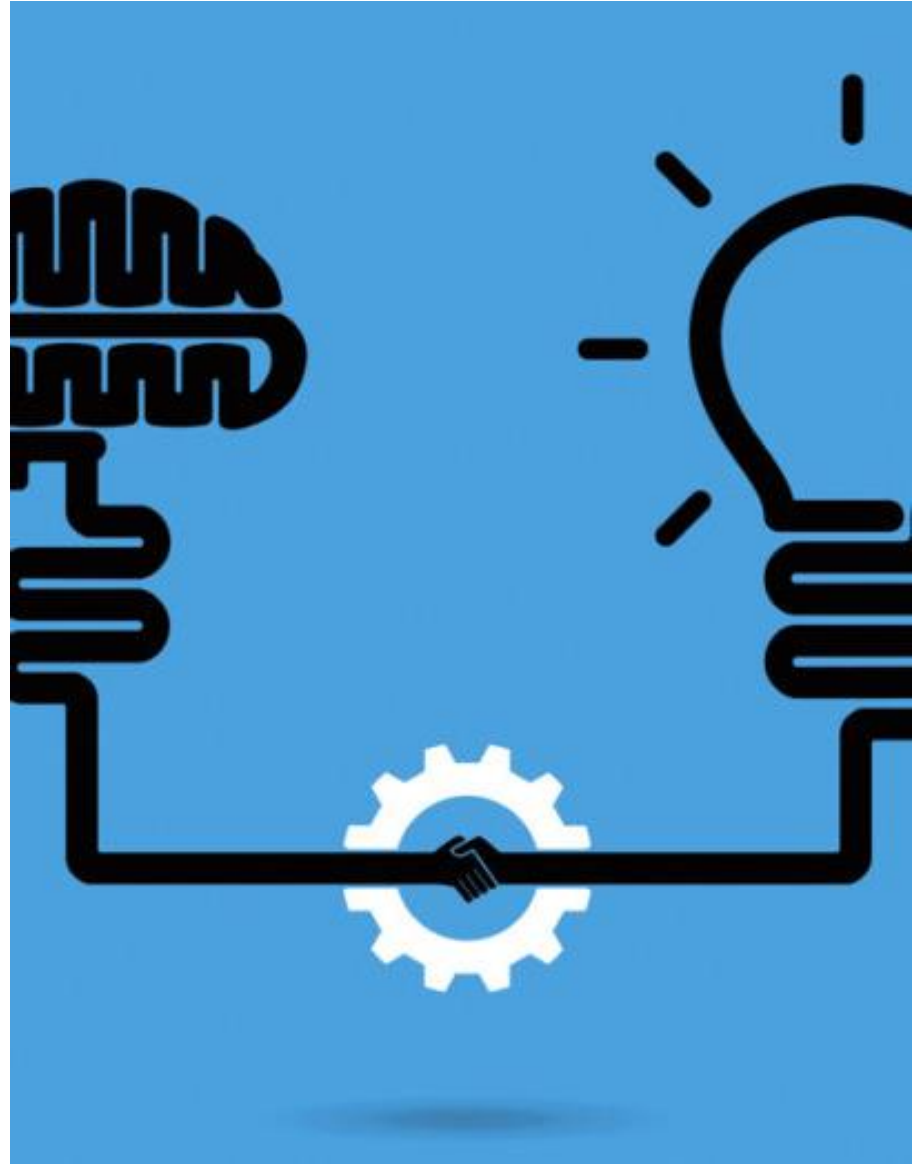
Providers make a strong effective recommendation at all 11 and 12-year-old health care visits

Increase HPV vaccine uptake for all 11 and 12-year-olds visits

Identify factors that influence parental decision making for giving or not giving the HPV vaccine

Project Innovation

Provider & System-
Based Strategies





Enhancing Provider Recommendation & Communication

Methods:

- In person Educational session for Providers
 - Communication strategies- framing the conversation, presumptive messaging, open-ended questions and reflective listening,
 - Presumptive announcement-based recommendations
 - **“Same Day Same Way”** approach
 - Cancer prevention
 - Gardasil 9 vaccine safety
 - Immunogenicity
 - Practice - role playing
 - Documentation

Changing Vaccine Schedule

Methods:

- Standardization of 11-year-old vaccine schedule to include:
 - Menactra
 - HPV
 - Tdap





Preparing Parents and Teens

Methods:

- Identification of all 11–12-year-old health care visits via EHR- weekly
- Pre-visit emails sent 1 week prior to visit by office manager
 - Provide vaccine fact sheets
 - Informative letter making a statement of the vaccines the child will receive
 - HPV video

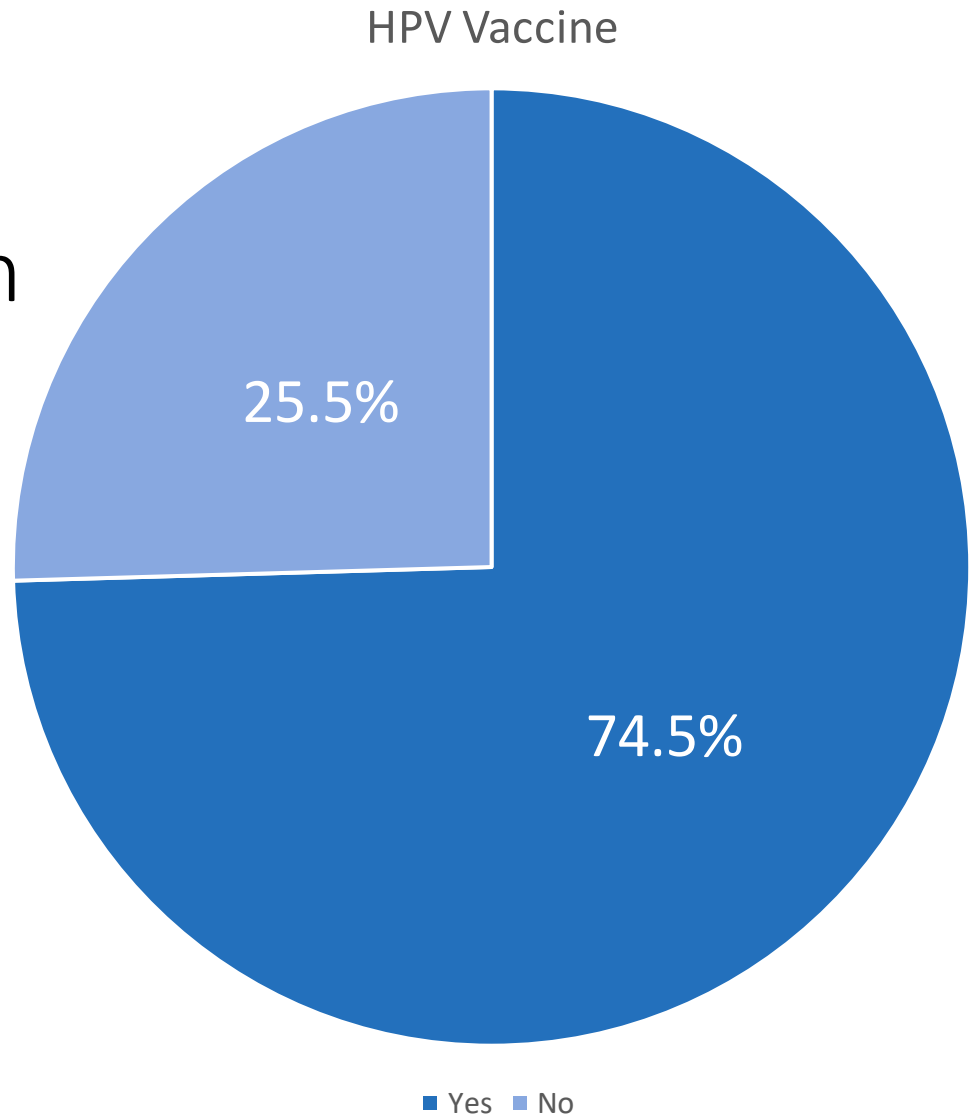
Post-Visit Survey

Given to all parents
of 11- & 12-year
old's

Identify factors that
influenced a
parent's HPV
vaccination decision

Results: Provider Recommendation

**Key Takeaway -
Changing behavior is a
process**



Results: Vaccination Rates

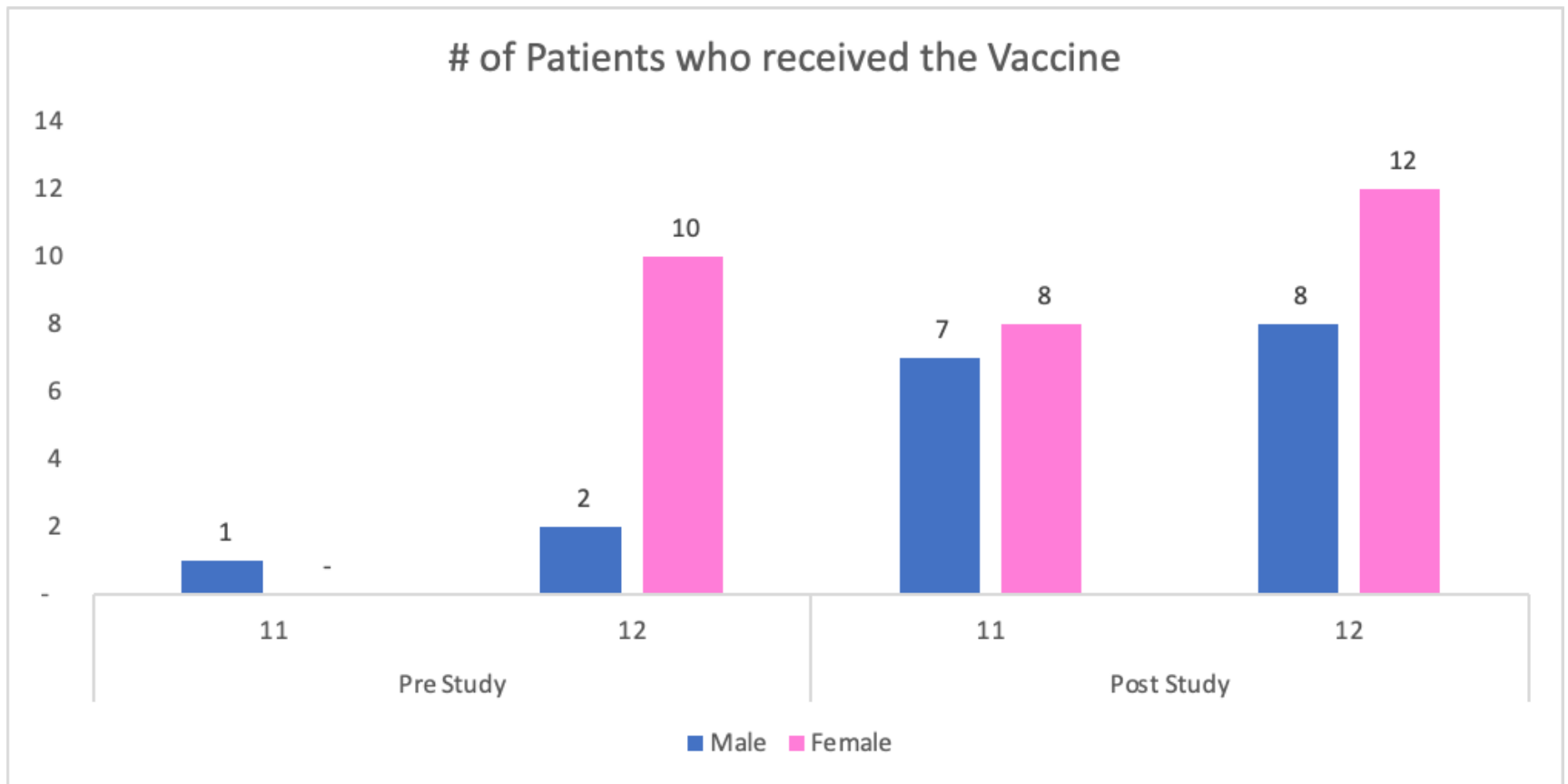
Vaccination Rates

Variable	Pre ($n = 73$)		Post ($n = 55$)		p -value
	n	%	n	%	
Vaccine Received					
Yes	13	17.8	35	63.6	< .001
No	60	82.2	20	36.4	

Key Takeaway - 45.8% increase in vaccine rate

Results: By Demographic

Key Takeaway – Increase vaccine uptake across all demographics

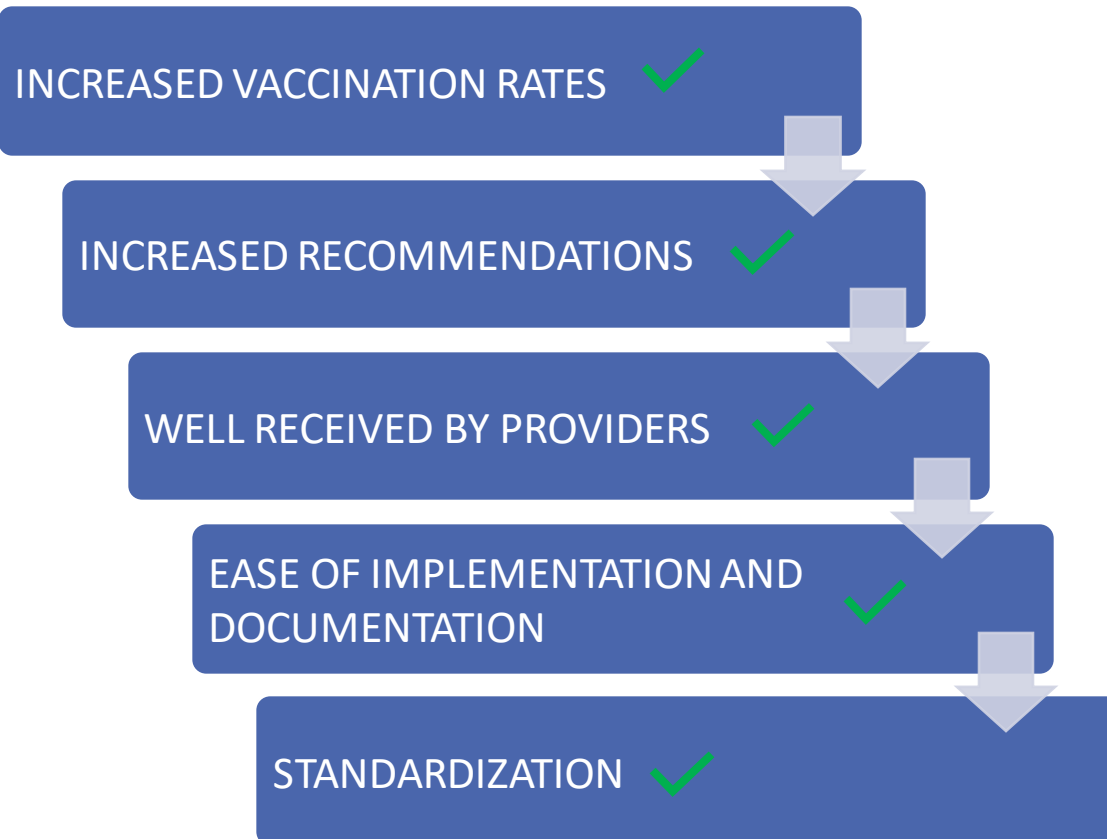


25 responses

Post Survey Results

Summary:

Small changes = Positive impact





-
- Assign an Immunization Champion
 - Reinforce effective recommendation strategies
 - Provide provider feedback
 - Automate pre-visit email for 11- and 12-year-old visits
 - Reminder phone call, text or emails to parents
 - Reduce missed opportunities (vaccine at any visit)
 - Standing orders
 - Provider prompts (ie, start the conversation at 9 yo visit)



National Association of
Pediatric Nurse Practitioners™

JOURNAL OF PEDIATRIC HEALTH CARE

Bernstein, T. A., Broome, M., Millman, J., Epstein, J., & Derouin, A. (2022). Promoting Strategies to Increase HPV Vaccination in the Pediatric Primary Care Setting. *Journal of pediatric health care : official publication of National Association of Pediatric Nurse Associates & Practitioners*, 36(2), e36–e41.

<https://doi.org/10.1016/j.pedhc.2021.10.009>



Thank you!

Comments or Questions

Email

Dear Parent or Guardian,

Greenwich Pediatrics is committed to providing the best care to all children. We see that your child has an upcoming appointment for their 11 or 12-year-old well child visit and we wanted to advise you about the upcoming vaccinations your child will receive.

The best way to protect your child against serious and preventable diseases is to vaccinate. The CDC and the American Academy of Pediatrics currently recommends the following vaccines for all 11 and 12-year-old adolescents, Meningococcal Disease (MenACWY), Human Papillomavirus (HPV), and Tetanus, Diphtheria and Pertussis (Tdap).

1) Meningococcal meningitis is an infection that causes swelling in the lining of the brain and spinal cord. This can lead to hearing loss, brain damage, learning problems and in some cases, loss of limbs. The meningococcal conjugate vaccine (MenACWY) protects against four types of meningococcal disease. Teens are at higher risk of getting meningococcal disease and should receive a single shot of meningococcal vaccine during their 11- to 12- year-old check-up and a booster dose at age 16.

2) HPV vaccination is cancer prevention. The Gardasil (HPV) vaccine is now recommended to be given to both boys and girls at their 11 and 12-year-old visit. Gardasil protects your child against HPV which is a virus that can lead to certain cancers later in life. About 79 million Americans are currently infected with HPV and about 14 million people, including teens, contract HPV each year. According to the Academy of Pediatrics the optimal age to receive HPV vaccine is between 11 and 12 years old because it is most effective in persons not previously exposed. Children have a robust immune system and when Gardasil is given at an early age provides significant immunogenicity against HPV infections and cancers. The AAP recommends that 11- to 12-year-olds receive two doses of HPV vaccine. The two doses should be separated by 6-12 months.

3) The Tdap vaccine is a booster shot that protects your teen or preteen from Tetanus, Diphtheria and Pertussis. Tetanus is caused by a toxin that enters the body through open wounds in the skin and causes painful muscle cramps. Diphtheria causes a thick coating in the back of the throat, which makes it difficult to swallow and breathe. Ten percent of people who contract the disease will die from it. Pertussis (whooping cough) is a contagious respiratory infection that causes a cough that is known for uncontrollable, violent *coughing* which often makes it hard to breathe.

Attached are the CDC fact sheets about each vaccine.

If you have any questions about the vaccines or how these diseases may affect your child, please call the office at (203) 637-3212 for any questions you may have prior to your visit.

For more information about these vaccines, you can visit: <https://www.cdc.gov>

Sincerely,
Greenwich Pediatric Associates



Post-Visit Survey

1. Did you receive and read the pre-visit email that was sent prior to your child's 11 or 12-year-old health care visit informing you of the vaccines he/she would be receiving at this visit? YES or NO
 2. Did your provider recommend the HPV vaccine today? YES or NO
 3. What influenced your decision to give the HPV vaccine today?
 - provider recommendation
 - information packet
 - other: _____
 4. If NO what was your reason for not giving this anti-cancer vaccine? _____
 5. If NO, do you intend to vaccinate your child for HPV in the future? YES or NO
-