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# **Combination Intervention of a Fact Sheet and Motivational Interviewing**

Amanda Dempsey, MD, PhD, MPH  
Professor of Pediatrics  
Children's Hospital Colorado

September 2018  
Global Challenges in Vaccine Acceptance Conference,  
Annecy France



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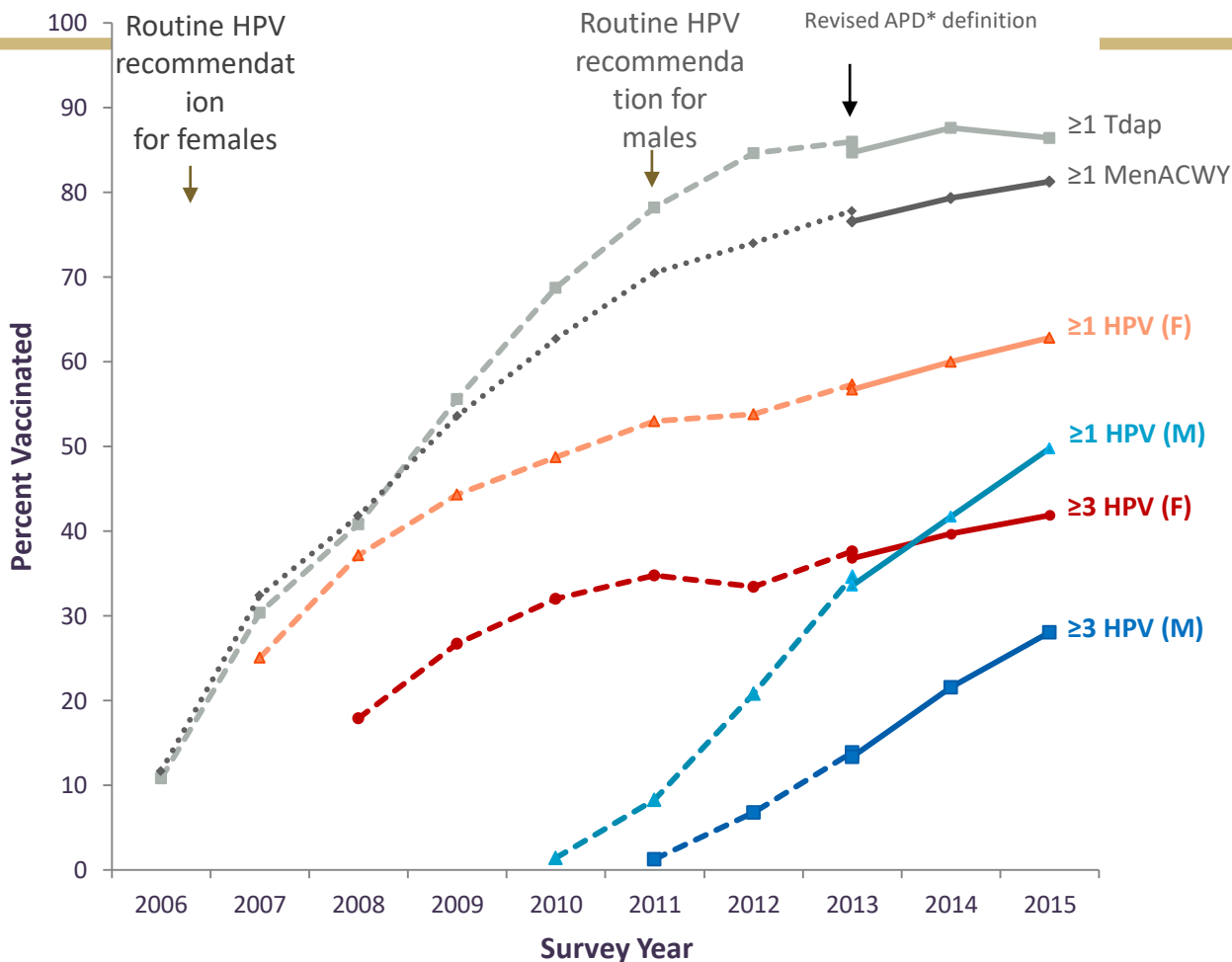
# Disclosure

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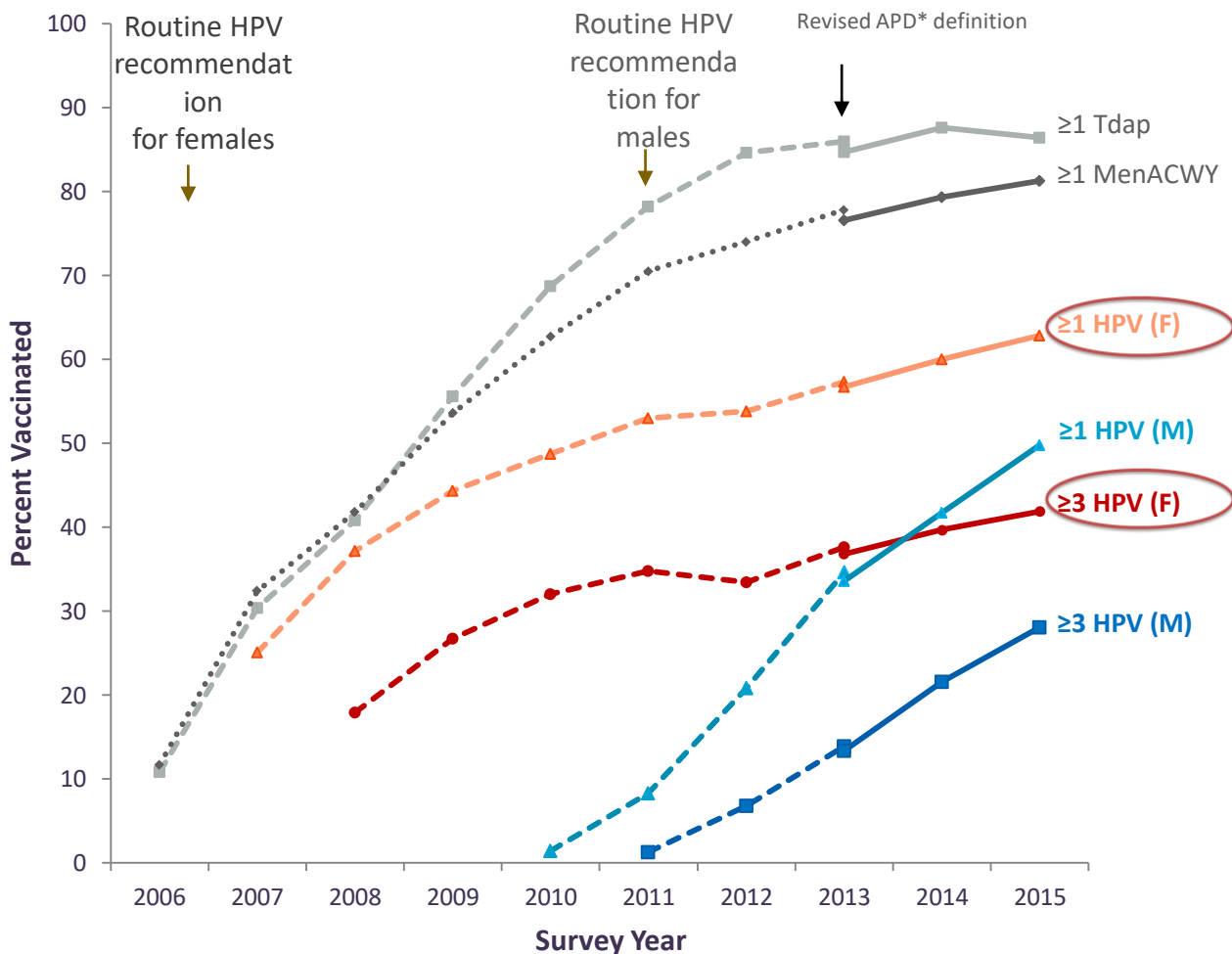
- *I serve on advisory boards for Merck and Pfizer. These companies played no role in this presentation.*



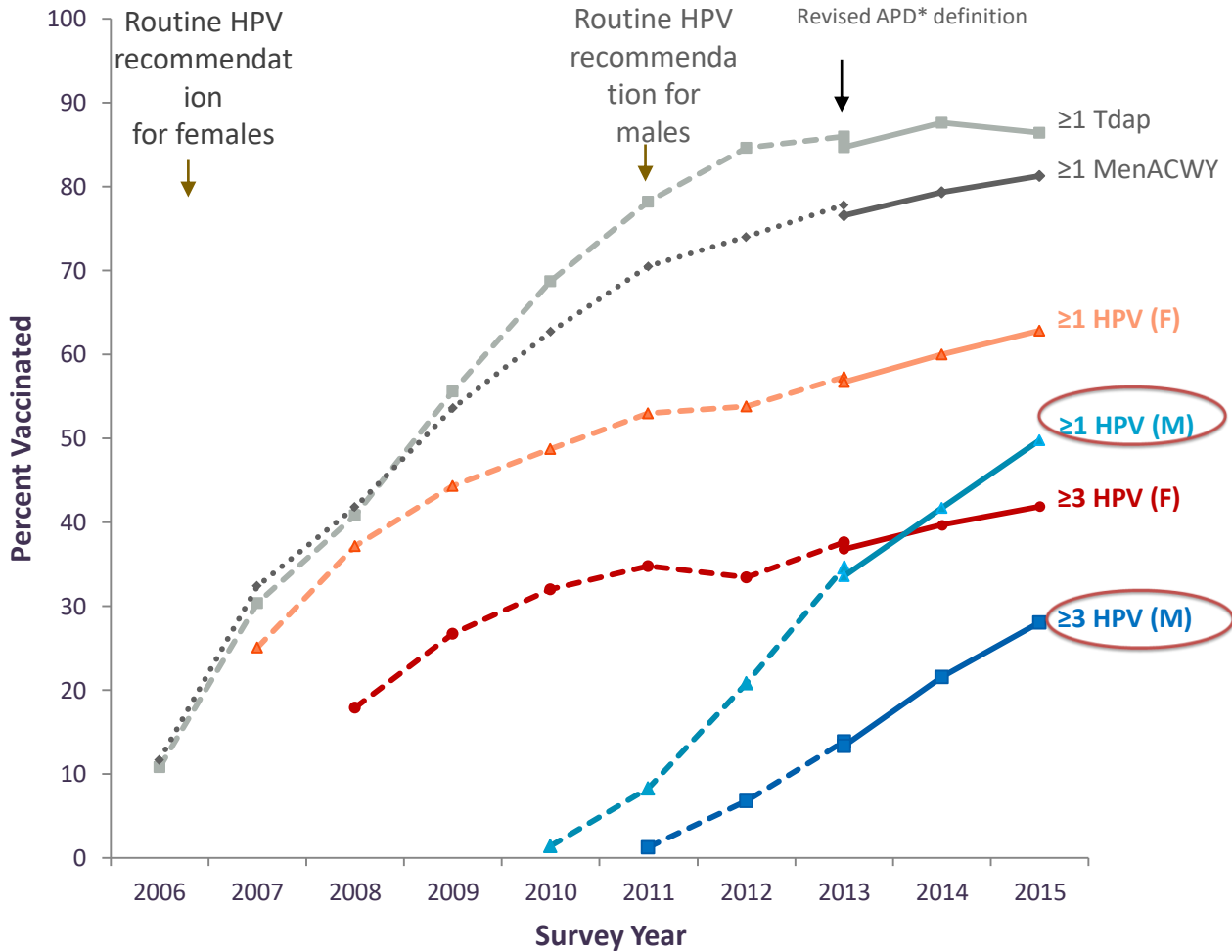
# The Problem of HPV Vaccination



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# Provider Recommendation is Key

## 2013 Top five reasons for not vaccinating adolescents

Parents of girls		Parents of boys	
Reason	%	Reason	%
Lack of knowledge	15.5	Not recommended	22.8
Not needed or necessary	14.7	Not needed or necessary	17.9
Safety concern/Side effects	14.2	Lack of knowledge	15.5
Not recommended	13.0	Not sexually active	7.7
Not sexually active	11.3	Safety concern/Side effects	6.9



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# Providers Often Do a Bad Job

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In a national study of primary care providers done in 2014

- 59% used a risk-based approach for deciding when to recommend the vaccine
- 49% recommended the vaccine be given “at a later visit”
- and 26% and 39% did not routinely recommend the vaccine for 11-12 year old females and males, respectively





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# Need for Vaccine Communication 2.0



**Vaccination decisions are based on emotion, not logic, reason, or “facts”**



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# Preferred Communication Strategies

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- Presumptive
- Blanket
- Strong
  - For everyone in age range
  - On same day as vaccine is being discussed
  - Using unequivocal language



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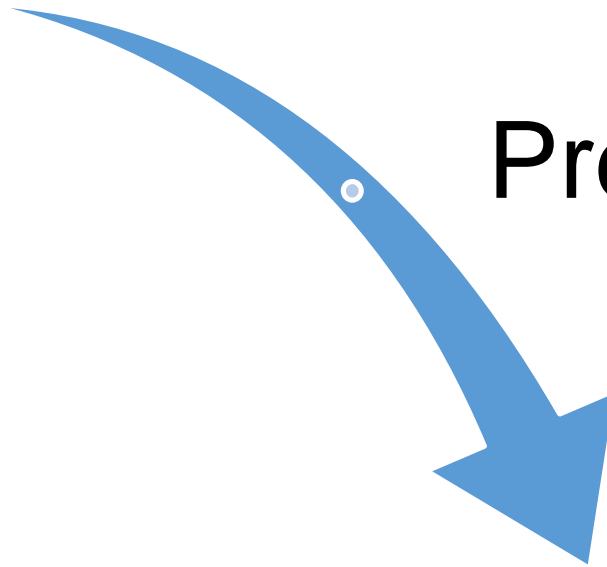
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# What Happens When That Doesn't Work?

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Blanket



Presumptive

**PIVOT TO MI**



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# MI\* in a Nutshell

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- A way of reorienting your relationship with patients
- Focus becomes being a “helper” in the change process rather than reaching a goal
- Works by leveraging a person’s intrinsic motivation for a behavior

\*Miller and Rollnick, 1991



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# 4 Tenets of MI

---

- Empathy
- Collaboration
- Evocation
- Support for Autonomy



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# PCOM Trial

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- Cluster RCT Among 16 public and private practices in Colorado
- Multi-component intervention
  - HPV Fact Sheet developed by patients and providers
  - HPV Decision Aid
  - Tailored web-based intervention
  - Communication Training



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# Communication Training

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## Blanket & Presumptive



**PIVOT TO MI**



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# Focus on Brief Strategies and Micro Skills of MI

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## Brief Strategies

- Ruler
- Elicit, Provide, Elicit (EPE)

## Micro Skills

- Reflection
- Open Ended Questions
- Affirmation
- Summaries



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# MI Trainings

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- Trainings were specific to the HPV vaccine conversation, and emphasized use of specific MI techniques
- 1, 30-min webinar followed by 2, 45-minute in person sessions
  - Session 1: Demonstration of Techniques
  - Session 2: Role Play with Feedback



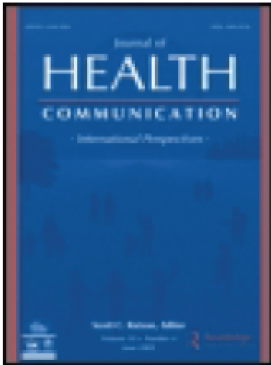
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# Description of the MI Training in Detail

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Journal of Health Communication  
International Perspectives



ISSN: 1081-0730 (Print) 1087-0415 (Online) Journal homepage: <http://www.tandfonline.com/loi/uhcm20>

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## Improving Provider Communication about HPV Vaccines for Vaccine-Hesitant Parents Through the Use of Motivational Interviewing

Jenna E. Reno, Sean O'Leary, Kathleen Garrett, Jennifer Pyrzanowski, Steven Lockhart, Elizabeth Campagna, Juliana Barnard & Amanda F. Dempsey



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# Case Example: MI Techniques and Tenets

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- You are seeing a 12 year old boy who you haven't seen in a few years, in for a well visit and to get some forms signed
- You finish the visit, and offer a presumptive, blanket recommendation for the HPV, Tdap and MenACWY vaccines



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# Wait a Minute...

- Mom agrees to Tdap and MenACWY, but **NOT HPV!!!!**





# MI Techniques - Ruler

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- You are a little surprised, since you've known this family for many years, and this child has received all of his recommended vaccines to now. To find out more you say,

## Example

- *“I see. So on a scale of 1 to 10, with 1 never getting the vaccine and 10 definitely getting it today, where are you at?” (Ruler)*
  - **“About a 3”**
- *“OK - can you tell me more about why you are a 3 instead of a 1?” (Elicitation, Evocation)*





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# Technique – Open Ended Questions

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- “Well, I definitely don’t want my son to ever have cancer, so I’m open to the idea of the vaccine, but I’m just scared its not safe”

## Example:

- *Would you mind telling me what safety issues you are worried about?” (Open-ended question)*
- “Well, I’ve heard that some children that get the shot can die from it. I know it’s probably not true, but it just makes me worry.”



# Techniques – Affirmation and Collaboration (Permission)

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- You reflect back the concern to be sure you understand and summarize what has been heard before proceeding, and with permission, to make a recommendation.

## Example:

- *So it sounds like one of your biggest concerns is safety but since you are OK with the other vaccines this is an HPV specific worry you have (**Reflection, Summary**). Well, I can see why your concerns would scare you – that would scare me too! (**Empathy, Affirmation**) This question of dying from the vaccine has come up for me before from other patients, and I've looked into where it came from. Would you mind if I went over what I found out, and why I think this is such an important vaccine?" (**Collaboration, EPE**)*
- "OK"



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# Techniques - EPE

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- After getting permission, you proceed with your response.

## Example:

- *“To address your specific concern, it turns out people started rumors about this vaccine on the Internet, and those rumors spread. There is no truth to them. In fact, this is one of the safest vaccines we have, and it’s been very well studied. This vaccine prevents several types of cancer, and it works really well. I’ve given it to my own children, and I think it’s a really important vaccine. That said, this is a decision only you can make. What do you think?”*  
*(Autonomy, EPE)*



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# Fact Sheets

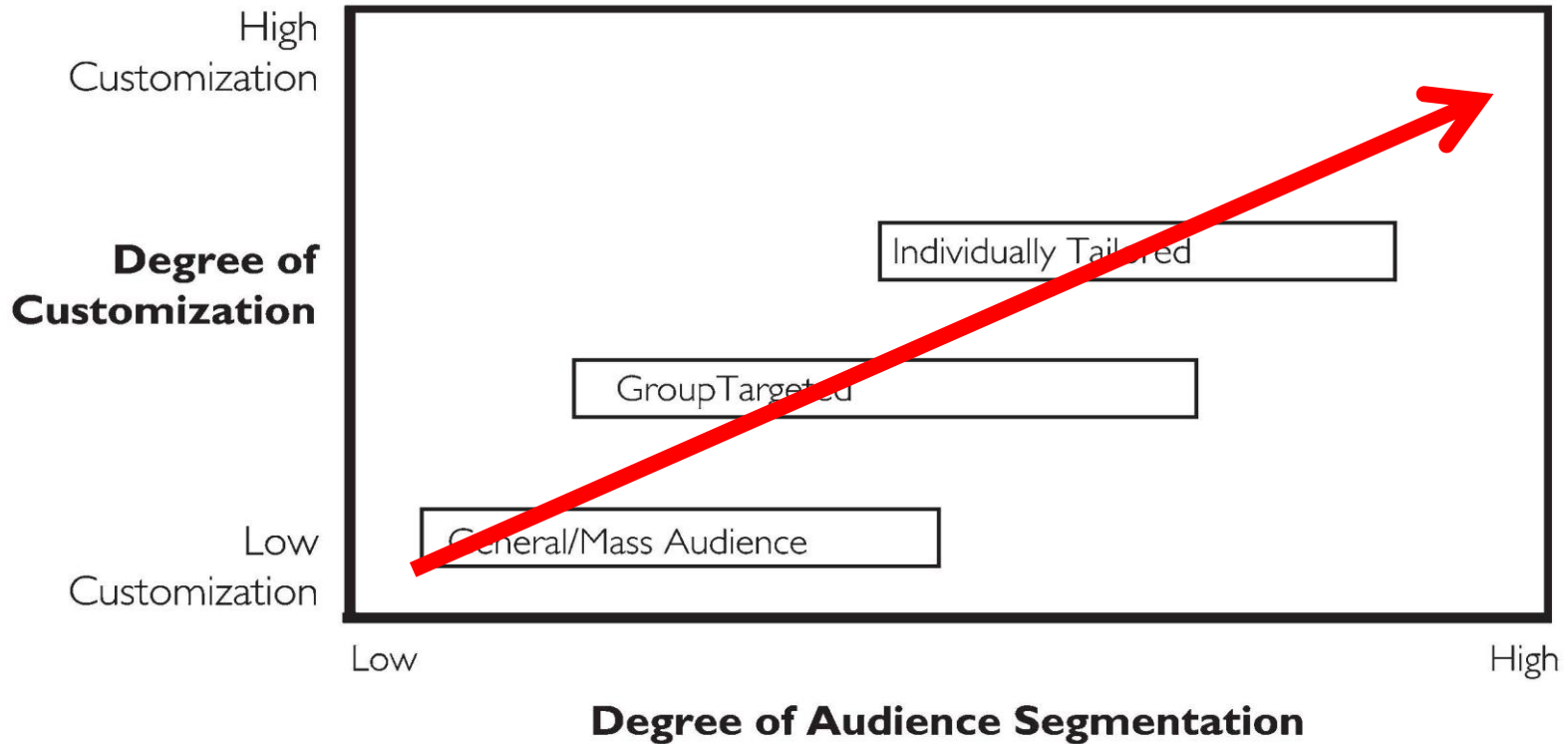


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# Targeting-Tailoring Continuum



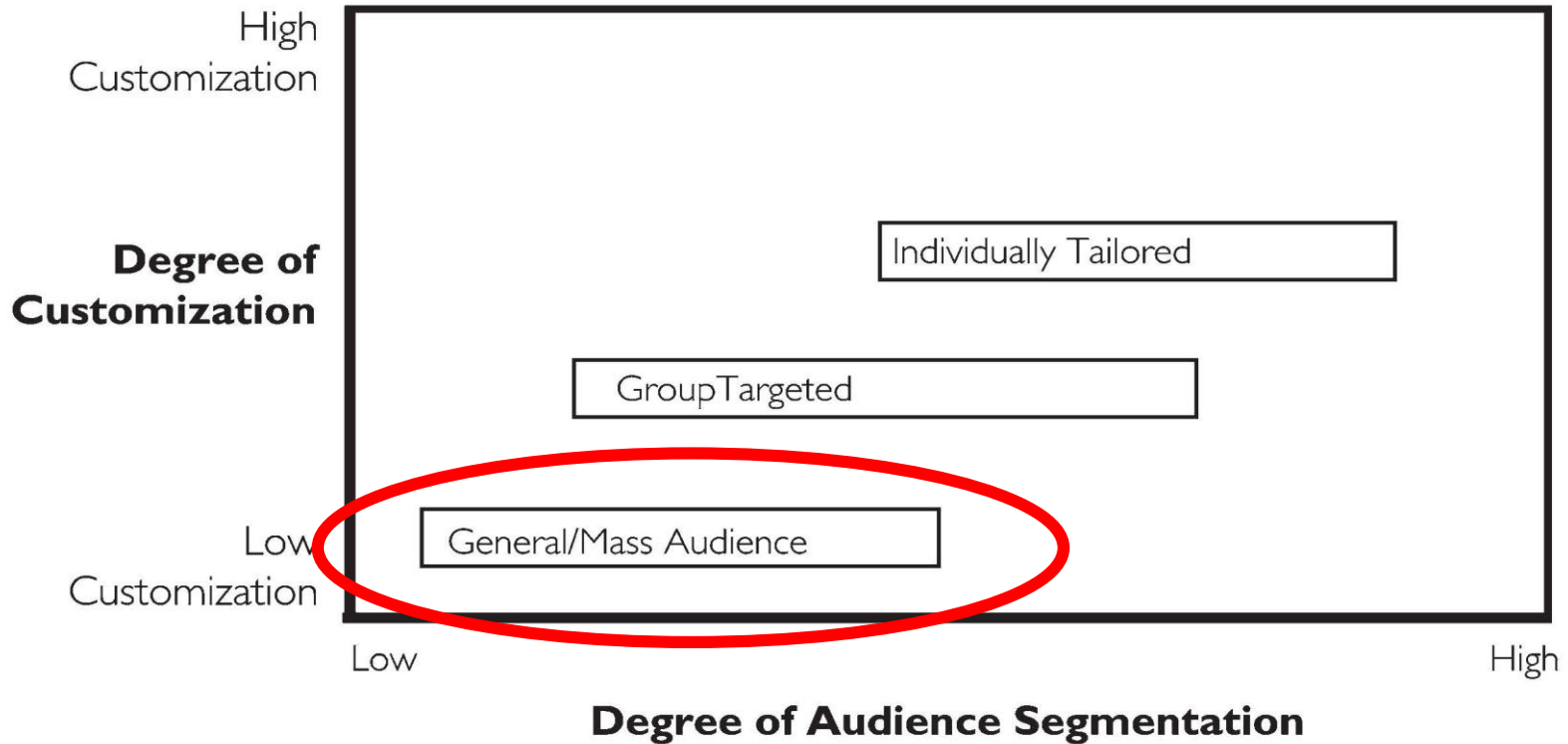


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# Targeting-Tailoring Continuum



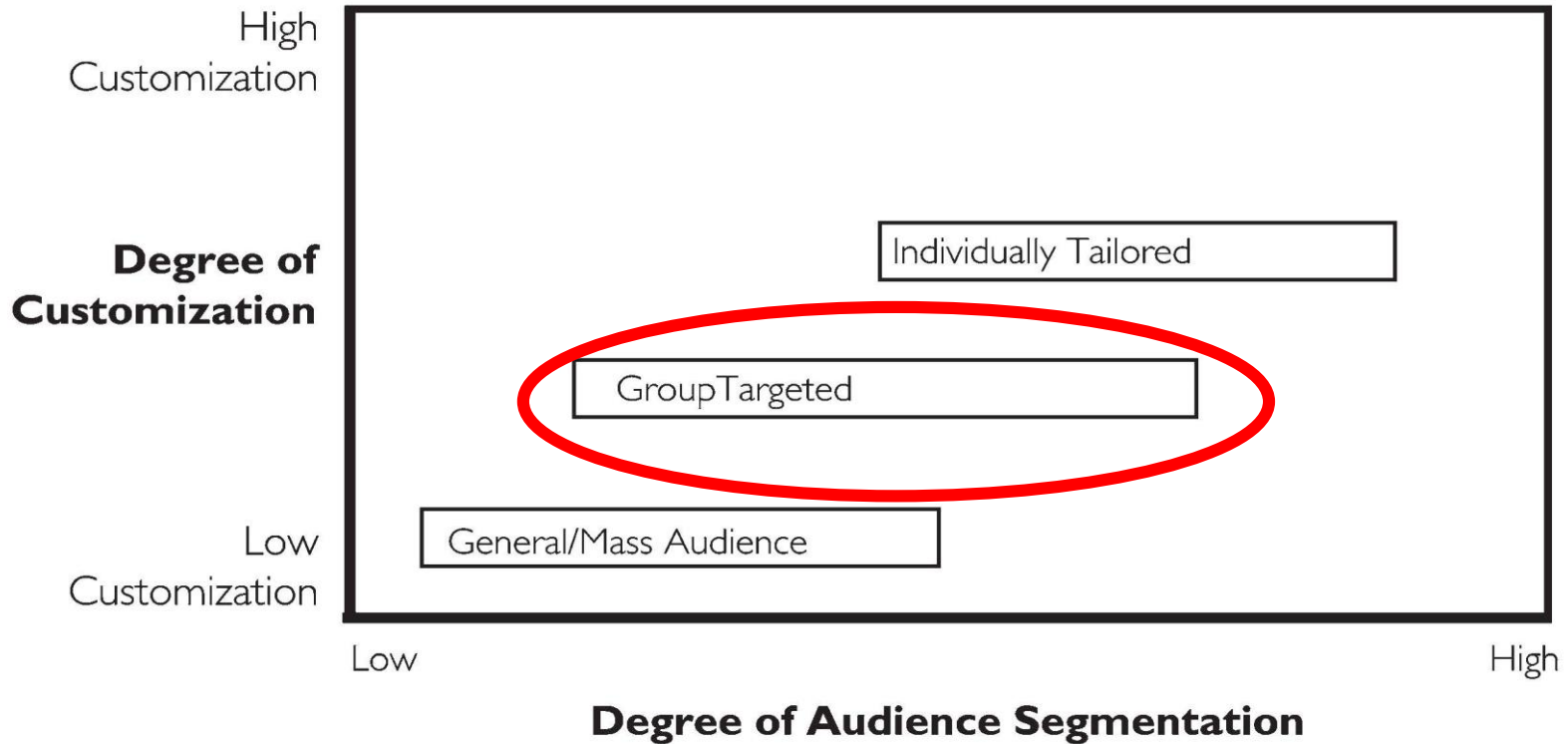


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# Targeting-Tailoring Continuum





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# Targeted Messages: Customized Fact Sheets

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## Process

1. Create template and Fact Sheet Library
2. Meet with practice and provide Library
3. Have each person choose most relevant pieces – prioritize by role
4. Create draft
5. Refine



## HUMAN PAPILLOMAVIRUS (HPV) FACTS

### HPV is Common and May Lead to Serious Disease

- Up to 75% of HPV infections occur among people 15 through 24 years old.
- HPV infection is equally common among both males and females.
- Treatment of problems associated with HPV, like genital warts, are painful and often require multiple treatments.
- HPV infection can lead to genital warts, abnormal pap smear tests, and/or cancer of the cervix, vagina, penis, anus, tonsils, and throat.
- Most symptoms of HPV can't be seen so a person can be infected and/or spread HPV without knowing.

8 OUT OF 10 PEOPLE  
WILL GET HPV



Skin-to-Skin contact is how  
the virus is spread.  
Intercourse is not required.

### Why get vaccinated?

There is **NO CURE** for HPV Infection, so it is best to prevent it.

The HPV vaccine is 1 of 4 vaccines that your child's medical provider recommends for your 11-12 year old. The 4 vaccines are: meningococcal vaccine (protects against a type of meningitis), HPV vaccine (protects against HPV), Tdap vaccine (protects against tetanus, diphtheria, and whooping cough), and influenza vaccine (protects against the flu).

The HPV vaccine is safe. You cannot get HPV from the vaccine, it does not contain the virus. Instead, the vaccine acts like the virus, causing the body to make proteins that can block infection from the actual virus. More than 76 million vaccines have been given. Common side effects include mild pain and redness where the vaccine was injected. Rarely those vaccinated have reported fainting, dizziness, and/or nausea.

The HPV vaccine works almost 100%  
of the time at preventing the most  
common HPVs from causing disease.

Getting the HPV vaccine doesn't increase  
likelihood of sexual activity. Scientific studies  
show that vaccinating adolescents against HPV is  
not related to sexual activity.



Abnormal pap smears can be a first sign of serious problems like cervical cancer. Cervical cancer is the 14th most common cancer in the U.S. among women. Untreated cervical cancer in the U.S. leads to more than 4000 deaths per year.

### Who should get vaccinated?

Providers at the Child Health Clinic agree, **THE BEST** time for your son or daughter to start the vaccine series is when they are between 11 or 12 years of age.

### Benefits of vaccinating at a young age:

Preteens' bodies have a stronger response to the vaccine, so protection from the disease may be longer.

Boys 13-21 and girls 13-26 years old who have not had  
the vaccine should get the vaccine ASAP.

## HUMAN PAPILLOMAVIRUS (HPV) FACTS

For more info, please visit  
<http://www.ivac-hpv.org>

### HPV is Common & May Lead to Serious Disease

- HPV is the most common sexually transmitted infection in the US.
- Most symptoms of HPV can't be seen, so a person can be infected and/or spread HPV without knowing.
- Up to 75% of HPV infections occur in people 15 through 24 years old.
- Most men will never know they have an HPV infection since there is no routine test for HPV in men.
- Cervical cancer is the 13th most common cancer in US females.
- HPV infection can lead to genital warts, abnormal pap smear tests, and/or cancer of the cervix, vagina, penis, anus, tonsils, and throat.

The risk of HPV infection is high.

Even with just one partner the chances of being infected with HPV after starting to have sex are:

More than 1 out of 5 within 6 months



More than 1 out of 3 within a year



- There is NO CURE for HPV Infection. Skin-to-Skin contact is how the virus is spread. Intercourse is not required.

### The HPV Vaccine Safely Protects Boys and Girls from HPV

#### Why get vaccinated?

The HPV vaccine works almost 100% of the time at preventing the most common HPVs from causing disease.

The HPV vaccine protects against genital warts, and cancers of the throat, penis, anus, cervix, vulva, and vagina.

The HPV vaccine is safe. You cannot get HPV from the vaccine. More than 76 million vaccines have been given. Common side effects include mild pain and redness where the vaccine was injected. Rarely those vaccinated have reported fainting, dizziness, and/or nausea.

Getting the HPV vaccine doesn't increase likelihood of sexual activity. Scientific studies show that vaccinating adolescents against HPV is not related to sexual activity.

Treatment of problems associated with HPV, like genital warts, are painful and often require multiple treatments.

Who should get vaccinated? Children as young as 9 years of age can start the vaccine series.

Youth Clinic providers agree, THE BEST time for your BOY or GIRL to get the vaccine is when they are 11 —12 years old.

BOYS 11 – 12 Years Old



GIRLS 11 – 12 Years Old

Benefits of vaccinating at a young age:

1. Preteens' bodies have a stronger response to the vaccine, so protection from the disease may be longer.
2. Your child will be protected before he or she even thinks about sex.

Boys 13-21 and girls 13-26 years old who have not had the vaccine should get the vaccine ASAP



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# Results

# Impact of the Intervention on HPV Vaccination

	Control		Intervention		Ratio of ORs (D/D)
	OR (95% CI) HPV Vaccine Uptake - post intervention compared to baseline		OR (95% CI) HPV Vaccine Uptake - post intervention compared to baseline		
	Unadjusted	Adjusted*	Unadjusted	Adjusted*	
HPV Series Initiation	1.13 (1.05-1.21)	1.11 (1.03-1.20)	1.61 (1.49-1.73)	1.62 (1.50-1.75)	<b>1.46 (1.31-1.62)</b>
HPV Series Completion	0.66 (0.57-0.76)	0.65 (0.56-0.75)	1.05 (0.90-1.22)	1.01 (0.87-1.18)	<b>1.56 (1.27-1.92)</b>

\*Models adjusted for type of practice, medical specialty, % VFC coverage, number of providers, patient age, patient insurance status and patient sex.

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# Other Outcomes

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- Compared to Control, PCOM led to:
  1. **Improved provider self-efficacy** for addressing HPV vaccine hesitancy
  2. Caused **no increase in time** spent discussing the vaccine with hesitant parents



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# Most Important Toolkit Components

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- Communication Training was the most used and useful intervention component
  - MI was the most useful component for HPV vaccine hesitant parents
- Fact sheet also highly used and useful
- Use of both was sustained over a 12 month period



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# Quotes from Providers - MI

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*“ anytime that you run up to a parent that is having difficulty understanding a decision you’re trying to help them with, if you can back off a little bit and approach it in a different way, that draws a little bit more on what they’re thinking about, you have a better chance of aligning the interests of both parties. So I think it’s a powerful technique.”*





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# Quotes from Providers - MI

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*“That you could continue the conversation when you were delivered a stop sign. . . . [By] asking permission, ‘Well, can I tell you some of my thoughts or my ideas?’ . . . because I was delivering it in a manner that gave them the choice, they’d say ‘Sure’ [to HPV vaccine information].”*



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# Quotes from Providers - FS

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*“It’s laid out more easily, and is visually stimulating. It’s not just paragraph after paragraph...And [it was especially helpful] because we took part in designing it...We picked which pictures, graphics, and information went on it, to tailor to our practice”*



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# Implications - MI

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**MI, which capitalizes on parents' intrinsic motivation, is one of few interventions specifically shown to address vaccine hesitancy and empower providers.**

Future research should explore use of this approach for vaccination more broadly



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# Implications – Fact Sheets

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- Customized fact sheets are low cost and relatively easy to create
- Engaging providers and staff in the process seemed to increase their interest and investment in using them
- Automated systems could be created to allow providers to do this themselves



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# The Future

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- Testing a pared down PCOM intervention
- Testing different dissemination methods
- Use of Fact Sheets for other vaccines
- Comparing
  - Presumptive vs.
  - Presumptive + FS + MI



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# MI for the Vaccine Conversation

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JAMA Pediatrics | [Original Investigation](#)

## Effect of a Health Care Professional Communication Training Intervention on Adolescent Human Papillomavirus Vaccination A Cluster Randomized Clinical Trial

Amanda F. Dempsey, MD, PhD, MPH; Jennifer Pyrznowski, MSPH; Steven Lockhart, MPH; Juliana Barnard, MA;  
Elizabeth J. Campagna, MS; Kathleen Garrett, MA; Allison Fisher, MPH; L. Miriam Dickinson, PhD; Sean T. O'Leary, MD, MPH



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# Use of Intervention Components



Academic Pediatrics



Available online 11 August 2018

In Press, Accepted Manuscript 



Original Article

## Evaluation of the Implementation of a Multi-Component Intervention to Improve Healthcare Provider Communication about HPV Vaccination

Jenna E. Reno PhD <sup>a</sup>  , Sean T. O'Leary MD, MPH <sup>b</sup>, Jennifer Pyrzanowski MSPH <sup>b</sup>, Steven Lockhart MPH <sup>b</sup>, Jacob Thomas MPH <sup>b</sup>, Amanda F. Dempsey MD, PhD, MPH <sup>b</sup>

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<https://doi.org/10.1016/j.acap.2018.08.004>

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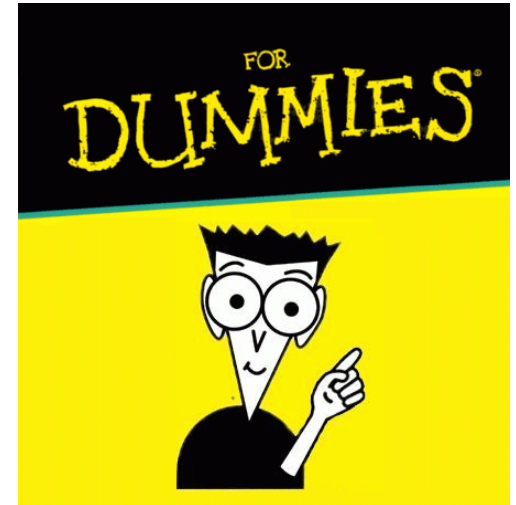
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# MI for Dummies

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Ask questions that parents are likely to say “yes” to.



MI Videos

<http://www.unity4teenvax.org/unity-projects/>



# **HPV Vaccine: Same Way, Same Day App**

- Brief, interactive role-play simulation
- Designed to enhance healthcare professionals' ability to introduce HPV vaccine and address hesitant parents' concerns
- Developed by Academic Pediatric Association, American Academy of Pediatrics, and Kognito
- Free
- Available for mobile devices:



– From the Google Play Store

[https://play.google.com/store/apps/details?id=com.kognito.hpv\\_immunization](https://play.google.com/store/apps/details?id=com.kognito.hpv_immunization)

– From the Apple iTunes Store

<https://itunes.apple.com/us/app/hpv-vaccine-same-way-same-day/id1356847181?mt=8>



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✓ – From the Google Play Store  
[https://play.google.com/store/apps/details?id=com.kognito.hpv\\_immunization](https://play.google.com/store/apps/details?id=com.kognito.hpv_immunization)

– From the Apple iTunes Store  
<https://itunes.apple.com/us/app/hpv-vaccine-same-way-same-day/id1356847181?mt=8>



# **HPV Vaccine: Same Way, Same Day App**

- Brief, interactive role-play simulation
- Designed to enhance healthcare professionals' ability to introduce HPV vaccine and address hesitant parents' concerns
- Developed by Academic Pediatric Association, American Academy of Pediatrics, and Kognito
- Free
- Available for mobile devices:



– From the Google Play Store

[https://play.google.com/store/apps/details?id=com.kognito.hpv\\_immunization](https://play.google.com/store/apps/details?id=com.kognito.hpv_immunization)

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# Thank You!

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