



HPV

BASICS AND BEYOND

CANDY GRAHAM, RN

JENNY MYERS, MPH

NORTH CAROLINA IMMUNIZATION PROGRAM

WHAT IS HPV?

- Human papillomavirus
- HPV infection is the most common sexually transmitted infection in the United States.
- More than 150 types
 - Most types cause common genital warts and cervical cell abnormalities
 - Some types act as carcinogens (high-risk types)
 - More than 40 types are sexually transmitted

HPV IS COMMON

- Almost every person who is sexually active will acquire HPV at some point in their life without HPV vaccination.
- ~14 million Americans, including teens, become infected with HPV each year
- Most HPV infections resolve spontaneously, while a small proportion become persistently infected.

HPV is a common virus that infects teens and adults.



80%

of people will get an HPV infection in their lifetime.



HPV VACCINE
IS CANCER PREVENTION

HPV TRANSMISSION

- Occurs most frequently with sexual intercourse
- Can occur when no penetration is involved – skin to skin
- Rare transmission from woman to a newborn infant has occurred
- Other nonsexual transmission has not been proven and is thought to be rare
- Infection with one type does not mean immunity to other types – a person can be infected with multiple types of the HPV virus
- Communicable during acute infection and persistent infection

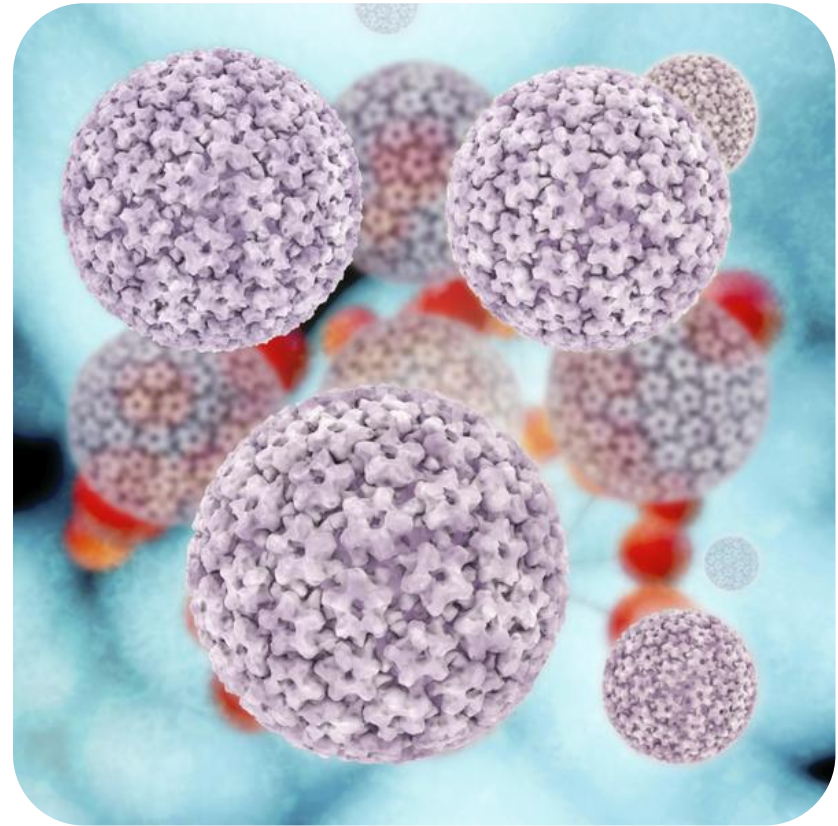
DISEASE BURDEN

- In the United States, an estimated 79 million persons are currently infected with HPV (men and women)
- 14 million new HPV infections occur annually
 - 50% are in persons 15-24 years of age
- Most people with HPV do not know that they are infected



HPV IS BELIEVED TO BE RESPONSIBLE FOR:

- 91% of cervical cancers,
- 75% of vaginal cancers,
- 69% of vulvar cancers,
- 63% of penile cancers,
- 91% of anal cancers, and
- 70% of oropharyngeal cancers



HPV TYPES

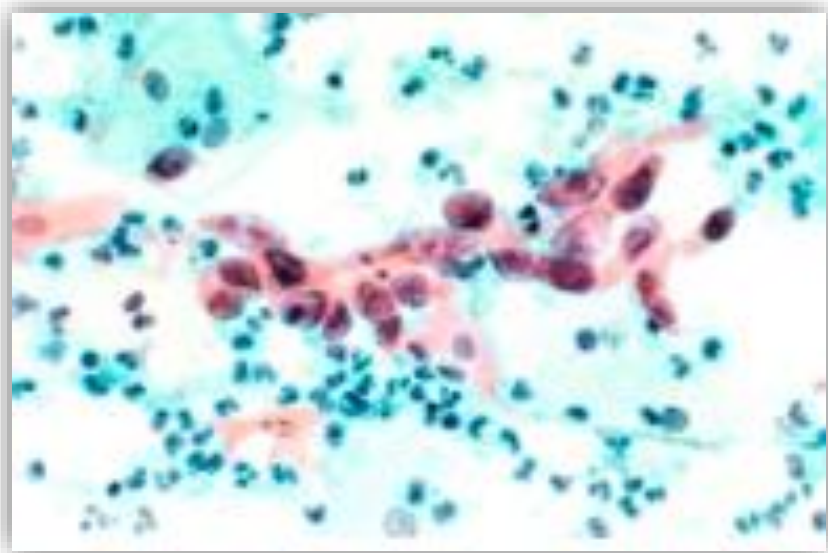
- HPV types 16 and 18 cause 63% of invasive HPV associated cancers in the US annually and 10% are attributable to types 31, 33, 45, 52 and 58 annually
- HPV types 31, 33, 45, 52 and 58 account for about 15% of cervical cancers
- An estimated 360,000 people in the US get genital warts each year
- Greater than 90% of these cases are caused by HPV types 6 and 11

HPV AND CERVICAL CANCER

- Cervical cancer is the first cancer in women to be identified as being caused almost exclusively by a virus.
- HPV is now a primary focus of the American Cancer Society and other cancer research organizations.

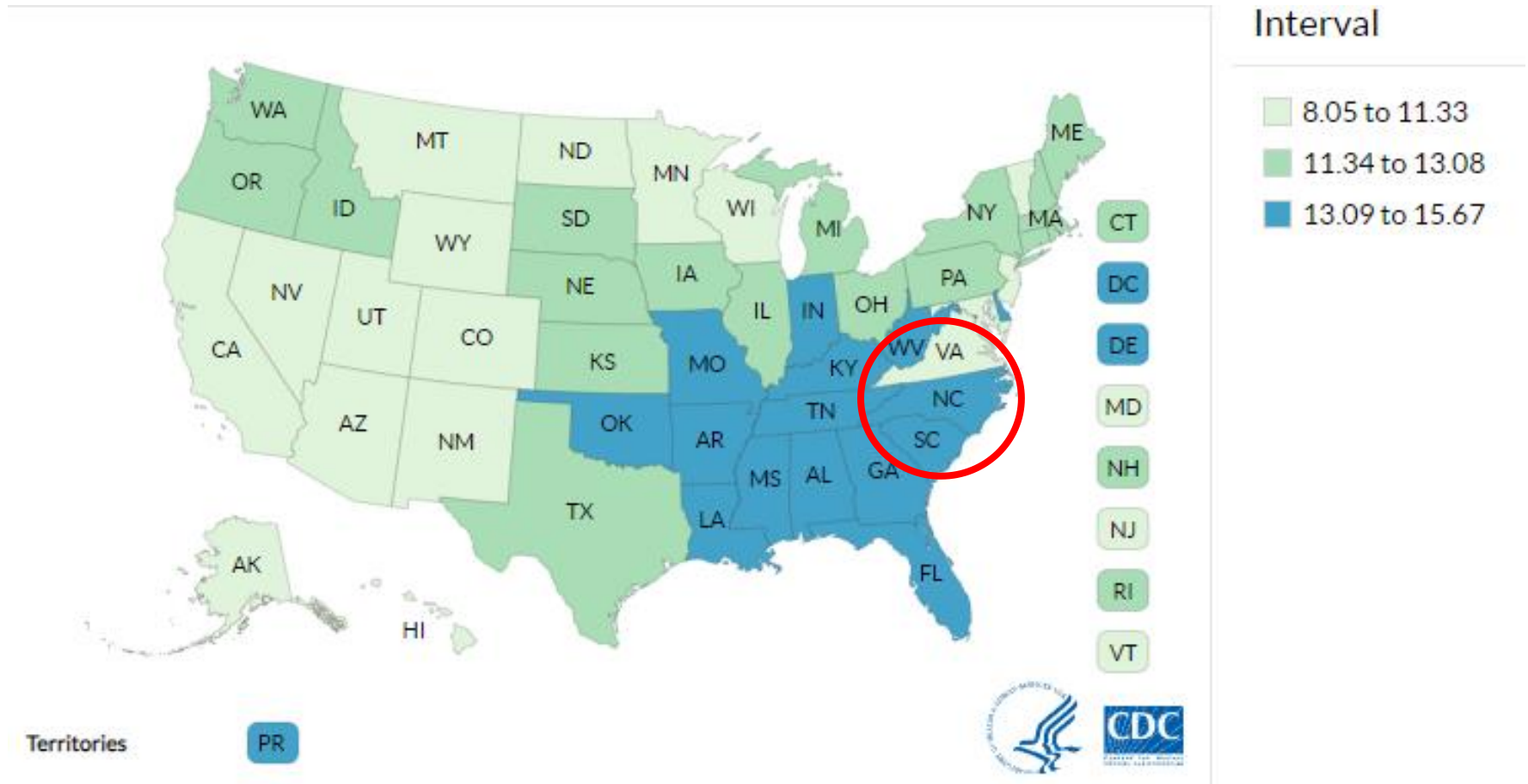
The screenshot shows the American Cancer Society website. At the top, there is a navigation bar with the ACS logo, a helpline number (1-800-227-2345), a live chat button, and links for 'Latest News' and 'English'. Below the navigation bar is a menu with categories: 'A-Z', 'STAY HEALTHY', 'TREATMENT & SUPPORT', 'OUR RESEARCH', 'GET INVOLVED', 'OUR PARTNERS', and 'ABOUT'. The main content area features a breadcrumb trail: 'HPV VACCINATION INFORMATION FOR HEALTH PROFESSIONALS'. The primary heading is 'Our HPV Vaccination Initiatives', followed by a paragraph: 'We work at the national and community level to increase HPV vaccination uptake. Our initiatives seek to advance best practices, increase collaboration, and provide leadership.' Below this is another heading, 'National HPV Vaccination Roundtable', with a paragraph: 'The National HPV Vaccination Roundtable, established by the American Cancer Society (ACS) and the Centers for Disease Control and Prevention (CDC) in 2014, is a national coalition of public organizations, private organizations, voluntary organizations, and invited individuals dedicated to reducing the incidence of and mortality from HPV-associated cancer in the U.S., through coordinated leadership and strategic planning.'

HPV AND CANCER



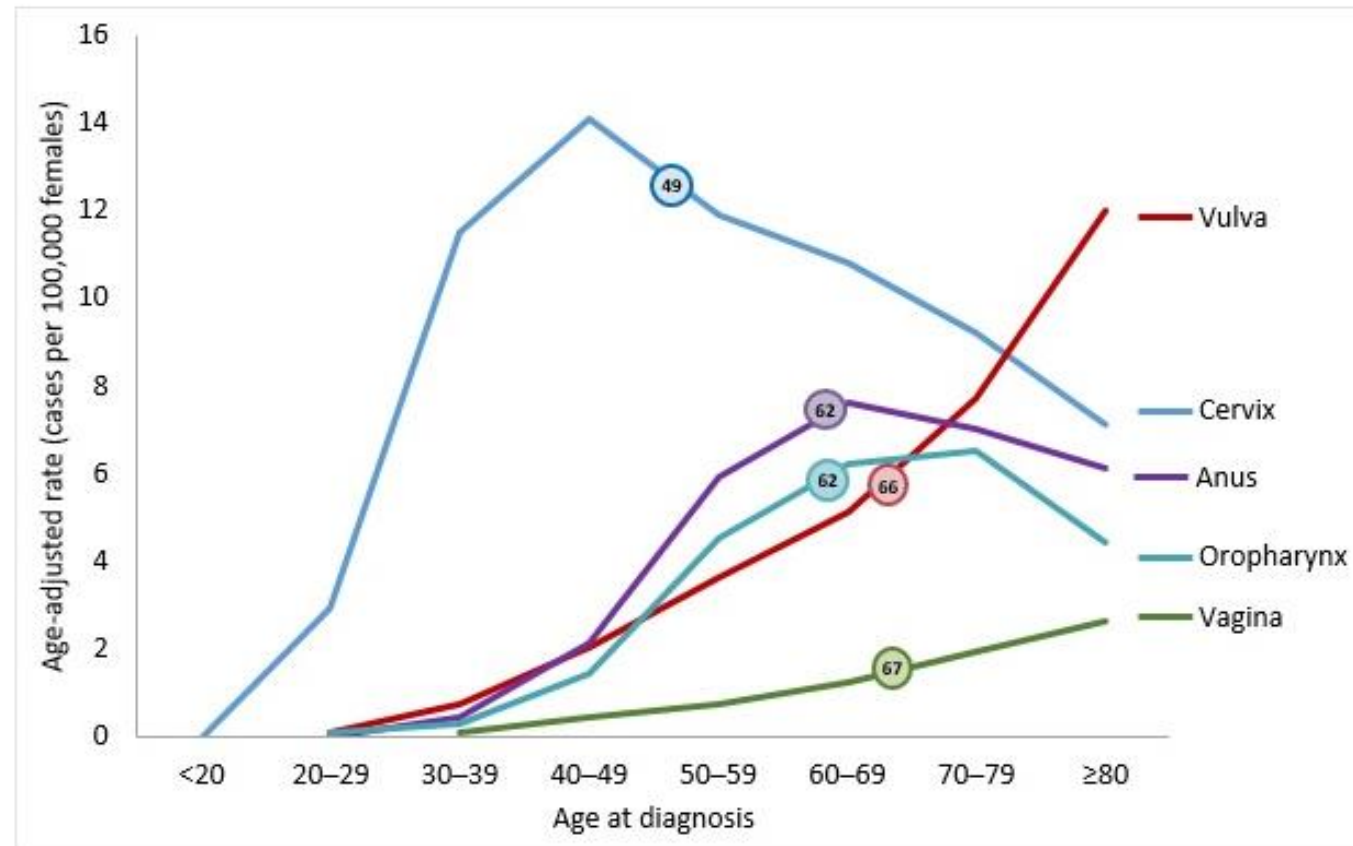
- High-risk HPV types (including types 16 and 18) are detected in 99% of cervical cancers
- Worldwide, the two most common types of cervical cancer (squamous cell carcinoma and adenocarcinoma) are both caused by HPV.
- Cervical cancer most commonly takes 10 years to 20 years or more to develop; women who are no longer sexually active should continue to be screened.

HPV-ASSOCIATED CANCER RATES BY STATE, 2011-2015



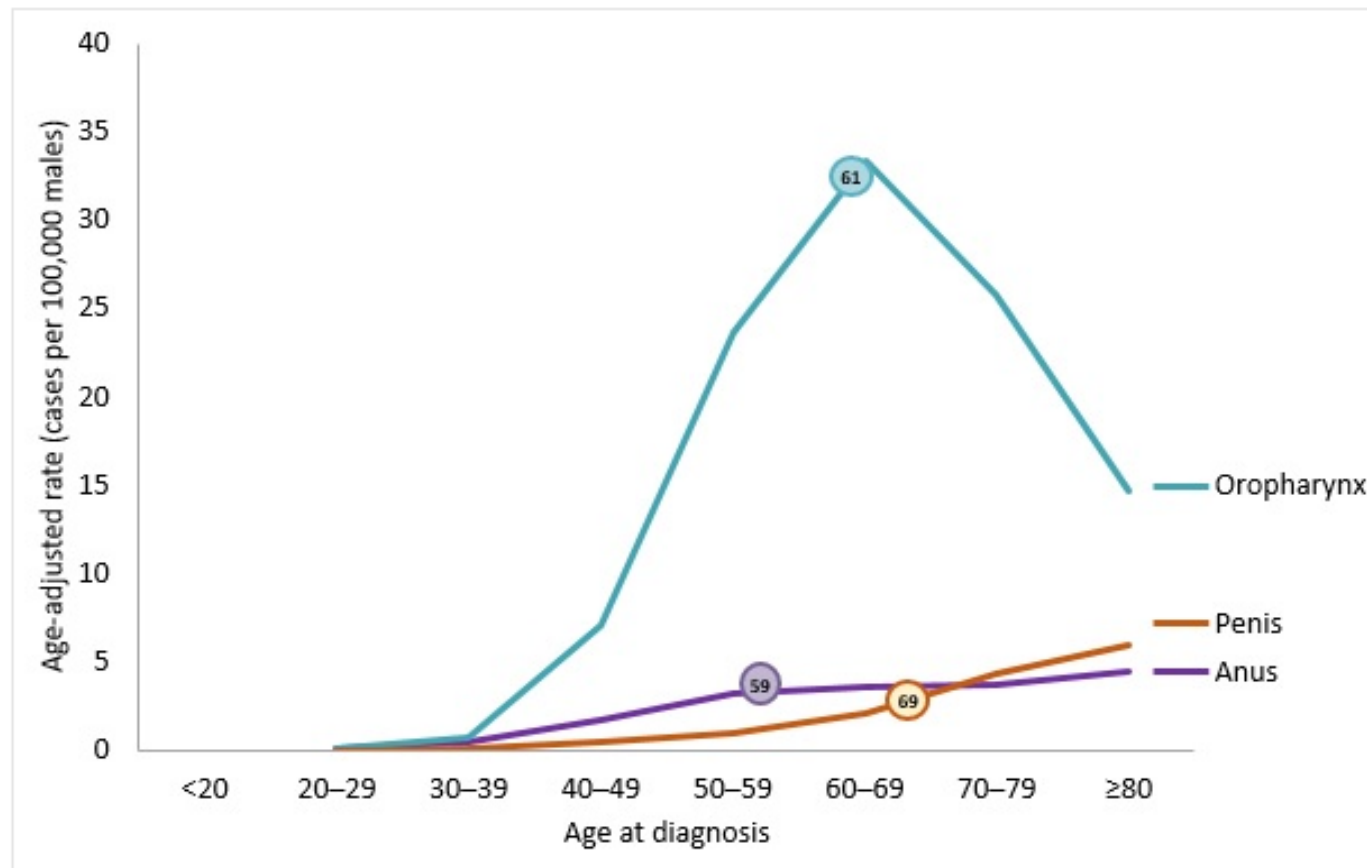
HPV-ASSOCIATED CANCERS BY AGE IN WOMEN

Rates of HPV-Associated Cancers and Age at Diagnosis Among Women in the United States per Year, 2011–2015



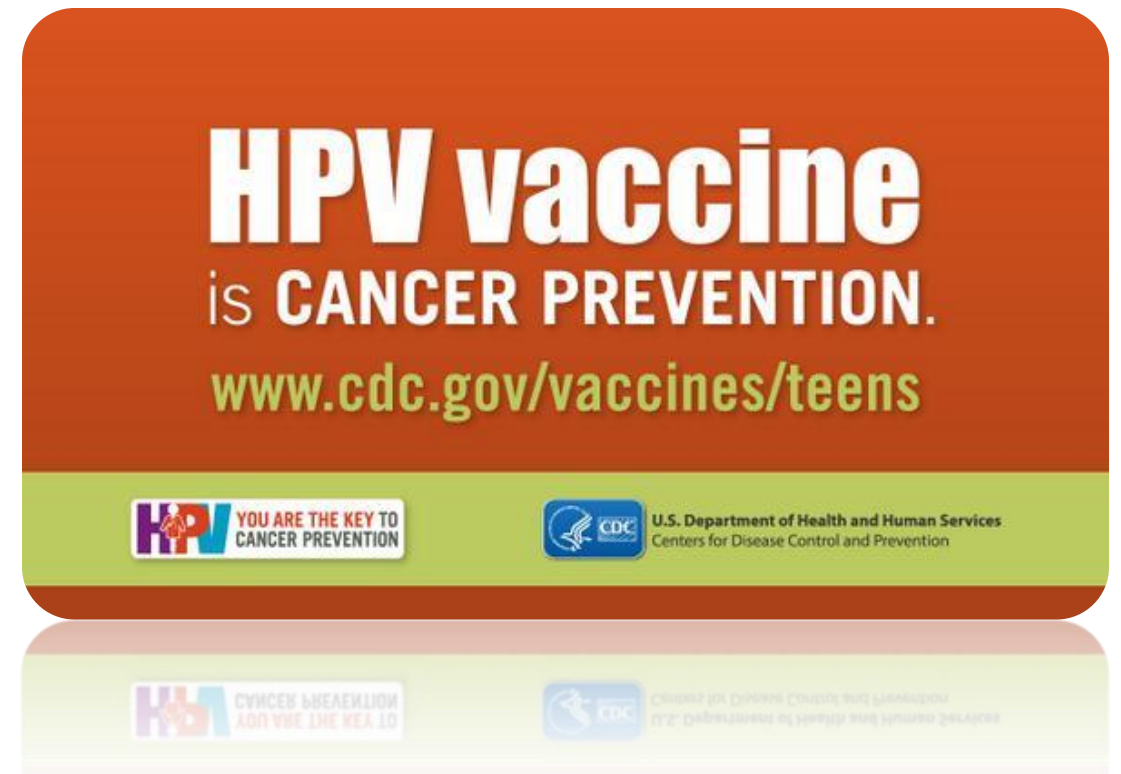
HPV-ASSOCIATED CANCERS BY AGE IN MEN

Rates of HPV-Associated Cancers and Age at Diagnosis Among Men in the United States per Year, 2011–2015



HPV PREVENTION AND TREATMENT

- Risk of transmission can be reduced with condoms and other physical barriers during sex – but does not eliminate the risk
- Monogamy is the best strategy if a person is sexually active to reduce their risk
- **HPV vaccine!**
- No direct treatment for HPV. Treatment is for the associated lesions (including genital warts, laryngeal papillomas, precancers, and cancers).



FISCAL IMPACT OF HPV

- Over **8 billion dollars** are spent annually on management of sequelae of HPV infections, primarily for the management of abnormal cervical cytology and treatment of cervical neoplasia.
 - Exceeds the economic burden of any other sexually transmitted infection except HIV.



CERVICAL CANCER SCREENING

Two tests available:

1. **Pap Test** – looks for precancerous and cancerous cells within the cervix
2. **DNA test** – looks for the DNA or RNA of the types of HPV virus that can cause these cellular changes (types 16 and 18)

Screening recommendations (for average-risk asymptomatic women*):

- **Age 21-29:** Pap test every three years
- **Age 30-65:** Pap test and HPV DNA test every 5 years; or Pap Test every 3 years

*women with certain risk factors may need to have more frequent screening or continue screening beyond age 65. Risk factors include being infected with HIV, being immunosuppressed, and having been treated for a precancerous cervical lesion or cervical cancer.

There is no HPV test currently for use in men.

Screening won't protect your patients from most HPV cancers.

protect your preteen patients today with HPV vaccine.

Cervical Cancer

Just the tip of the iceberg.

Even with screening, HPV causes
10,800 cases of cervical cancer
each year in the U.S.

Source: <http://www.cdc.gov/ncipc/dp/201404/cervical.htm>

Cervical cancer is the only type of HPV cancer for which there is a recommended screening test.

Cervical Precancers

While cervical precancers are routinely screened for, these precancers may require invasive testing and treatment.

Source: www.ncbi.nlm.nih.gov/pmc/articles/PMC3412161/

Cases Every Year

~300,000

High Grade
Cervical
Lesions

Other HPV Cancers

Cases Every Year

800 Penile Cancer

3,300 Vulvar &
Vaginal Cancer

5,900 Anal Cancer

12,900 Oropharyngeal
Cancer

Recommended cancer screening tests are not available yet for these cancers. These cancers may not be detected until they cause health problems.

OVER 90%

of HPV cancers are preventable through HPV vaccination.

Source: <http://www.cdc.gov/ncipc/dp/201404/cervical.htm>

Last Update: AUGUST 2014

There are no screening tests available for HPV-associated non-cervical cancers.

#PreventCancerTogether

HPV VACCINE
IS CANCER PREVENTION

www.cdc.gov/HPV

"HPV vax protects your child from cervical and other cancers."

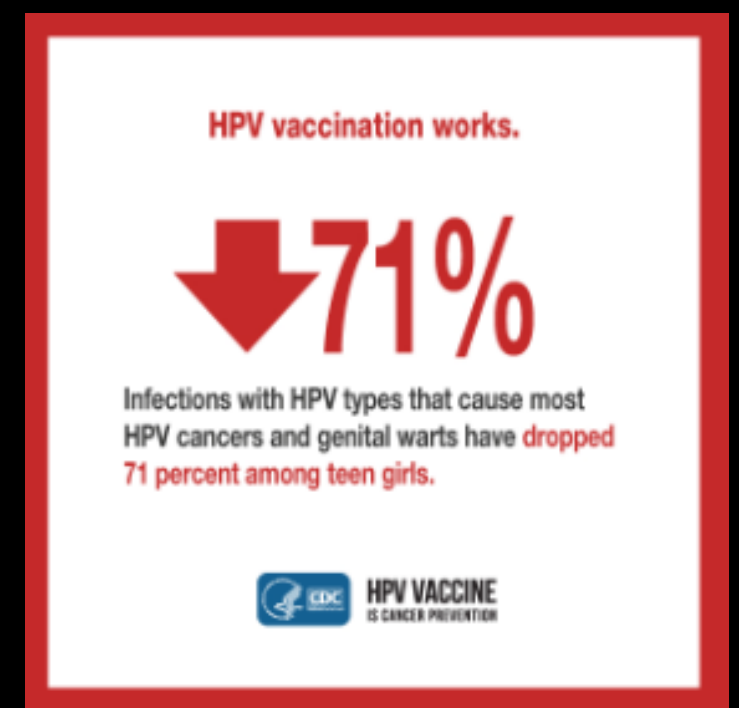
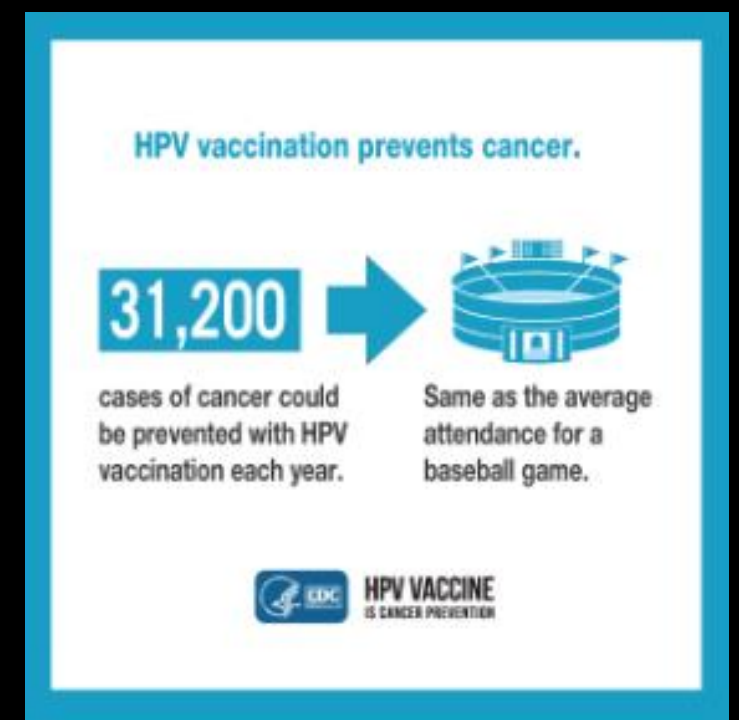
HPV VACCINE

- One vaccine licensed in the US
- Gardasil 9 manufactured by Merck
- Protects against 7 types of cancer causing HPV – 16, 18, 31, 33, 45, 52, 58 and 2 types of HPV that cause most genital warts – 6 and 11
- The vaccine is licensed for use in females and males ages 9-45 years



HPV VACCINE EFFICACY

- Since the HPV vaccine was introduced over 10 years ago, HPV infections have dropped significantly.
 - Infections with HPV types that cause most HPV cancers and genital warts have dropped 71% among teen girls.
- HPV vaccination *can* prevent over 90% of HPV-related cancers from ever developing in men and women.
- Australia on track to eliminate cervical cancer after implementing a rigorous HPV vaccination campaign.
[https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(18\)30183-X/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(18)30183-X/fulltext)



ACIP RECOMMENDATIONS

- ACIP recommends routine HPV vaccine for females and males beginning at age 11 or 12 years – can be started as early as 9 years
- Vaccine is also recommended for females age 13 through 26 years and males 13 through 21 years who have not been vaccinated previously or who have not completed the series.
- Vaccine is also recommended for MSM 22 through 26 years of age or are immunocompromised as a result of infection including HIV, disease, or medication.
- Other males 22-26 years may be vaccinated at the clinician's discretion.



JUST 2 DOSES
OF HPV VACCINE
AT AGE 11 OR 12
PREVENTS
HPV CANCERS

[LEARN MORE >](#)

 **HPV VACCINE**
IS CANCER PREVENTION

The advertisement is a rectangular graphic with a light blue background and a white bottom section. The top text is in white and red, enclosed in large red brackets. A white button with a right-pointing arrow is centered below the main text. The bottom section features the CDC logo on the left and the text 'HPV VACCINE IS CANCER PREVENTION' on the right.

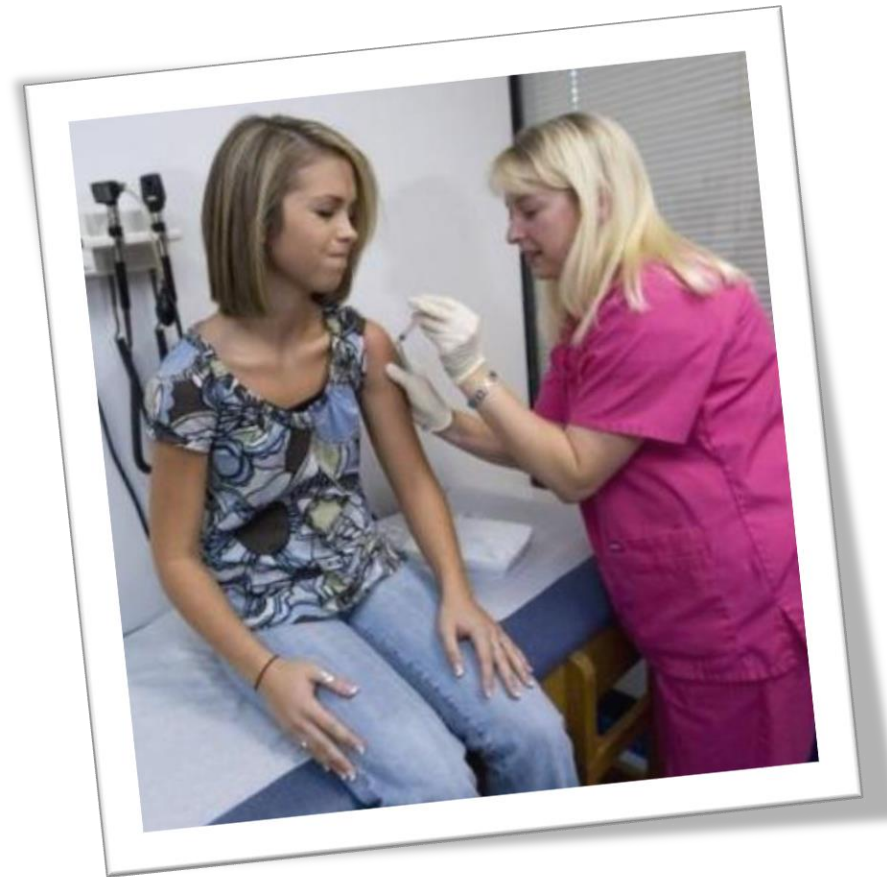
LICENSURE VS. RECOMMENDATION

- The FDA has licensed the vaccine to be given to males and females through 45 years of age, however, ACIP does not recommend routine vaccination of persons older than 26.
- HPV vaccine should be given prior to potential exposure to HPV through sexual contact
- HPV vaccine is NOT required by NC Law
- Garrett's Law mandates that NC schools provide parents and guardians with information about HPV and the vaccine available to protect against it. (2007)



VACCINE SCHEDULE

- Adolescents who start the series before 15 years of age:
 - Give 2 doses separated by 6-12 months
 - A minimum interval of 5 calendar months between first and second doses
- Adolescents who start the series after 15 years of age and for people with immunocompromising conditions (cancers, HIV, or taking immunosuppressive drugs):
 - Give 3 doses at 0, 1-2 months, and 6 months
 - Minimum interval between 1st and 2nd dose is 4 weeks; minimum interval between 2nd and 3rd dose is 12 weeks; minimum interval between 1st and 3rd dose is 5 calendar months
- ACIP does not recommend additional doses of Gardasil 9 for persons who started or completed the series with the bivalent or quadrivalent vaccine



WHY VACCINATE PRE-TEENS?

5 reasons why the HPV vaccination is recommended for pre-teens



#5

Better immunity

After receiving HPV vaccine pre-teens make more infection fighting antibodies than older teens. That is why they need only 2 doses of the vaccine are recommended at this age, instead of 3.

#4

More chances to vaccinate

Every visit on or after the 9th birthday is an opportunity to provide the vaccine.

#3

Low risk of exposure

HPV vaccine only works if the series is complete before a person is infected. Almost no 9-12 year olds have HPV.

#2

Long lasting

Current evidence shows that the HPV vaccination does not wear off!

#1

More effective

Early vaccination prevents substantially more pre-cancer than late vaccination.

cervivor
informed. empowered. alive.
www.cervivor.org

This content was supported by the Grant or Cooperative Agreement Number, 5H23IP000952, funded by the Centers for Disease Control and Prevention. The content is solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



HPV VACCINE SAFETY

INFORMATION FOR PARENTS

| DISEASES and the VACCINES THAT PREVENT THEM |

HPV Vaccines Are Safe For Your Child

IMPORTANT CONCEPTS

HPV vaccines are very safe. CDC has carefully studied the risks of HPV vaccination. The benefits of HPV vaccination, such as prevention of cancer, far outweigh the risks of possible side effects.

HPV vaccines are safe and recommended for girls and boys at age 11 or 12

Human papillomavirus (HPV) is a common virus that affects men and women. HPV can cause cancers of the cervix, vagina, and vulva in women; cancer of the penis in men, and cancers of the anus and throat in men and women.

HPV vaccination is recommended for girls and boys at ages 11 or 12. There are three HPV vaccines approved by the Food and Drug Administration (FDA) and recommended by the Centers for Disease Control and Prevention (CDC) to protect against HPV and the cancers it can cause.

Like all vaccines used in the United States, HPV vaccines are required to go through years of safety testing before they are approved by the FDA. CDC and FDA closely monitor vaccines to make sure they are safe even after they are available to the public.

HPV vaccines have good safety records. Studies have shown that each HPV vaccine is very safe, and careful safety monitoring has not shown any problems.

The safety of HPV vaccines was tested in thousands of volunteers before the vaccines were approved

	How many people was it tested on?	When was it approved?	Who is it recommended for?
Gardasil	More than 25,000 volunteers	2006	Girls and boys at age 11 or 12
Cervarix	More than 30,000 volunteers	2009	Girls age 11 or 12
Gardasil 9	More than 15,000 volunteers	2014	Girls and boys at age 11 or 12 years

Like any vaccine or medicine, HPV vaccines can cause side effects

Some people have mild side effects after getting the HPV vaccine. Common side effects include:

- Pain, swelling, or redness in the arm where the shot was given
- Fever
- Headache or feeling tired
- Nausea, vomiting, diarrhea, or stomach pain
- Muscle or joint pain



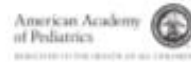
Talk with your doctor about any health concerns before vaccination

If your child is scheduled for HPV vaccination, tell your doctor about any severe allergies. Some children should not get some HPV vaccines, including:

- Children who have ever had a life-threatening allergic reaction to any ingredient of an HPV vaccine, or to a previous dose of HPV vaccine
- Children who have an allergy to yeast (Gardasil and Gardasil 9)
- Children who have an allergy to latex (Cervarix)

HPV vaccines are safe for children who are mildly ill – for example, with a low-grade fever of less than 101 degrees, a cold, runny nose, or cough. Children with a moderate or severe illness should wait until they are better.

- HPV vaccine safety has been well studied
- Gardasil 9 was studied in more than 15,000 women and men
- Since becoming licensed in 2006, there have been no confirmed safety signals (higher than expected number of adverse events) noted with HPV vaccine; with the exception of fainting



HOW VACCINES ARE MONITORED FOR SAFETY

- Before a vaccine is licensed by the FDA, they go through years of extensive safety testing
- After licensure, CDC and FDA continues to monitor for any rare or new issues
- Three safety monitoring systems are used:
 - VAERS – The Vaccine Adverse Event Reporting System
 - VSD – The Vaccine Safety Datalink
 - CISA – The Clinical Immunization Safety Assessment Network
- Ongoing monitoring is carried out by:
 - Continued review VAERS reports for changing patterns or unusual adverse events
 - Continued monitoring of VSD and the current Gardasil 9 vaccine
 - Routine consultation with CISA staff on clinically complex adverse events

VACCINE SAFETY – HPV AND VAERS

- More than 100 Million doses of HPV vaccine have been distributed in US
- Of all the reports to VAERS regarding HPV – 6% were classified as “serious”; 22% of the reports were not related to health problems
- VAERS is not designed to determine if a vaccine caused a health problem, but is especially useful for detecting unusual or unexpected patterns of adverse event reporting that might indicate a possible safety problem with a vaccine.
- The most common side effects are pain, redness, or swelling in the arm where the shot was given; dizziness, fainting, nausea, and headache. HPV vaccination is typically not associated with any serious side effects.
- The benefits of HPV vaccination far outweigh any potential risk of side effects.

WHAT CHANGES HAVE BEEN MADE BASED ON SAFETY MONITORING?

- The FDA changed their guidance after finding fainting was a reoccurrence to include information on prevention of falls and injuries from fainting after HPV vaccination.
- ACIP continues to remind staff to observe this guidance and share this information with all patients on prevention of falls and injuries after vaccination

TDAP, MENING. AND HPV

- Routinely administer HPV at the same time (and in the same way) that you administer Tdap and Meningococcal vaccine (and flu if appropriate)

Vaccine	Birth	1 mo	2 mos	4 mos	6 mos	9 mos	12 mos	15 mos	18 mos	19-23 mos	2-3 yrs	4-6 yrs	7-10 yrs	11-12 yrs	13-15 yrs	16 yrs	17-18 yrs
Hepatitis B ¹ (HepB)	1 st dose	←-----2 nd dose-----→			←-----3 rd dose-----→												
Rotavirus ² (RV) RV1 (2-dose series); RV5 (3-dose series)			1 st dose	2 nd dose	See footnote 2												
Diphtheria, tetanus, & acellular pertussis ³ (DTaP: <7 yrs)			1 st dose	2 nd dose	3 rd dose			←-----4 th dose-----→				5 th dose					
<i>Haemophilus influenzae</i> type b ⁴ (Hib)			1 st dose	2 nd dose	See footnote 4		←-----3 rd or 4 th dose-----→ See footnote 4										
Pneumococcal conjugate ⁵ (PCV13)			1 st dose	2 nd dose	3 rd dose		←-----4 th dose-----→										
Inactivated poliovirus ⁶ (IPV: <18 yrs)			1 st dose	2 nd dose	←-----3 rd dose-----→							4 th dose					
Influenza ⁷ (IIV)					Annual vaccination (IIV) 1 or 2 doses								Annual vaccination (IIV) 1 dose only				
Measles, mumps, rubella ⁸ (MMR)					See footnote 8		←-----1 st dose-----→					2 nd dose					
Varicella ⁹ (VAR)							←-----1 st dose-----→					2 nd dose					
Hepatitis A ¹⁰ (HepA)							←-----2-dose series, See footnote 10-----→										
Meningococcal ¹¹ (Hib-MenCY ≥6 weeks; MenACWY-D ≥9 mos; MenACWY-CRM ≥2 mos)			See footnote 11											1 st dose		2 nd dose	
Tetanus, diphtheria, & acellular pertussis ¹² (Tdap: ≥7 yrs)														Tdap			
Human papillomavirus ¹³ (HPV)														See footnote 13			
Meningococcal B ¹¹															See footnote 11		
Pneumococcal polysaccharide ⁵ (PPSV23)														See footnote 11			

NATIONAL IMMUNIZATION SURVEY (NIS) – 2017 HPV COVERAGE RESULTS

NIS-TEEN (13 through 17 years)

Cohort: Children born January 1999 through February 1995; Estimates presented as point estimates (%) ± 95% CI.

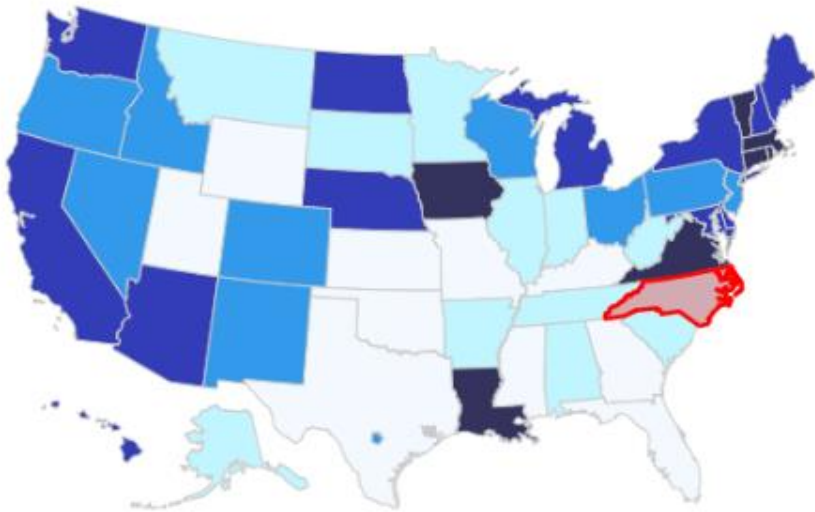
	≥1 Tdap	≥1 MenACWY	HPV - Males and Females		HPV - Females Only		HPV - Males Only		≥2 MMR
			≥1	UTD	≥1	UTD	≥1	UTD	
HP 2020 Goal	80	80	--	--	--	--	--	--	95
US Overall									
2016	88.0 (±1.2)	82.2 (±1.0)	60.4 (±1.2)	43.4 (±1.3)	65.1 (±1.7)	49.5 (±1.9)	56.0 (±1.7)	37.5 (±1.7)	90.9 (±0.7)
2017	88.7 (±0.9)	85.1 (±0.9)*	65.5 (±1.2)*	48.6 (±1.3)*	68.6 (±1.7)*	53.1 (±1.9)*	62.6 (±1.7)*	44.3 (±1.7)*	92.1 (±0.8)*
North Carolina									
2016	89.1 (±4.0)	75.7 (±5.6)	57.5 (±6.4)	41.2 (±6.4)	57.9 (±8.9)	46.9 (±9.0)	57.1 (±9.2)	35.7 (±9.0)	87.5 (±4.6)
2017	91.9 (±3.4)	84.8 (±4.8)*	66.8 (±6.1)*	51.9 (±6.6)*	66.8 (±9.2)	50.0 (±9.9)	66.8 (±8.2)*	53.7 (±8.8)*	93.0 (±3.1)*

NIS-Teen Highlights:

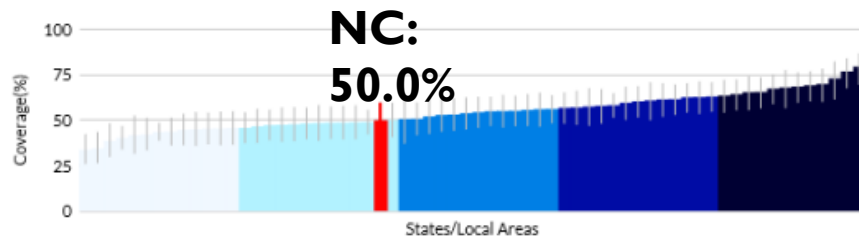
- North Carolina reached the HP2020 target for Tdap and MCV.
- North Carolina is at or above the national average for Tdap, MMR, ≥1 and UTD HPV for males and females together, and ≥1 and UTD HPV for males only.
- North Carolina observed statistically significant increases in MCV, MMR, and ≥1 and UTD HPV for males and females together, and males only.
- Nationally, statistically significant increases were observed in every vaccine category, with the exception of Tdap.

NIS – HPV UTD RESULTS IN FEMALES V. MALES

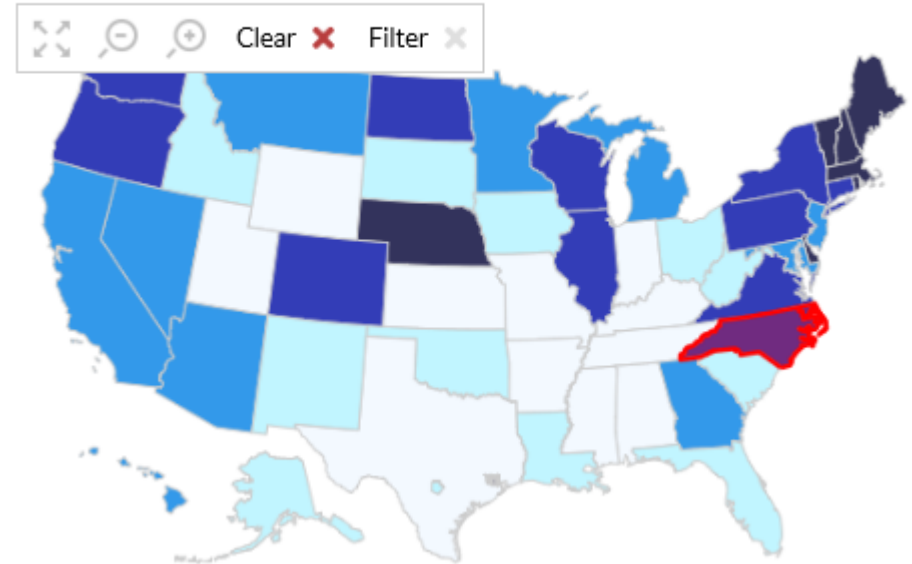
Currently Viewing: HPV Vaccination Up-To-Date, Female >> Age >> 13-17 Years >> Coverage for 2017



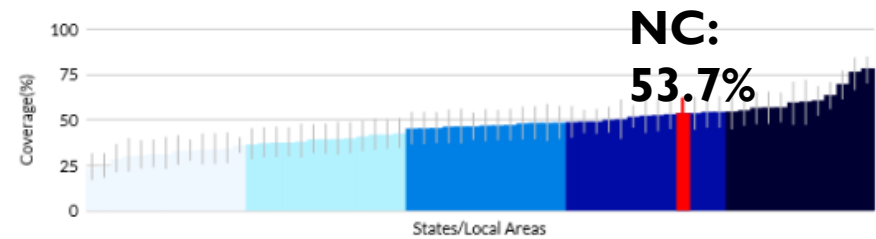
Vaccination Coverage by State and Local Area



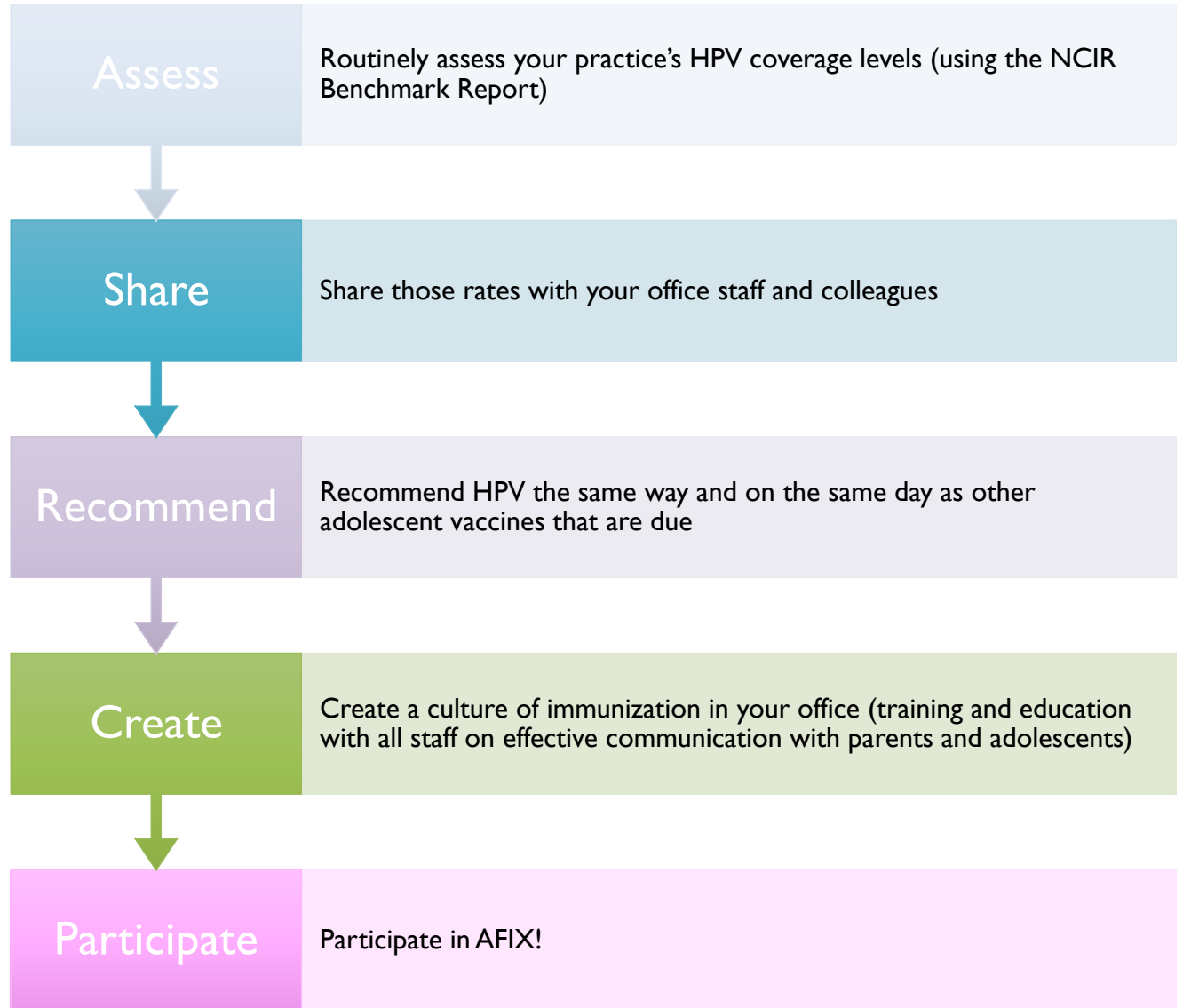
Currently Viewing: HPV Vaccination Up-To-Date, Male >> Age >> 13-17 Years >> Coverage for 2017



Vaccination Coverage by State and Local Area

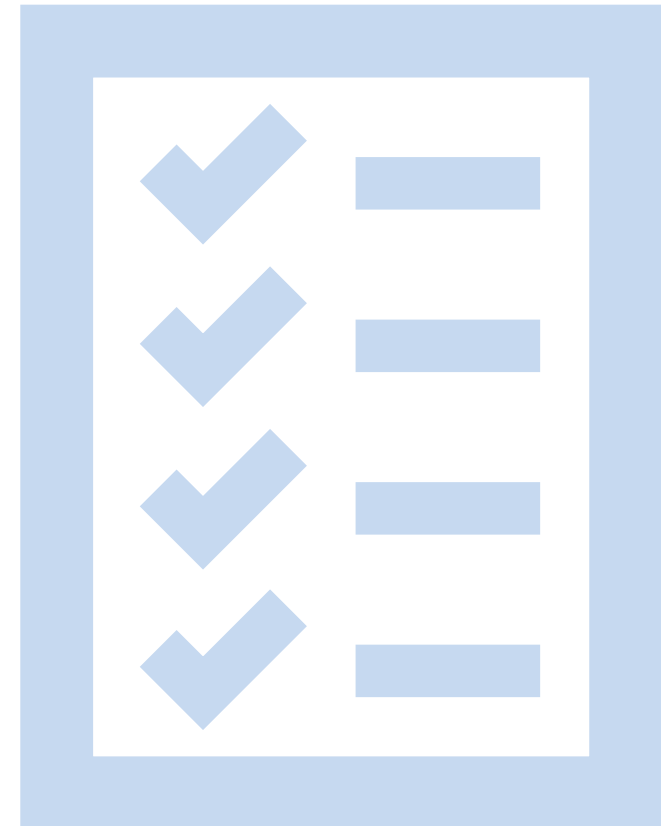


HOW TO IMPROVE HPV RATES IN YOUR COMMUNITY AND YOUR PRACTICE



HPV AND YOUR OFFICE

- Establish a policy to check patients' immunization status at every visit and recommend every vaccine that a child is due for
- Establish protocols for reminders to families and patients for follow up doses of vaccine
- Use standing orders when appropriate
- Evaluate your scheduling practices to maximize your ability to accommodate patients, be effective and decrease staff work load (allow schedule f/u appts before they leave the office, allow scheduling up to 6 months in advance etc.)
- Utilize resources from the CDC and Immunization Action Coalition (and other reputable organizations)



UTILIZE CDC RESOURCES

Top 10 List for HPV #VaxSuccess

Attain and Maintain High HPV Vaccination Rates

1. Appreciate the significance of the HPV vaccination recommendation.
 - ✓ *By boosting HPV vaccination rates among your patients, you will be preventing cancer.*
2. Acknowledge the importance of your recommendation to parents to get their children vaccinated.
 - ✓ *Clinician recommendation is the number one reason parents decide to vaccinate. This is especially important for HPV vaccination.*
3. Use the right approach by presenting immunizations the correct way, especially with the HPV vaccine.
 - ✓ *Recommend the HPV vaccine the same day and the same way you recommend all other vaccines. For example, "Now that Danny is 11, he is due for vaccinations to help protect against meningitis, HPV cancers, pertussis, and flu. We'll give those shots during today's visit"*
4. Motivate your team and facilitate their immunization conversations with parents.
 - ✓ *Starting with your front office, ensure each team member is aware of HPV's importance and is educated on proper vaccination practices and recommendations, ready to answer parents' questions, and/or regularly remind and recall parents. Be sure staff regularly check immunization records, place calls to remind families about getting vaccines, and report back to you.*
5. Create systematic pathways and procedures that help your team attain and maintain immunization rates.
 - ✓ *Establish a policy to vaccinate at every visit. Create a system to check immunization status ahead of all sick and well visits. Before seeing the patient, staff should indicate if the patient is due for immunization, with special consideration to HPV vaccination. Use standing orders.*
6. Utilize your local health department's resources.
 - ✓ *Utilize the resources of the local health department to achieve your goals of protecting your patients.*
7. Know your rates of vaccination and refusal.
 - ✓ *Deputize your staff to assist you with knowing your actual vaccination rates and learning more about why some patients are behind on their vaccines. They can also help you facilitate solutions on how to bring these patients in and keep immunization rates up.*
8. Maintain strong doctor-patient relationships to help with challenging immunization conversations.
 - ✓ *It is extremely gratifying when parents who initially questioned immunization agree to get their child vaccinated on time. It's always nice to hear: "Okay, that makes sense and I trust you!"*
9. Be familiar with vaccine skeptics and critics by learning more about their reasoning.
 - ✓ *Be prepared with answers to succinctly, accurately, and compassionately inform parents with the most current medical facts. Skeptics often accept their provider's explanations if presented correctly.*
10. Use personal examples of how you choose to vaccinate children in your family.
 - ✓ *Providing personal examples shows you believe in the importance of immunizations, especially HPV vaccine. These examples—combined with an effective recommendation—can help parents better understand the benefits of HPV vaccination for cancer prevention.*

Adapted with Permission from: Khatib, B. (2015)
The 10 Immunization Success Factors: Practical Strategies
for Providers. Unpublished manuscript.

HPV VACCINE
IS CANCER PREVENTION
For more info visit: www.cdc.gov/HPV

Talking to Parents about HPV Vaccine

Recommend HPV vaccination in the **same way** and on the **same day** as all adolescent vaccines. You can say, *"Now that your son is 11, he is due for vaccinations today to help protect him from meningitis, HPV cancers, and pertussis."* Remind parents of the follow-up shots their child will need and ask them to make appointments before they leave.

Why does my child need HPV vaccine?

HPV vaccine is important because it prevents infections that can cause cancer. That's why we need to start the shot series today.

Is my child really at risk for HPV?

HPV is a very common infection in women and men that can cause cancer. Starting the vaccine series today will help protect your child from the cancers and diseases caused by HPV.

Why do they need HPV vaccine at such a young age?

Like all vaccines, we want to give HPV vaccine earlier rather than later. If you wait, your child may need three shots instead of two.

I'm worried about the safety of HPV vaccine. Do you think it's safe?

Yes, HPV vaccination is very safe. Like any medication, vaccines can cause side effects, including pain, swelling, or redness where the shot was given. That's normal for HPV vaccine too and should go away in a day or two. Sometimes kids faint after they get shots and they could be injured if they fall from fainting. We'll protect your child by having them stay seated after the shot.

Would you get HPV vaccine for your kids?

Yes, I gave HPV vaccine to my child (or grandchild, etc.) when he was 11, because it's important for preventing cancer.

Why do boys need HPV vaccine?

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

What diseases are caused by HPV?

Some HPV infections can cause cancer—like cancer of the cervix or in the back of the throat—but we can protect your child from these cancers in the future by getting the first HPV shot today.

How do you know the vaccine works?

Studies continue to prove HPV vaccination works extremely well, decreasing the number of infections and HPV precancers in young people since it has been available.

I'm worried my child will think that getting this vaccine makes it OK to have sex.

Studies tell us that getting HPV vaccine doesn't make kids more likely to start having sex. I recommend we give your child her first HPV shot today.

Can HPV vaccine cause infertility in my child?

There is no known link between HPV vaccination and the inability to have children in the future. However, women who develop an HPV precancer or cancer could require treatment that would limit their ability to have children.

What vaccines are actually required?

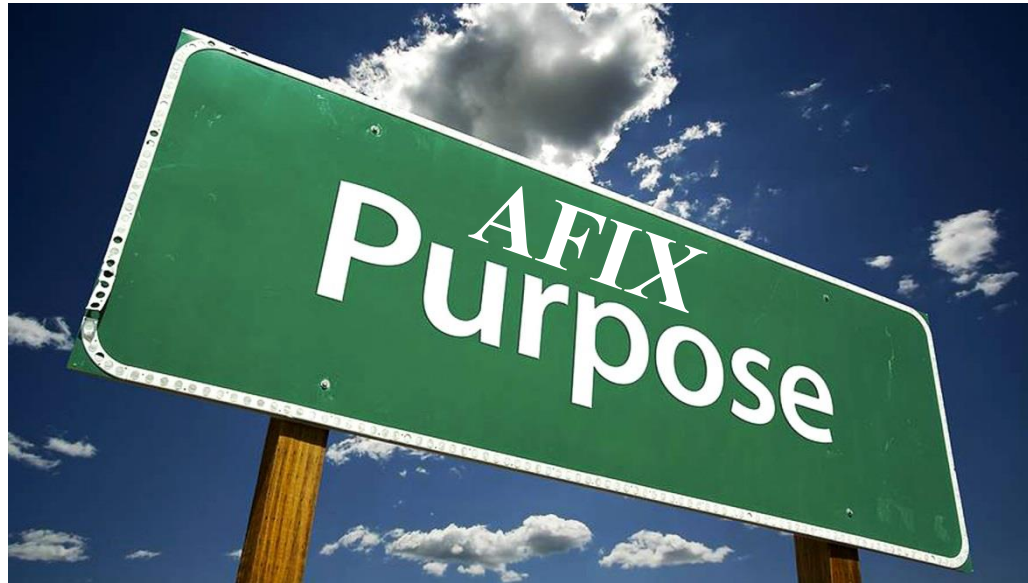
I strongly recommend each of these vaccines and so do experts at the CDC and major medical organizations. School entry requirements are developed for public health and safety, but don't always reflect the most current medical recommendations for your child's health.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

HPV VACCINE
IS CANCER PREVENTION

December, 2016 | CS2694538



To assist and support health care personnel by identifying low immunization rates, opportunities for improving immunization delivery practices, and ensuring that providers are:

- Aware of and knowledgeable about their immunization rates and missed opportunities
- Motivated to incorporate changes to their current practices
- Ready to try new immunization service strategies
- Capable of sustaining these new behaviors

HPV AND AFIX

Adolescent AFIX focuses on:

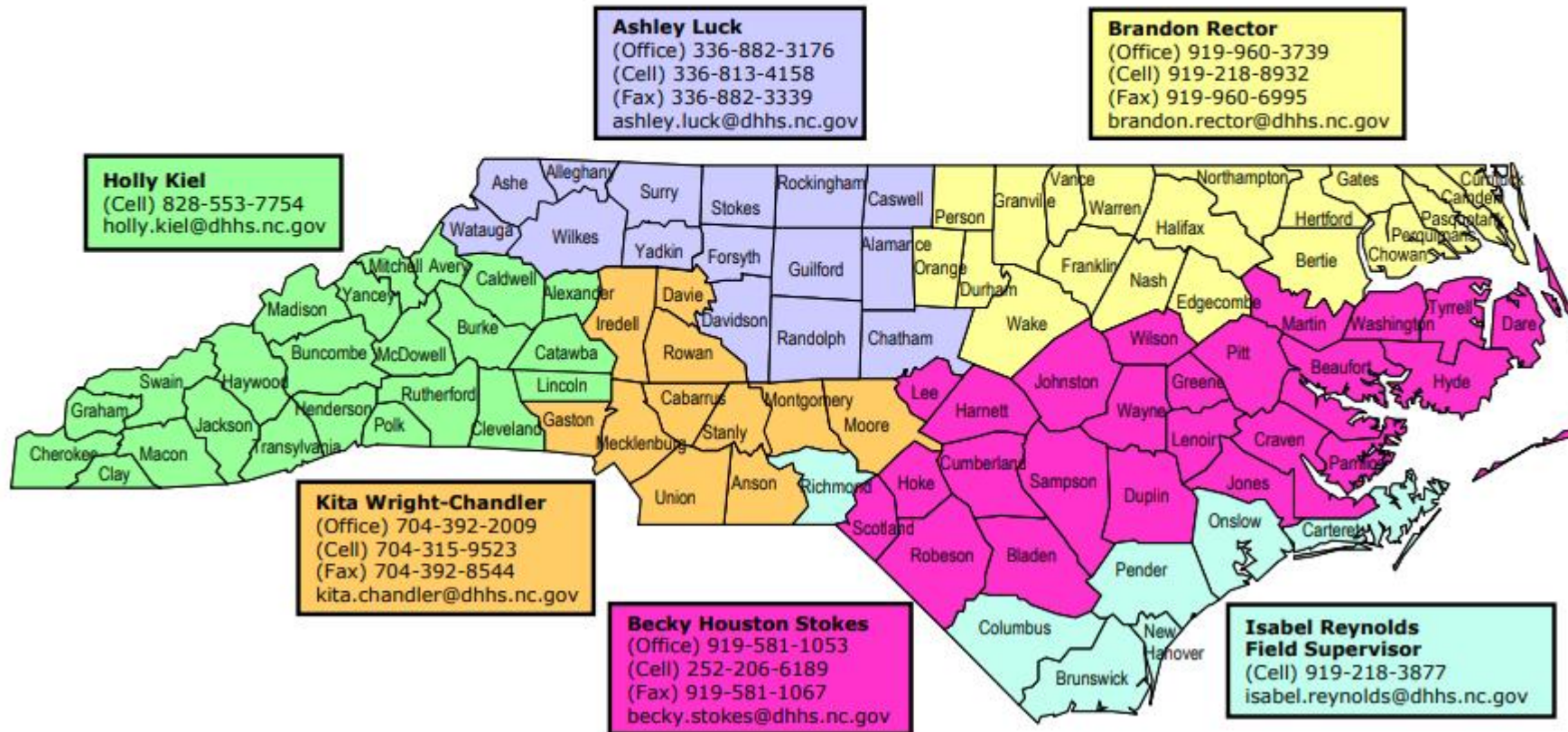
- Understanding the ACIP schedule (and NCIR recommendations)
- How to use the NCIR client-based coverage reports
- Pinpointing drop-off points and trouble areas
- Understanding the root cause of low immunization rates
- Identifying practice-specific strategies for improvement
- Comparison of rates (provider, county, state, NIS) in relation to HP2020 goals
- Reviewing vaccine orders and promoting uptake
- Education and resource distribution



WHO CONDUCTS AFIX IN NC?



Regional Immunization Program Consultants North Carolina Division of Public Health North Carolina Immunization Program



OTHER VACCINE UPDATES AND INITIATIVES



- Availability to use new Hepatitis B vaccine for college students
- Varicella requirements for college-age persons
- Meningococcal ACWY requirements – effective 7/1/2020
- Hepatitis A outbreak and prevention strategies

HEPLISAV-B

- ACIP published recommendations for use of this 2 dose Hepatitis B vaccine (0, 1 month) on April 20, 2018.
- The vaccine is licensed for persons 18 years and older
- This provides a 2 dose option for persons to meet the NCAC requirement (10 A NCAC 41a .0401) for the Hepatitis B vaccine series in place of the three doses of Hepatitis B vaccine which are written in the immunization rules for individuals born on or after July 1, 1994.
- A memo was sent to all college and university health administrators notifying them of this option in October 2018



HEPLISAV-B CONTINUED

- The following guidance was issued from the NC Division of Public Health's Chief Legal Counsel:
 - *Individuals 18 years of age and older previously unvaccinated or those with an incomplete vaccine history who subsequently receive two doses of Heplisav-B® vaccine administered at least four weeks apart meet the immunization dosage requirement for Hepatitis B vaccine and may attend college. When feasible, the same manufacturer's vaccine should be used to complete the series. However, vaccination should not be deferred when the manufacturer of the previously administered vaccine is unknown or when vaccine from the same manufacturer is unavailable.*

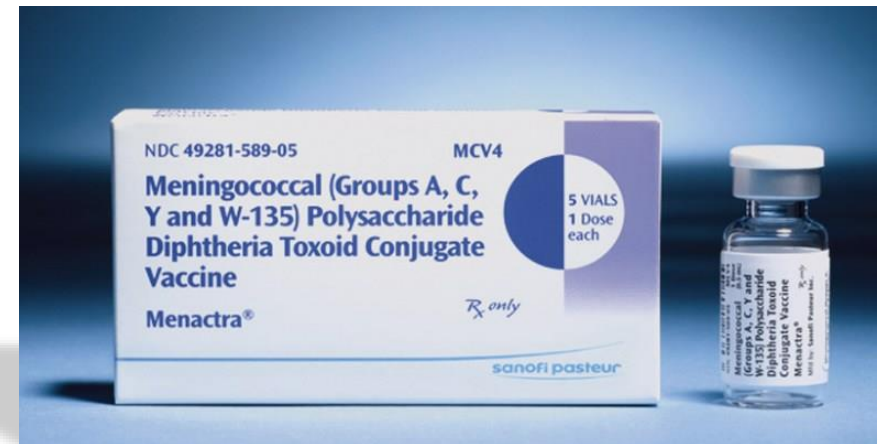
VARICELLA VACCINE

- Persons born before April 1, 2001 are not required to receive varicella vaccine
 - ***the cohort of children born on or after April 1, 2001 will begin reaching college age in 2019***
 - These individuals are required to be vaccinated with at least one dose of varicella vaccine
 - Memo was sent in October 2018 to all college and university administrators to incorporate evaluation of varicella vaccination status as part of their assessment of immunization records for compliance with the law
 - Students can provide laboratory confirmation of varicella disease immunity documented by a positive antibody titer or documentation from a physician, FNP, or PA verifying history of disease in place of vaccine.



MENINGOCOCCAL CONJUGATE REMINDER

- NC Law requires 2 doses of Meningococcal conjugate (ACWY) vaccine – one dose for individuals entering seventh grade or by 12 years of age and a booster dose by 17 years or by entering the 12 grade **HOWEVER**
 - The 1st dose does not apply to individuals who entered 7th grade before 7/1/15
 - The booster does not apply to individuals who enter 12th grade before 8/1/20
 - If the 1st dose is given on or after the 16th birthday, a booster is not required
 - If born before 1/1/03, individuals are not required to receive meningococcal conjugate
- **Individuals who enter 12th grade AFTER August 1, 2020 are required to have a booster dose of Meningococcal conjugate ACWY**



HEPATITIS A OUTBREAK RESPONSE AND PREVENTION

- More than 8,500 cases of hepatitis A infections associated with person-to-person transmission from January 2017 through November 2018 per CDC
- Cases are primarily in 3 risk groups:
 - Persons who use injection or non-injection drugs
 - Persons experiencing homelessness
 - Men who have sex with men
- NC is experiencing an increase in the # of cases of Hep A since April 2018 primarily affecting MSM

North Carolina Outbreak Case Definition

Outbreak-associated case:

An acute case of hepatitis A meeting the confirmed case classification with onset on or after January 1, 2018 in a North Carolina resident who:

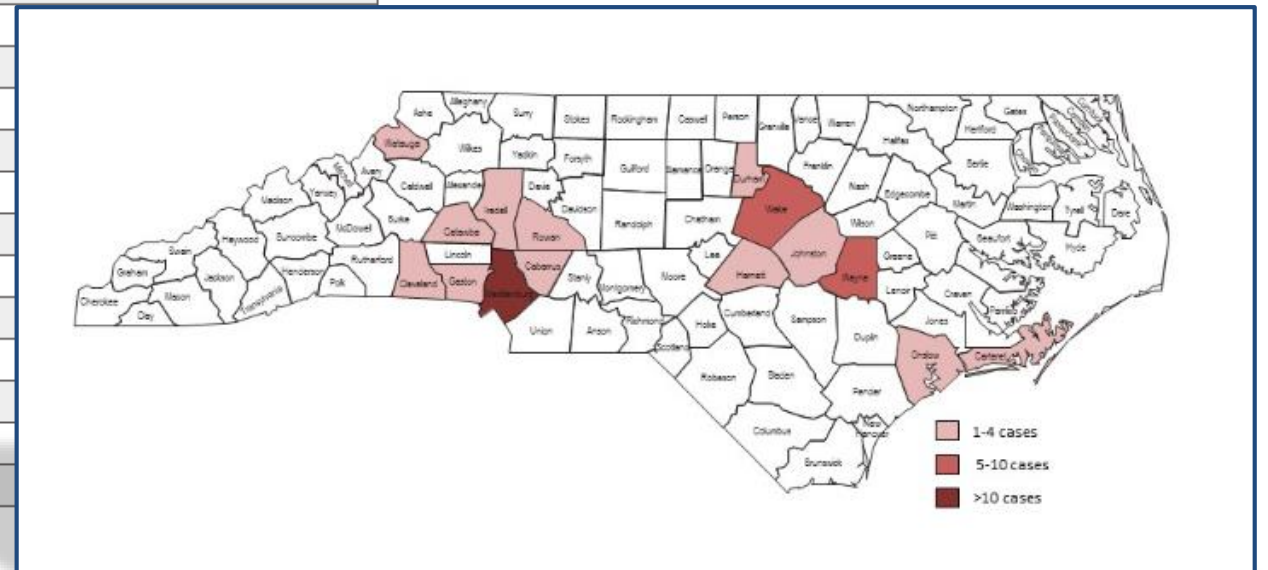
- a. Reports at least one of the following risk factors: homelessness, drug use (injection or non-injection), or MSM status; **OR**
- b. Has a hepatitis A genotype that matches a genotype predominant in a recent or current US hepatitis A outbreak; **OR**
- c. Is epidemiologically linked to a person meeting one of the above criteria.

HEPATITIS A OUTBREAK - NC

North Carolina Hepatitis A Outbreak-associated Cases, January 1, 2018 - January 14, 2019

Cases	Hospitalizations	Deaths
57	43 (75%)	1

County	Cases
Mecklenburg	25
Wake	7
Wayne	5
Cabarrus	3
Harnett	3
Johnston	3
Iredell	2
Rowan	2
Carteret	1
Catawba	1
Cleveland	1
Durham	1
Gaston	1
Onslow	1
Watauga	1
TOTAL	57



PARTNERS

- Partners working together to provide education and increase vaccination of high-risk groups include:
 - Local health departments
 - NC State Immunization Branch
 - NC Division of State Operated Health Facilities
 - NC Division of Public Safety
 - NC Office of Emergency Medical Services
 - CDC
 - VA health facilities
 - Community-based organizations, including syringe exchange programs

ONGOING HEP A PREVENTION STRATEGIES

- Expansion of NC Coverage Criteria for use of State pediatric and adult Hepatitis A vaccine for the following risk groups:
 - Persons who use injection and/or non-injection drugs
 - Persons who are homeless
 - Men who have sex with men
 - Persons with chronic liver disease, including chronic hepatitis B or C
 - Persons who are currently incarcerated in a county-owned facility/jail
- A memo was sent to LHDs encouraging partnership with detention centers to incorporate a jail health hepatitis A vaccination program in their jurisdiction

PREVENTION STRATEGIES CONTINUED

- Partnership between the CDB, Immunization Branch and Grindr
 - Individuals who access the app will get information on the Hep A outbreak and will be directed to contact their LHD or the IB Nurse On-Call line for more information
- Ongoing communication and consultation between CDC, IB and CDB



Questions?



CONTACT INFORMATION

Candy Graham, RN
NC Immunization Branch
919-707-5575
Candy.graham@dhhs.nc.gov

Jenny Myers, MPH
NC Immunization Branch
919-707-5599
Jenny.myers@dhhs.nc.gov