

# Role of School Nurses in HPV Vaccination Uptake

Brittany L. Rosen, PhD, MEd, CHES®

Assistant Professor of Pediatrics  
Division of Adolescent and Transition Medicine  
Cincinnati Children's Hospital Medical Center

College of Medicine  
University of Cincinnati



## Disclosures

- I received an honorarium in the past year from the Indiana Immunization Coalition for an invited presentation on healthcare providers HPV vaccine recommendation practices.

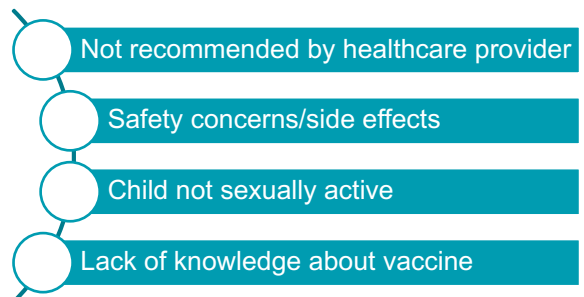


## Overview

- Review reasons parents do not vaccinate against HPV
- Discuss current HPV vaccine recommendation research
- Discuss school nurses' role as an opinion leader for the HPV vaccine
- Review school nurses' role in HPV vaccine recommendation research



## Reasons Cited for Parents Not Vaccinating



Ames et al., 2017; Gilkey & McRee, 2016; Kinder, 2017; Rodriguez, 2017; Rosen et al., 2018; Thompson et al., 2017



## Reasons Cited for Parents Not Vaccinating

- Not recommended by healthcare provider
- Safety concerns/side effects
- Child not sexually active
- Lack of knowledge about vaccine

Ames et al., 2017; Gilkey & McRee, 2016; Kinder, 2017; Rodriguez, 2017; Rosen et al., 2018; Thompson et al., 2017



## Reasons Cited for Parents Not Vaccinating

- Not recommended by healthcare provider
- Safety concerns/side effects
- Child not sexually active
- Lack of knowledge about vaccine

Ames et al., 2017; Gilkey & McRee, 2016; Kinder, 2017; Rodriguez, 2017; Rosen et al., 2018; Thompson et al., 2017



## Reasons Cited for Parents Not Vaccinating

- Not recommended by healthcare provider
- Safety concerns/side effects
- Child not sexually active
- Lack of knowledge about vaccine

Ames et al., 2017; Gilkey & McRee, 2016; Kinder, 2017; Rodriguez, 2017; Rosen et al., 2018; Thompson et al., 2017



## Reasons Cited for Parents Not Vaccinating

- Not recommended by healthcare provider
- Safety concerns/side effects
- Child not sexually active
- Lack of knowledge about vaccine

Ames et al., 2017; Gilkey & McRee, 2016; Kinder, 2017; Rodriguez, 2017; Rosen et al., 2018; Thompson et al., 2017



## Current HPV Vaccine Recommendation Research



This photo by Unknown Author is licensed under CC BY-ND.

- Strong recommendation
  - Presumptive statements
  - Bundle message
  - Same day, same way
- Consistent messages between healthcare team members

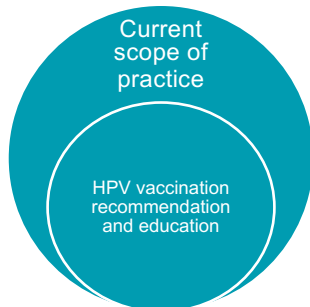
Brewer et al., 2017; Fontenot et al., 2018; Strum et al., 2015



## Gap in HPV Vaccine Research



## School Nurses' Practice and HPV Vaccination



## School Nurses as Opinion Leaders



- Diffusion of Innovations
- People search for advice from trusted informants about innovations
- Opinion leaders influence others' attitudes and behaviors

Dearing, Res Soc Work Pract, 2009; Rogers, Diffusions of Innovations, 2003



## Research in School Nurses' Role in HPV Vaccination

Rosen et al. reported in: *J Sch Health* 2015;85(2):73-81.

- SN had moderately high knowledge and attitudes
- SN reported not being opinion leaders for HPV vaccine
- SN reported not providing HPV vaccine education to parents

Rhodes et al. reported in: *J Community Health Nurs* 2017;34(4):180.

- 60% of SN disagreed they were opinion leaders
- SN reported not being confident in their ability to provide parents education about the HPV vaccine
- SN reported not providing HPV vaccine education to parents

Selvan et al. presented at NCI Cancer Center HPV Vaccination Meeting, 2018, Salt Lake City, UT

- One-third of SN had access to HPV vaccine educational materials



## Research in School Nurses' Role in HPV Vaccination

Rosen et al. reported in: *J Sch Health* 2015;85(2):73-81.

- SN had moderately high knowledge and attitudes
- SN reported not being opinion leaders for HPV vaccine
- SN reported not providing HPV vaccine education to parents

Rhodes et al. reported in: *J Community Health Nurs* 2017;34(4):180.

- 60% of SN disagreed they were opinion leaders
- SN reported not being confident in their ability to provide parents education about the HPV vaccine
- SN reported not providing HPV vaccine education to parents

Selvan et al. presented at NCI Cancer Center HPV Vaccination Meeting, 2018, Salt Lake City, UT

- One-third of SN had access to HPV vaccine educational materials



## Research in School Nurses' Role in HPV Vaccination

Rosen et al. reported in: *J Sch Health* 2015;85(2):73-81.

- SN had moderately high knowledge and attitudes
- SN reported not being opinion leaders for HPV vaccine
- SN reported not providing HPV vaccine education to parents

Rhodes et al. reported in: *J Community Health Nurs* 2017;34(4):180.

- 60% of SN disagreed they were opinion leaders
- SN reported not being confident in their ability to provide parents education about the HPV vaccine
- SN reported not providing HPV vaccine education to parents

Selvan et al. presented at NCI Cancer Center HPV Vaccination Meeting, 2018, Salt Lake City, UT

- One-third of SN had access to HPV vaccine educational materials



## Barriers for School Nurses to Recommend the HPV Vaccine

Lack of HPV and vaccine knowledge

Not seeing themselves as opinion leaders

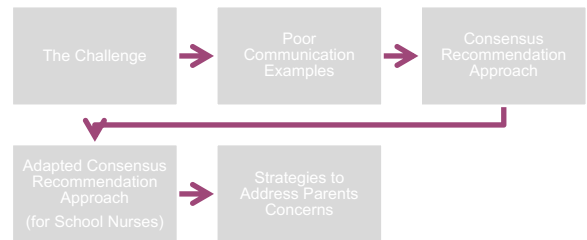
Lack of confidence in providing HPV vaccine education to parents



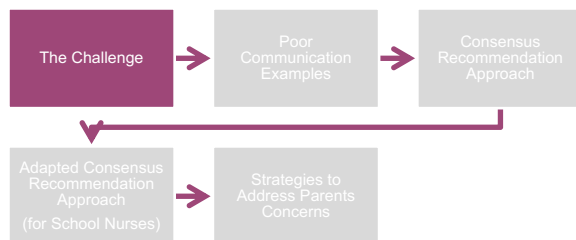
Switch to Dr. Gyan



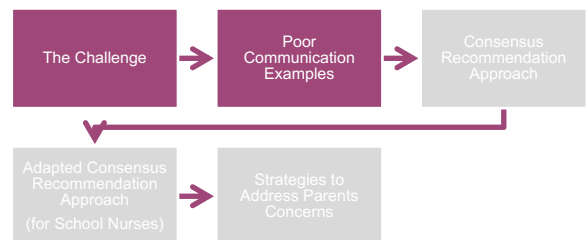
## Evidence-based HPV Vaccine Recommendations



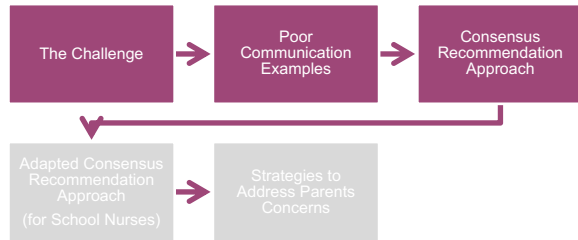
## Evidence-based HPV Vaccine Recommendations



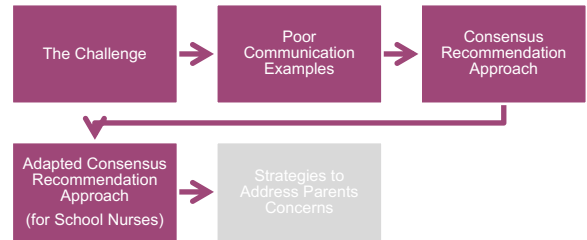
## Evidence-based HPV Vaccine Recommendations



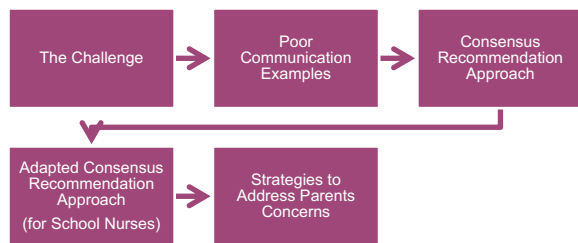
## Evidence-based HPV Vaccine Recommendations



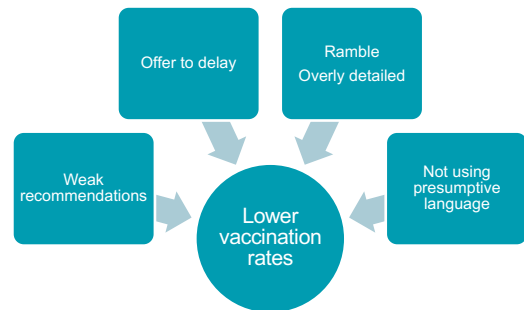
## Evidence-based HPV Vaccine Recommendations



## Evidence-based HPV Vaccine Recommendations



## The Challenge



## Examples of Poor Communication

- **“I like that & I would like for her to have that [HPV vaccine] but I don’t care when”**
- “Well, the thing is, it protects, the virus is passed back and forth between boys & girls.”
- “Women can actually pick up cancer from this vaccine.”
- “But as long as it’s before he’s sexually active which he better not be because then he’d have to answer to his pediatrician and his mama.”

Sturm et al. J Adolesc Health 2017.



## Examples of Poor Communication

- “I like that & I would like for her to have that [HPV vaccine] but I don’t care when”
- **“Well, the thing is, it protects, the virus is passed back and forth between boys & girls.”**
- “Women can actually pick up cancer from this vaccine.”
- “But as long as it’s before he’s sexually active which he better not be because then he’d have to answer to his pediatrician and his mama.”

Sturm et al. J Adolesc Health 2017.



## Examples of Poor Communication

- “I like that & I would like for her to have that [HPV vaccine] but I don’t care when”
- “Well, the thing is, it protects, the virus is passed back and forth between boys & girls.”
- **“Women can actually pick up cancer from this vaccine.”**
- “But as long as it’s before he’s sexually active which he better not be because then he’d have to answer to his pediatrician and his mama.”

Sturm et al. J Adolesc Health 2017.



## Examples of Poor Communication

- “I like that & I would like for her to have that [HPV vaccine] but I don’t care when”
- “Well, the thing is, it protects, the virus is passed back and forth between boys & girls.”
- “Women can actually pick up cancer from this vaccine.”
- **“But as long as it’s before he’s sexually active which he better not be because then he’d have to answer to his pediatrician and his mama.”**

Sturm et al. J Adolesc Health 2017.





## Consensus Recommendation Approach

- Your daughter/son will get<sup>1</sup> three vaccines today<sup>2</sup>:
- Tdap to prevent pertussis, the first dose of HPV vaccine, which prevents cancers<sup>3</sup>, and meningococcal vaccine to prevent a serious brain infection.
- I strongly<sup>4</sup> recommend all three.
- What questions do you have?

1. Presumptive
2. Same day
3. Bundled, with HPV in the middle
4. Strong recommendation

## Evidence Supporting Consensus Recommendation Approach

- |  |  |
|--|--|
| Sturm et al. reported in: <i>J Adolesc Health</i> 2017;61:246-251.     | • HCP did not use a presumptive approach and/or recommended delaying, children were less likely to receive HPV vaccine |
| Brewer et al. reported in: <i>Pediatrics</i> 2016;139:e20161764.       | • HCPs trained in presumptive approach improved their vaccination rates  |
| Dempsey et al. reported in: <i>JAMA Pediatr</i> 2018; 172(5):e180016.. | • Multi-faceted provider training resulted in increased HPV vaccination rates  |

## Evidence Supporting Consensus Recommendation Approach

- |  |  |
|--|--|
| Sturm et al. reported in: <i>J Adolesc Health</i> 2017;61:246-251.     | • HCP did not use a presumptive approach and/or recommended delaying, children were less likely to receive HPV vaccine |
| Brewer et al. reported in: <i>Pediatrics</i> 2016;139:e20161764.       | • HCPs trained in presumptive approach improved their vaccination rates  |
| Dempsey et al. reported in: <i>JAMA Pediatr</i> 2018; 172(5):e180016.. | • Multi-faceted provider training resulted in increased HPV vaccination rates  |



## Evidence Supporting Consensus Recommendation Approach

Sturm et al. reported in: *J Adolesc Health* 2017;61:246-251.

- HCP did not use a presumptive approach and/or recommended delaying, children were less likely to receive HPV vaccine

Brewer et al. reported in: *Pediatrics* 2016;139:e20161764.

- HCPs trained in presumptive approach improved their vaccination rates

Dempsey et al. reported in: *JAMA Pediatr* 2018; 172(5):e180016..

- Multi-faceted provider training resulted in increased HPV vaccination rates



## Consensus Recommendation Approach

- Your daughter/son will get<sup>1</sup> three vaccines today<sup>2</sup>:
- Tdap to prevent pertussis, the first dose of HPV vaccine, which prevents cancers<sup>3</sup>, and meningococcal vaccine to prevent a serious brain infection.
- I strongly<sup>4</sup> recommend all three.
- What questions do you have?

1. Presumptive
2. Same day
3. Bundled, with HPV in the middle
4. Strong recommendation



## Adapted Consensus Recommendation Approach

- Your daughter/son needs three vaccines:



## Adapted Consensus Recommendation Approach

- Your daughter/son needs three vaccines:
- Tdap to prevent pertussis, the first dose of HPV vaccine, which prevents cancers<sup>1</sup>, and meningococcal vaccine to prevent a serious brain infection.

1. Bundled, with HPV in the middle



## Adapted Consensus Recommendation Approach

- Your daughter/son needs three vaccines:
- Tdap to prevent pertussis, the first dose of HPV vaccine, which prevents cancers<sup>1</sup>, and meningococcal vaccine to prevent a serious brain infection.
- I strongly<sup>2</sup> recommend all three.
- What questions do you have?

1. Bundled, with HPV in the middle
2. Strong recommendation

## Adapted Consensus Recommendation Approach

- Your daughter/son needs three vaccines:
- Tdap to prevent pertussis, the first dose of HPV vaccine, which prevents cancers<sup>1</sup>, and meningococcal vaccine to prevent a serious brain infection.
- I strongly<sup>2</sup> recommend all three.
- What questions do you have?

1. Bundled, with HPV in the middle
2. Strong recommendation

## Adapted Consensus Recommendation Approach

- Your daughter/son needs three vaccines:
- Tdap to prevent pertussis, the first dose of HPV vaccine, which prevents cancers<sup>1</sup>, and meningococcal vaccine to prevent a serious brain infection.
- I strongly<sup>2</sup> recommend all three.
- What questions do you have?

1. Bundled, with HPV in the middle
2. Strong recommendation

## Addressing Hesitant Parents

Ask open-ended questions about their hesitancy regarding vaccination

Reflect on parent's comment and validate their concern

Give **NO** unsolicited advice, but ask if you can share what you know

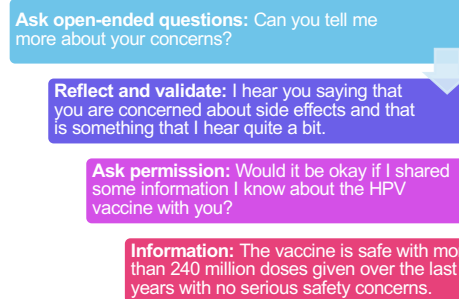
Provide accurate information without medical jargon

## Example: Addressing Hesitant Parents

- Narrative: Caregiver of 11-year-old girl calls asking which vaccines the child needs. After using the adapted consensus recommendation approach, caregiver states she is not sure about the HPV vaccine because it has bad side effects.



## Example: Addressing Hesitant Parents



© Behavioral Health and Wellness Program,  
University of Colorado School of Medicine



## Accurate Information without Medical Jargon

Safety

Age and sex

Boys and HPV

School requirements



## Accurate Information without Medical Jargon: Safety Concerns

### Vaccine is safe

- Two hundred forty million doses have been administered over the last 10 years with no serious safety concerns.

### Side effects can include:

- pain, swelling, or redness, which is normal and should go away in a day or two.
- Sometimes kids faint after they get shots – we make sure kids don't fall and get injured by having them stay seated after the shot for 15 minutes.



## Accurate Information without Medical Jargon: Age and Sex Concerns

### Prevents cancer

- Fourteen million people are infected with HPV each year.
- Thirty-one thousand men and women are diagnosed each year with a cancer caused by HPV.

### Vaccinate earlier rather than later

- Like all vaccines, we want to vaccinate earlier than later
- If families wait, a child may need 3 shots instead of 2 shots.

### Not linked with sex

- Studies tell us that getting HPV vaccine doesn't make kids more likely to start having sex.
- We want to give the vaccine before he/she becomes sexually active so that they can be protected.



## Accurate Information without Medical Jargon: Boys and HPV

### Prevent future infection

- HPV vaccine can help prevent future infections that can lead to cancers of the penis, anus, and back of the throat in men.



## Accurate Information without Medical Jargon: School Requirements

### HPV vaccine is recommended

- Remind families that school requirements don't always reflect the most current recommendations, and HPV vaccination is recommended by experts at the CDC and major medical organizations.



## School-Located Vaccination Programs

President's Cancer Panel. Bethesda (MD): President's Cancer Panel; 2018 Nov.

- Challenges: complicated billing, competing priorities, low demand
- May expand access in rural areas
- School-based health centers

Rodriguez et al. reported in: *Am J Prev Med.* 2019; 56(4):591-602

- Meta-analysis found SLV clinics improved uptake
- Addressed access, convenience, reach, and diverse population

Vanderpool et al. reported in: *Am J Prev Med* 2015;49:317-23.

- Found SLV program to be successful
- School nurse's role included: obtaining consent forms, access to school resources, communicating with parents and students, and running SLV clinic



## School-Located Vaccination Programs

President's Cancer Panel. Bethesda (MD): President's Cancer Panel; 2018 Nov.

- Challenges: complicated billing, competing priorities, low demand
- May expand access in rural areas
- School-based health centers

Rodriguez et al. reported in: *Am J Prev Med*. 2019; 56(4):591-602

- Meta-analysis found SLV clinics improved uptake
- Addressed access, convenience, reach, and diverse population

Vanderpool et al. reported in: *Am J Prev Med* 2015;49:317-23.

- Found SLV program to be successful
- School nurse's role included: obtaining consent forms, access to school resources, communicating with parents and students, and running SLV clinic



## School-Located Vaccination Programs

President's Cancer Panel. Bethesda (MD): President's Cancer Panel; 2018 Nov.

- Challenges: complicated billing, competing priorities, low demand
- May expand access in rural areas
- School-based health centers

Rodriguez et al. reported in: *Am J Prev Med*. 2019; 56(4):591-602

- Meta-analysis found SLV clinics improved uptake
- Addressed access, convenience, reach, and diverse population

Vanderpool et al. reported in: *Am J Prev Med* 2015;49:317-23.

- Found SLV program to be successful
- School nurse's role included: obtaining consent forms, access to school resources, communicating with parents and students, and running SLV clinic



## Toolkits and Resources for School Nurses

- NASN Middle School Health Starts Here: <https://www.nasn.org/nasn/programs/educational-initiatives/middle-school-health>
- CDC Tools for Your Office: <https://www.cdc.gov/hpv/hcp/tools-materials.html>
- National Foundation for Infectious Disease HPV Resource Center: <http://www.adolescentvaccination.org/professional-resources/hpv-resource-center>



## Contact Information

Brittany Rosen, PhD, MEd, CHES®  
Assistant Professor of Pediatrics  
Division of Adolescent and Transition Medicine  
Cincinnati Children's Hospital Medical Center

College of Medicine  
University of Cincinnati

Website: [cincinnatichildrens.org/bio/r/brittany-rosen](http://cincinnatichildrens.org/bio/r/brittany-rosen)

Email: [brittany.rosen@cchmc.org](mailto:brittany.rosen@cchmc.org)

Phone: 513-803-2911

