

# HPV Vaccination in Full Bloom

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**4<sup>TH</sup> ANNUAL MEETING**

**September 24, 2024**

at the **Memphis Botanic Garden**  
>>> [stjude.org/memphis-roundtable](https://stjude.org/memphis-roundtable)



# Moderator

**Julia Brown, MPH**

Program Manager,  
St. Jude HPV Cancer Prevention  
Program



# Bloom Where You Are Planted – Welcome

**Michelle Bowden, MD**

The University of Tennessee Health  
Science Center  
Le Bonheur Children's Hospital

Chair of the Memphis and Shelby County  
HPV Cancer Prevention Roundtable



# Sowing with Purpose

## Akeria Taylor, MPH

Program Coordinator, St. Jude HPV  
Cancer Prevention Program

Ex-Officio Member, Memphis and  
Shelby County HPV Cancer  
Prevention Program



# Program Overview

## About Us

- The Roundtable was formally established in 2021, inspired by the urgent need to address rising cases of preventable cervical cancers in the Memphis area.
- This initiative brought together local healthcare, community, and advocacy partners to form a unified response to this critical health need in Memphis and Shelby County.

## Our Mission

- To measurably increase HPV vaccination coverage in our region.
- Reduce the incidence of HPV-related cancers and save lives.

## Guiding Principles

- **Collaboration:** We engage collectively as a network of local allies and partners to boost HPV vaccination coverage.
- **Awareness and Education:** We work together to raise awareness and provide education about HPV and the importance of vaccination.
- **Capacity Building:** We empower our members with the resources and support needed to extend our outreach and impact.

Memphis and Shelby County





# Executive Committee

- Michelle Bowden, MD, Chair
- Fedoria Rugless, PhD, Co-Chair
- Naloni Howard, MBA, General Representative
- Felicia Williams, MHA, General Representative

This is our governing body that drives our mission, defines the scope of our activities, and supports membership growth. Members of the Executive Committee are elected and voted on each year.

# Planning Committee



Leanne Alexander, MPH

Jennifer Berger, MD

Michelle Bowden, MD

Julia Brown, MPH

Benita Carney, RN

Seok Won Jin, PhD

J. R. Sanders, MPA

Michelle Whitlock

Felicia Williams, MHA

Rana Zakaria, MPH

This committee is responsible for developing programmatic activities, including organizing our annual Roundtable event. Unlike the Executive Committee, the Planning Committee is open to all interested members who wish to participate.

# Executive Committee Nominations

January 2025 - December 2026 Term

## *Interested in becoming an Executive Committee Member?*

- Nominations for Chair, Vice Chair, and General Representatives are due by **September 30, 2024**.
- You may submit **unlimited nomination forms** for as many people as you wish to nominate for these positions.
- Online voting will be open until **October 31, 2024**.
- Results will be announced in **early November 2024**.
- New term will begin on **January 1, 2025**.



Scan to Complete  
Executive Committee Nomination Form

# Membership Report

- As of August 28, 2024, there are 151 members of the Roundtable.
- This includes an additional 19 new members since March 13, 2024.
- Our members represent over 34 healthcare and community organizations.



# Membership Form

## Join Our Efforts



### *Interested in becoming a part of the Roundtable?*

#### **Member Roles & Responsibilities:**

- Attend Roundtable monthly meetings regularly.
- Engage in strategic planning and action plan execution.
- Serve as a liaison if representing an organization.
- Collaborate with members across different affiliations and interests.
- Participate in at least one Roundtable event per year to maintain active member status and voting privileges.



Scan to Complete  
Membership Form

# 2024 Priorities and Objectives

## Engagement and Membership



Increase Roundtable membership from 123 as of December 2023 to 150 by December 2024.

## Communication



Develop and distribute communications to at least 300 health care providers and professionals in Memphis and Shelby County by December 2024.

## Data



Increase HPV vaccination rates in Memphis and Shelby County from 36% to 40% by December 2024.

## Provider Education



Provide HPV vaccination education to at least 300 health care providers and professionals in Memphis and Shelby County.

# 2024 Priorities and Strategies

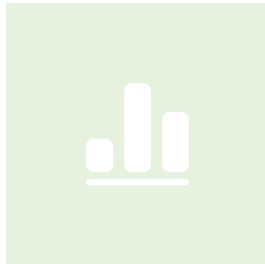
## Engagement and Membership

- Regular meetings of Roundtable leadership
- Annual and mid-year meetings
- Targeted outreach for member recruitment

01



02



## Communication

- Regular communication with Roundtable members and health care providers

## Provider Education

- Educational and training programs for health care providers

04



03



## Data

- Gather and communicate HPV-related data for Memphis and Shelby County to Roundtable members

# Engagement and Membership

Increase Roundtable membership from 123 to 150 by December 2024



Hosted a Mid-Year Roundtable Meeting in March



Women Veterans Health Fair

Membership as of  
August 28, 2024

**151**

# Engagement and Membership

## Increase Roundtable membership from 123 to 150 by December 2024



### Welcome to the Memphis and Shelby County HPV Cancer Prevention Roundtable!

Dear New Member,

We are thrilled to welcome you to the Memphis and Shelby County HPV Cancer Prevention Roundtable, a collaborative effort dedicated to increasing HPV vaccination coverage in our community. Your decision to join us marks an important step towards making a significant impact in preventing HPV cancers in Memphis and Shelby County, Tennessee.

### About Us

The Roundtable was formally established in 2021, inspired by the urgent need to address rising cases of preventable cervical cancers, a concern first raised by Dr. Michael Ulm of the West Cancer Center. This initiative brought together local healthcare, community, and advocacy partners to form a unified response to this critical health need in Memphis and Shelby County.

### Our Mission

Our mission is simple yet powerful: to measurably increase HPV vaccination coverage in our region. We believe that through collective action and dedication, we can reduce the incidence of HPV-related cancers and save lives.

### Guiding Principles

We operate under three guiding principles:

- 1. Collaboration:** We engage collectively as a network of local allies and partners to boost HPV vaccination coverage.
- 2. Awareness and Education:** We work together to raise awareness and provide education about HPV and the importance of vaccination.
- 3. Capacity Building:** We empower our members with the resources and support needed to extend our outreach and impact.

### Membership and Structure

Our Roundtable is supported by two key committees:



New Membership Welcome Letter

"HPV Vaccination in Full Bloom" Invitations

# Communication

Develop and distribute communications to at least 300 health care providers and professionals in Memphis and Shelby County by December 2024.



August 2024

**Dear Memphis Roundtable Members,**

As August unfolds, we are savoring the final days of summer and the opportunities that come with it. This month, as we recognize National Immunization Awareness Month, we are especially energized by the progress we have made and excited about the new initiatives on the horizon for the Memphis and Shelby County HPV Cancer Prevention Roundtable. The momentum we have built is setting the stage for impactful developments and collaborations.

In this monthly communication, we share the latest updates and developments with you, including [registration information about the annual meeting on September 24](#) and more opportunities.

Distributing Monthly Newsletters

Roundtable Member Feature: Tennessee American Academy of Pediatrics (TNAAP)



The Tennessee Chapter of the American Academy of Pediatrics (TNAAP) hosted a successful mixer event on May 30 at Belle Meade Social in Memphis, providing professionals with an excellent opportunity to network and connect.

Developed a "Roundtable Member Feature"



# Communication

Develop and distribute communications to at least 300 health care providers and professionals in Memphis and Shelby County by December 2024.

| Monthly Newsletters | Distribution | Opened Rate | Unopened Rate | Bounce Rate |
|---------------------|--------------|-------------|---------------|-------------|
| January             | 413          | 42.4%       | 56.9%         | 0.7%        |
| February            | 409          | 38.9%       | 61.1%         | 0%          |
| March               | ---          | N/A         | N/A           | N/A         |
| April               | 404          | 36.4%       | 63.4%         | 0.2%        |
| May                 | 400          | 40.3%       | 59.0%         | 0.7%        |
| June                | 396          | 29.5%       | 70.5%         | 0%          |
| July                | 395          | 36.7%       | 63.3%         | 0%          |
| August              | 454          | 37.4%       | 61.9%         | 0.7%        |
| September           | 449          | 38.8%       | 61.0%         | 0.2%        |

2024 Monthly Newsletter Data Report



## Data

# Gather and communicate HPV-related data for Memphis and Shelby County to Roundtable members

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### Tennessee Teen Coverage Rate Dashboard and Shelby County HPV Vaccination Rates

The Memphis and Shelby County HPV Cancer Prevention Roundtable reviewed completion rates for Shelby County Vaccines for Children (VFC) providers at the end of 2023, finding that 14 local VFC providers had achieved HPV vaccination completion rates of 60% or higher, indicating consistent increases quarter by quarter. This mirrors broader trends within Shelby County, where HPV vaccination rates have shown steady improvement over the past five years. They finally exceeded the state average in late 2022 and continued to climb throughout 2023, reaching a peak of 39.2%, compared to the state average of 36.5%, a tremendous success for those working to improve HPV vaccination rates within Shelby County. You can view the Tennessee Teen Coverage Rate Dashboard [here](#).

Data Updates Featured in May's Newsletter

# Data

## Gather and communicate HPV-related data for Memphis and Shelby County to Roundtable members

### Local Impact of the Memphis and Shelby County HPV Cancer Prevention Roundtable on Vaccination Rates

Akeria Taylor, MPH, Kasia Mitchell, MHA, Julia Brown, MPH, Andrea W. Stubbs, MPA, Heather M. Brandt, PhD

St. Jude Children's Research Hospital, HPV Cancer Prevention Program | Email: [PreventHPV@stjude.org](mailto:PreventHPV@stjude.org)

**ACKNOWLEDGMENTS:**  
Special thanks and appreciation to the Memphis Roundtable Executive Committee, Planning Committee, and member organizations for their engagement and commitment to prevent HPV cancers in our community. We also thank Carol Minor for her previous work on the Memphis Roundtable.



### BACKGROUND

- ❖ The Memphis and Shelby County HPV Cancer Prevention Roundtable (Memphis Roundtable) was established in 2021 to increase HPV vaccination coverage in Memphis and Shelby County, Tennessee, which at the time ranked 94<sup>th</sup> out of 95 counties in the state.
- ❖ The Memphis Roundtable grew out of concern for increased diagnoses of preventable cervical cancers by a local oncologist.
- ❖ Currently, the Memphis Roundtable comprises 130+ members from more than 34 healthcare and community organizations with a shared goal of boosting HPV vaccination rates in Memphis and Shelby County, Tennessee.

*The Memphis Roundtable operates on the principle that collective power is more effective in driving change than individual actions.*

### METHODS

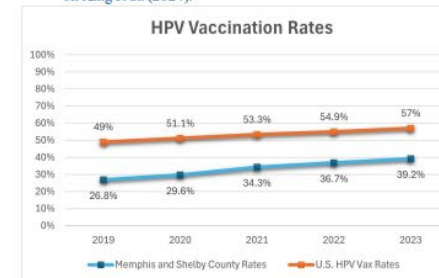
- ❖ Bringing together partners engaged in HPV cancer prevention fosters a collaborative process in which all voices contribute to identifying actionable opportunities to enhance vaccination coverage. St. Jude provides backbone support.
- ❖ Members receive resources to build local capacity, including guidance from national HPV vaccination subject matter experts and guidance on implementing best practices.
- ❖ This framework unites partners, leveraging their collective expertise and resources to drive measurable progress in HPV vaccination rates guided by priority actions.
- ❖ Members engage through annual and mid-year meetings, quarterly virtual seminars, periodic training programs, and community tabling events.



Learn more about the Memphis Roundtable at [stjude.org/Memphis-roundtable](http://stjude.org/Memphis-roundtable)

### RESULTS

- ❖ Over the past five years, HPV vaccination rates ( $\geq 1$  dose) in Shelby County have shown consistent growth, increasing by 12.9% between 2019 and 2023, based on Tennessee Immunization Information System (TennIIS) data.
  - HPV vaccination coverage in Shelby County surpassed the Tennessee state average in late 2022
  - Rates continued to ascend through 2023, peaking at 39.2%, compared to the state average of 36.5%
- ❖ Shelby County has also outpaced national averages in its rate of increase.
  - From 2019 to 2022, Shelby County saw a 10.3% increase whereas Tennessee and the United States experienced 6.0% and 4.5% increase, respectively.
  - Shelby County's HPV vaccination rates have continued to climb despite a national decline during this same time period, based on Kang et al. (2024).



### CONCLUSION

- ❖ While more evaluation efforts are needed, the upward trend of HPV vaccination rates in Shelby County, despite a national decline, offers promising evidence of the Memphis Roundtable's impact on HPV vaccination coverage.
- ❖ Priority actions identified by membership will continue to guide programming.
- ❖ The 4th Annual Memphis and Shelby County HPV Cancer Prevention Roundtable Meeting, titled 'HPV Vaccination in Full Bloom,' will be held on September 24 at the Memphis Botanic Garden.



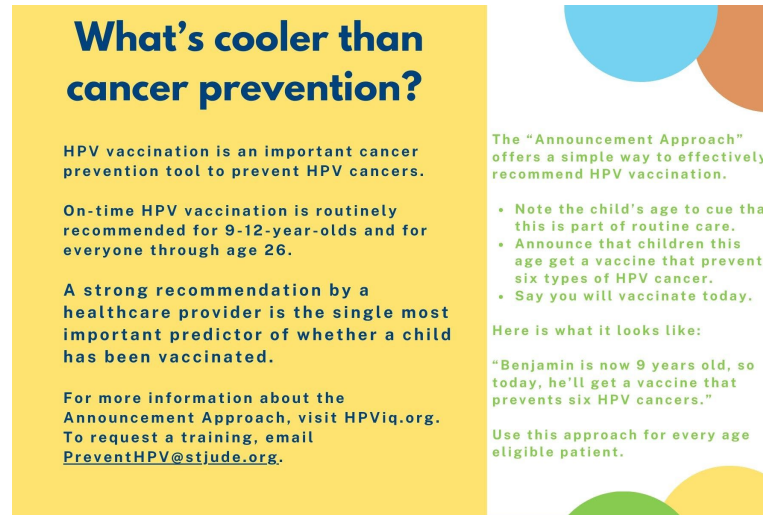
2024 National Immunization Conference, Poster Presentation

# Provider Education

Provide HPV vaccination education to at least 300 health care providers and professionals in Memphis and Shelby County.



Keep Summer Cool Poster



Keep Summer Cool Postcards



Keep Summer Cool at Le Bonheur General Pediatrics

# Provider Education

Provide HPV vaccination education to at least 300 health care providers and professionals in Memphis and Shelby County.

## Carve Out Time



## to Prevent HPV Cancers



HPV vaccination is cancer prevention and starts at age 9.  
LEARN MORE AT [STJUDE.ORG/MEMPHIS-ROUNDTABLE](http://STJUDE.ORG/MEMPHIS-ROUNDTABLE)

### Protect All the Little Pumpkins from HPV Cancers

HPV vaccination is an important cancer prevention tool to prevent HPV cancers.

On-time HPV vaccination is routinely recommended for 9-12-year-olds and for everyone through age 26 and for some people age 27-45.

**A STRONG RECOMMENDATION BY A HEALTHCARE PROVIDER IS THE MOST IMPORTANT PREDICTOR OF WHETHER A CHILD HAS BEEN VACCINATED.**

For more information about the Announcement Approach, visit [HPVIQ.ORG](http://HPVIQ.ORG). To request a training, email [PreventHPV@stjude.org](mailto:PreventHPV@stjude.org).



**THE "ANNOUNCEMENT APPROACH" OFFERS A SIMPLE WAY TO EFFECTIVELY RECOMMEND HPV VACCINATION.**

- Note the child's age to cue that this is part of routine care.
- Announce that children this age get a vaccine that prevents six types of HPV cancer.
- Say you will vaccinate today.

Here is what it looks like:

"Benjamin is now 9 years old, so today, he'll get a vaccine that prevents HPV cancers."

Use this approach for every age eligible patient.



Protect All the Little Pumpkins Postcards



# Provider Education

## Provide HPV vaccination education to at least 300 health care providers and professionals in Memphis and Shelby County.



### EMPOWERING CONVERSATIONS

#### Enhancing HPV Vaccine Uptake with the Announcement Approach

November 14, 2024, 6 - 8 pm

Join the Memphis and Shelby County HPV Cancer Prevention Roundtable and the Tennessee Chapter of the American Academy of Pediatrics as they host Empowering Conversations: Enhancing HPV Vaccine Uptake with the Announcement Approach.

This 2-hour educational activity is intended to educate local providers about the critical importance of on-time HPV vaccination to prevent HPV cancers in adulthood, through the introduction of the Announcement Approach.

Dinner will be provided, and CME credits will be available. The TMA is accredited by the ACCME to provide continuing medical education for physicians.

**CHAR Restaurant 431 S. Highland St, #120 Memphis, TN 38111**

The Announcement Approach Training (AAT) is designed to improve providers' and nursing staff's HPV vaccine communication.

Participants will learn to:

- Build skills in effective vaccine communication
- Apply and implement the announcement approach in a clinic or system setting.



[Register Today](#)

For more information about the Announcement Approach, visit [HPViq.org](http://HPViq.org). For questions related to this educational activity, email [PreventHPV@stjude.org](mailto:PreventHPV@stjude.org).

Learn more at [stjude.org/memphis-roundtable](http://stjude.org/memphis-roundtable)

## Empowering Conversations: Enhancing HPV Vaccine Uptake with the Announcement Approach: AAT

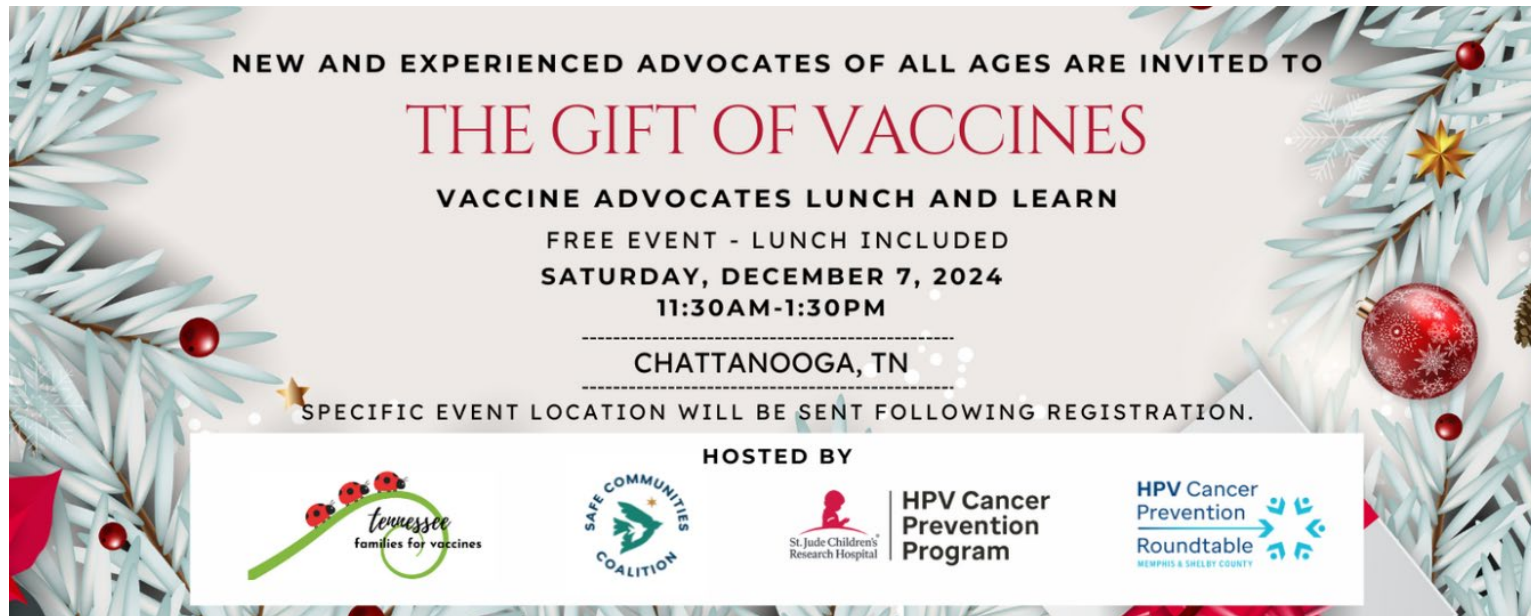
November 14, 2024, 6-8 pm



Scan To Register

# Provider Education

Provide HPV vaccination education to at least 300 health care providers and professionals in Memphis and Shelby County.



NEW AND EXPERIENCED ADVOCATES OF ALL AGES ARE INVITED TO

## THE GIFT OF VACCINES



VACCINE ADVOCATES LUNCH AND LEARN

FREE EVENT - LUNCH INCLUDED  
SATURDAY, DECEMBER 7, 2024  
11:30AM-1:30PM


-----  
CHATTANOOGA, TN  
-----

SPECIFIC EVENT LOCATION WILL BE SENT FOLLOWING REGISTRATION.

HOSTED BY



HPV Cancer Prevention Program



## The Gift of Vaccines

Tennessee Families for Vaccine  
Supported by the Memphis and  
Shelby County HPV Cancer  
Prevention Roundtable

December 7, 2024, 11:30 am-1:30 pm  
Chattanooga, TN

Register at:  
[www.tnfamiliesforvaccines.org/giftofvaccines](http://www.tnfamiliesforvaccines.org/giftofvaccines)

# Planting the Seeds of HPV Cancer Prevention Through HPV Vaccination

**Madison Toney, MPH, CPH**

Analytics and Program Evaluation  
Lead Epidemiologist, Vaccine-  
Preventable Diseases &  
Immunization Program

Tennessee Department of Health



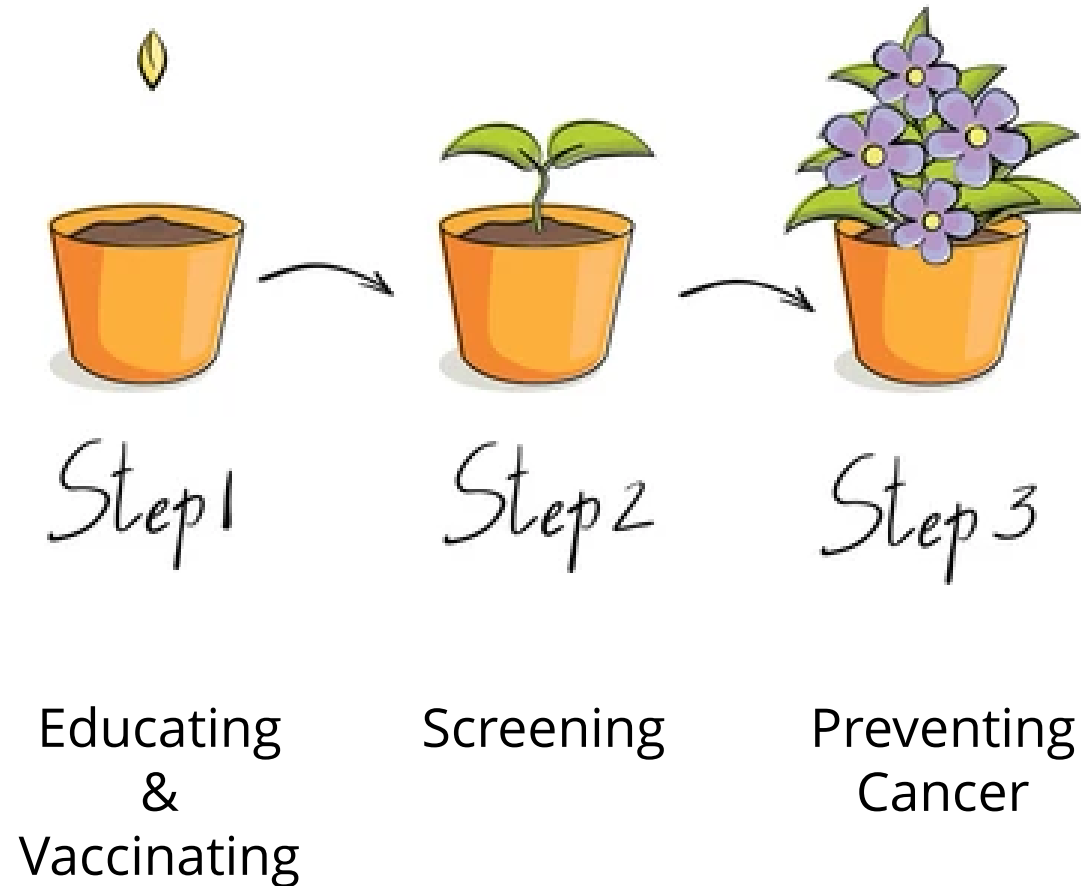


# Planting the Seeds of HPV Cancer Prevention through HPV Vaccination

# Frameworks, Resources, and Data

- Healthy People Framework
- U.S. Centers for Disease Control and Prevention (CDC)
- National Immunization Survey - Teen (NIS-Teen)
- Tennessee Immunization Information System (TennIIS)

# Where does prevention start?



# Healthy People 2030

- An initiative launched by the U.S. Department of Health and Human Services (HHS) in 1980
- Aims to direct national efforts in health promotion and disease prevention to enhance the overall health of the nation
- Outlines science-based objectives with specific targets to track progress, inspire action, and concentrate efforts on key health priorities
- A new framework is introduced every decade, we are currently on the fifth iteration

# HPV Related Healthy People 2030 Objectives

**Objective 1:** Increase the proportion of females who get screened for cervical cancer

**Objective 2:** Reduce infections of HPV types prevented by the vaccine in young adults

**Objective 3:** Increase the proportion of adolescents who get recommended doses of the HPV vaccine

|                | Objective 1 | Objective 2 | Objective 3  |
|----------------|-------------|-------------|--------------|
| <b>Target</b>  | 79.2%       | 8.7%        | <b>80.0%</b> |
| <b>Current</b> | 73.9%       | 15.1%       | <b>58.5%</b> |

# Increase the proportion of adolescents who get recommended doses of the HPV vaccine — IID-08



Baseline:

**48.0** percent of adolescents aged 13 through 15 years received recommended doses of the HPV vaccine by 2018



Most Recent Data:

**58.5** percent (2021)



Target:

**80.0** percent



Desired Direction:

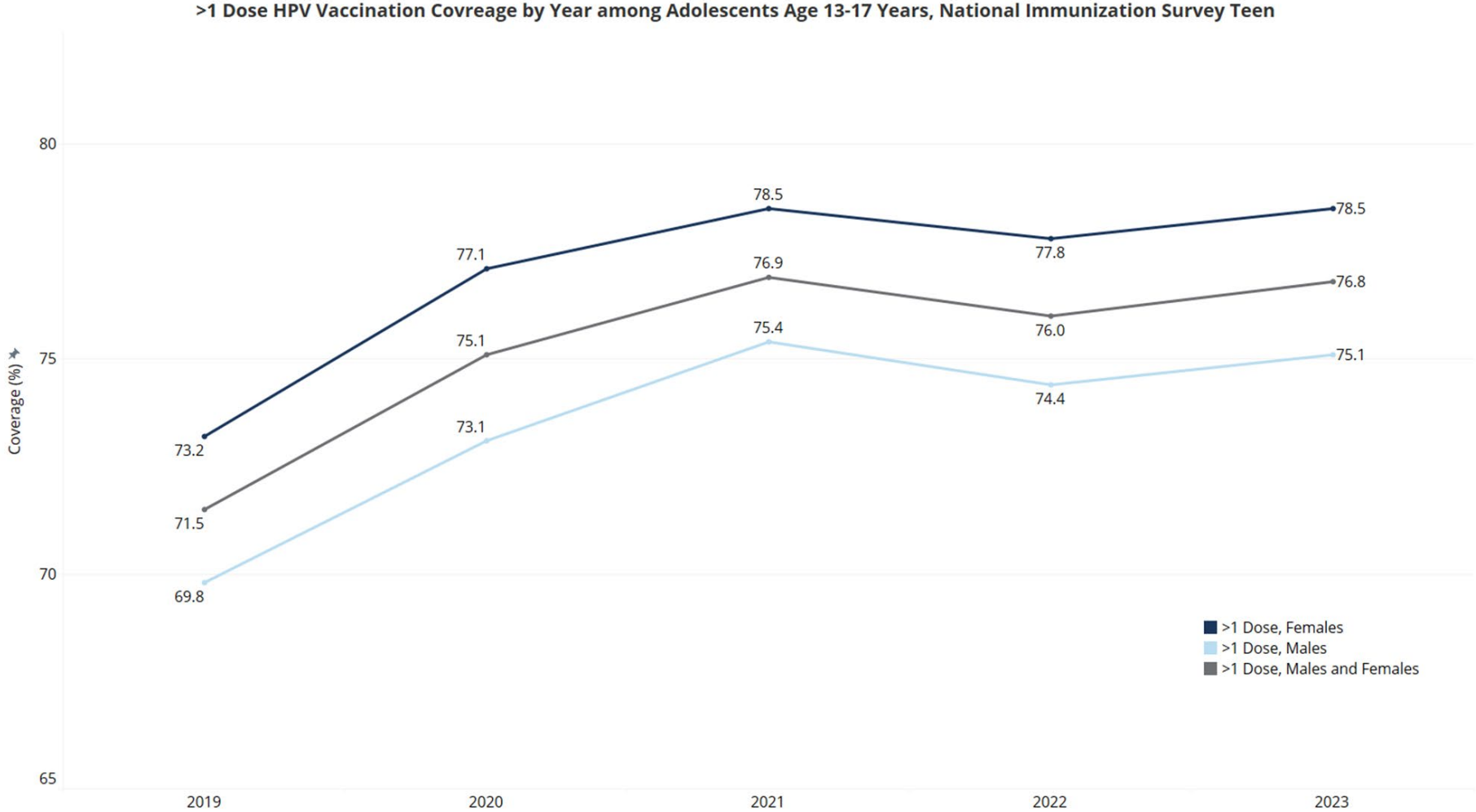
**Increase desired**

Status: Improving (+)

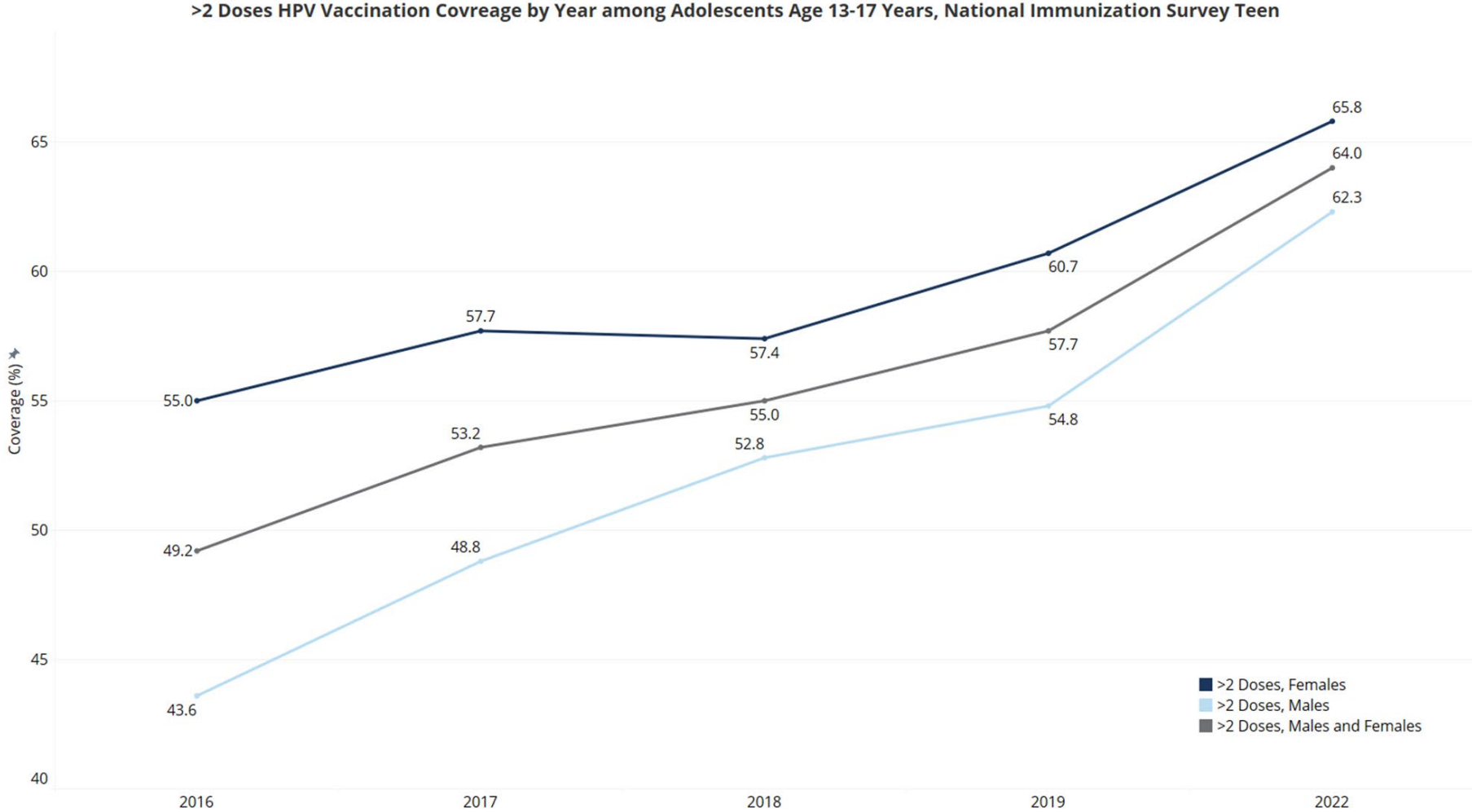
# Where does data come from and how is it measured?

|                     | National   | State   |
|---------------------|--|---|
| Numerator           | Respondent to the CDC's National Immunization Survey           | Voluntary vaccine reporting from participating providers          |
| Denominator         | Individuals sampled for the CDC's National Immunization Survey | U.S. Census Bureau data   |
| Age Range           | 13-17 Years  | 11-17 Years   |
| Immunization Status | >1 Dose<br>>2 Dose<br>Up-to-Date                               | Complete based on ACIP recommendation by age at series initiation |

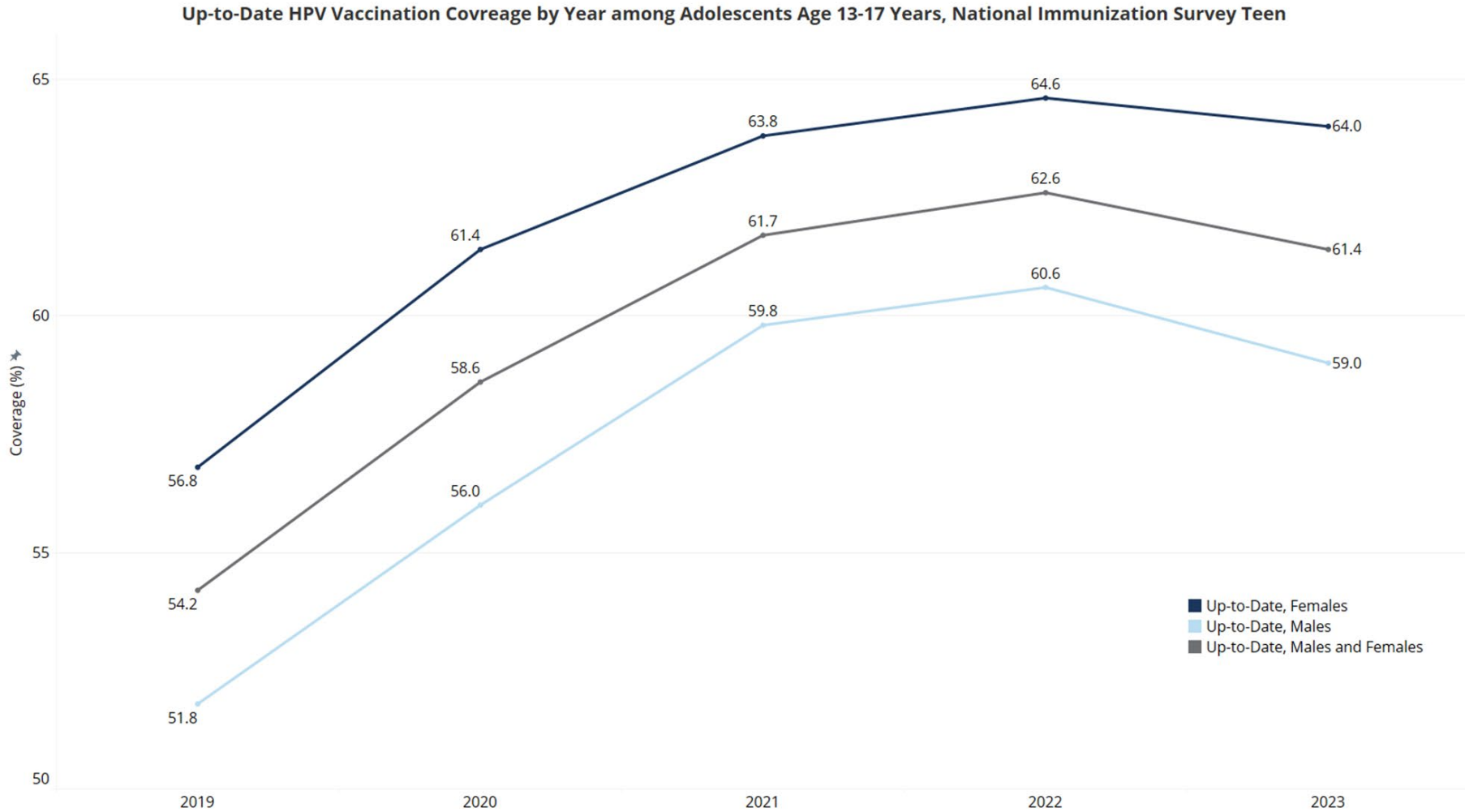
# National HPV Coverage Rates (>1 Dose)



# National HPV Coverage Rates (>2 Doses)



# National HPV Coverage Rates (Up-to-Date)

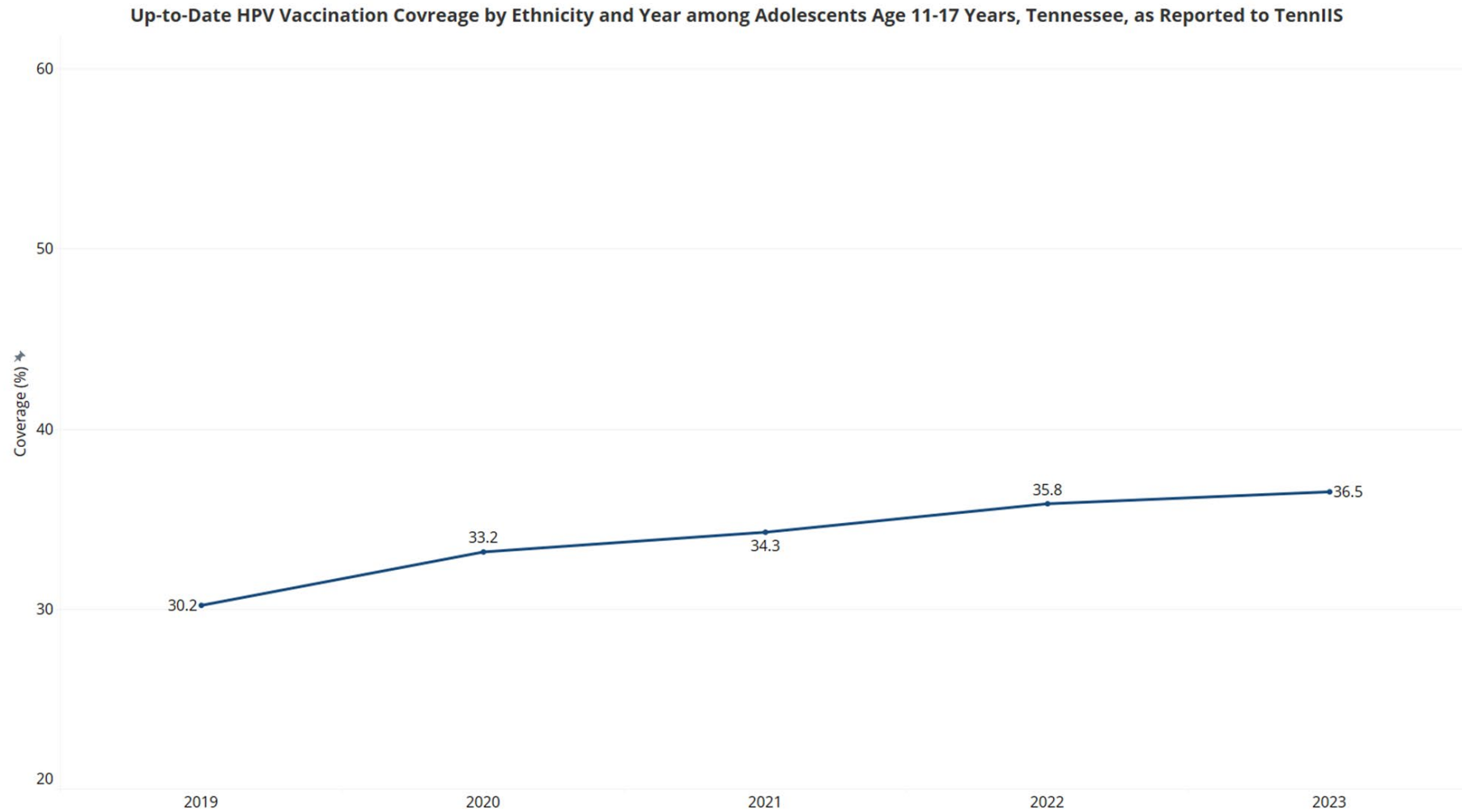


# HPV Coverage Rate Overview

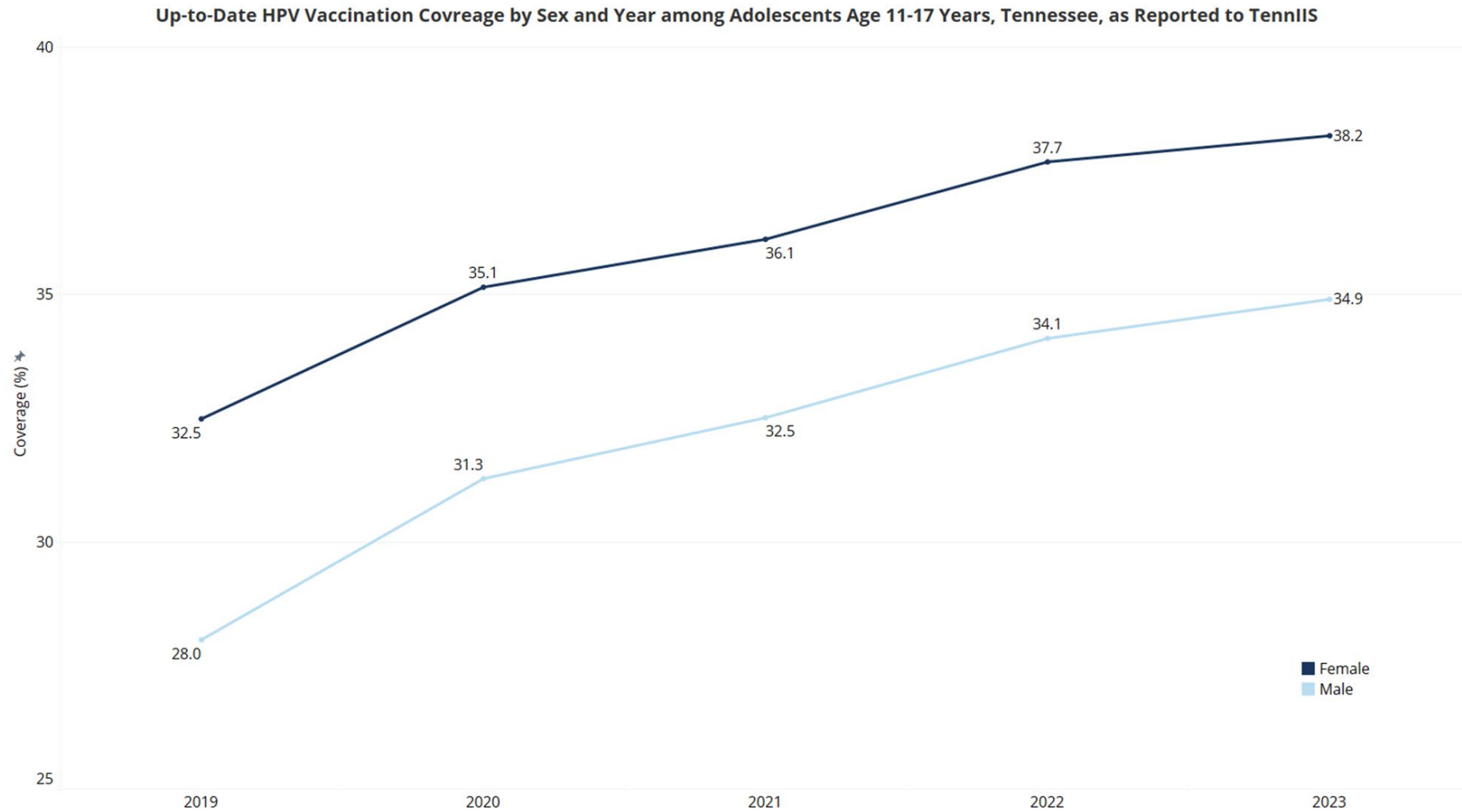
## HPV Coverage Rates as of 2023

| Geography          | Up-to-Date |
|--------------------|------------|
| National Rate      | 61.4       |
| <b>Target: 80%</b> |            |

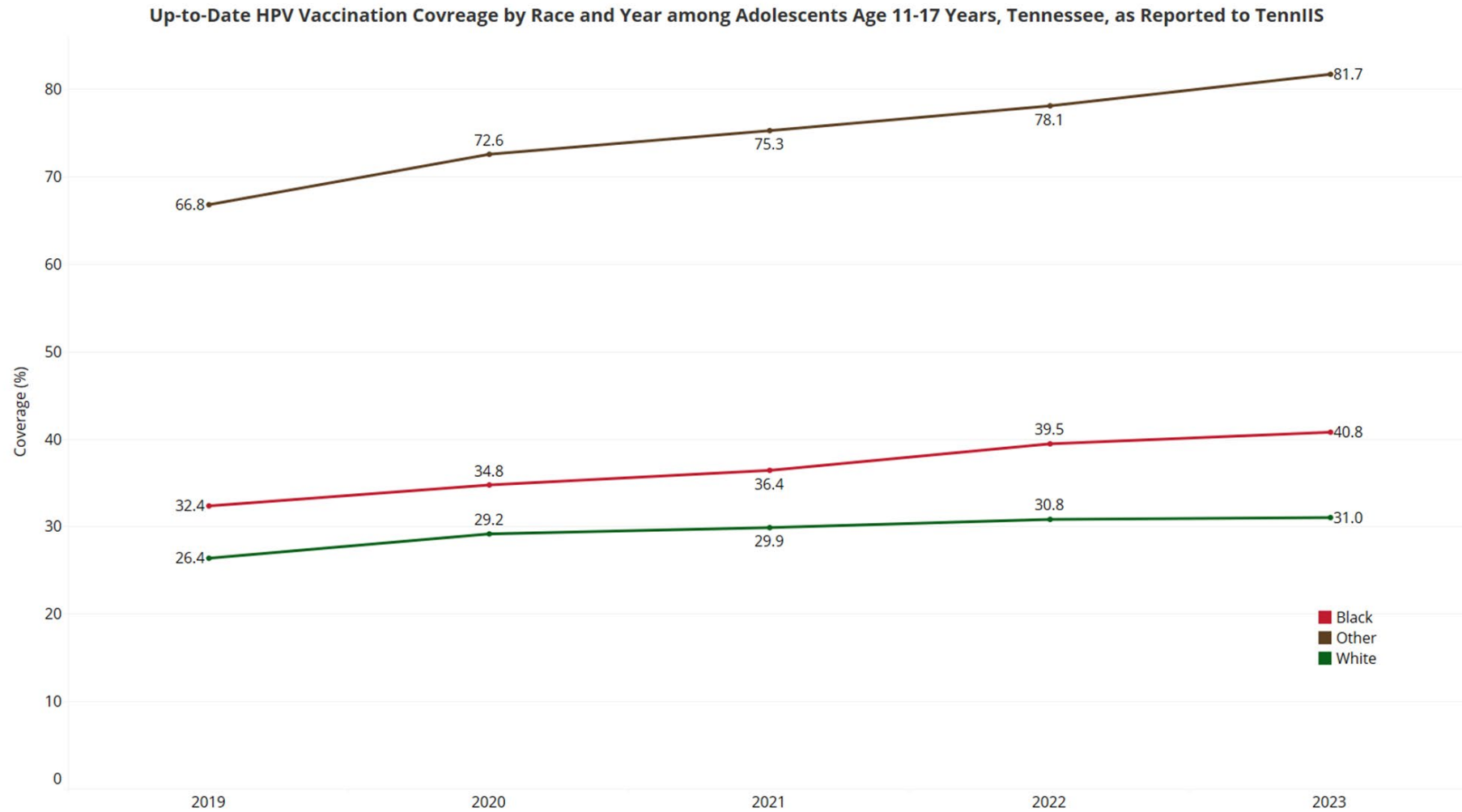
# Tennessee HPV Coverage Rates (Overall)



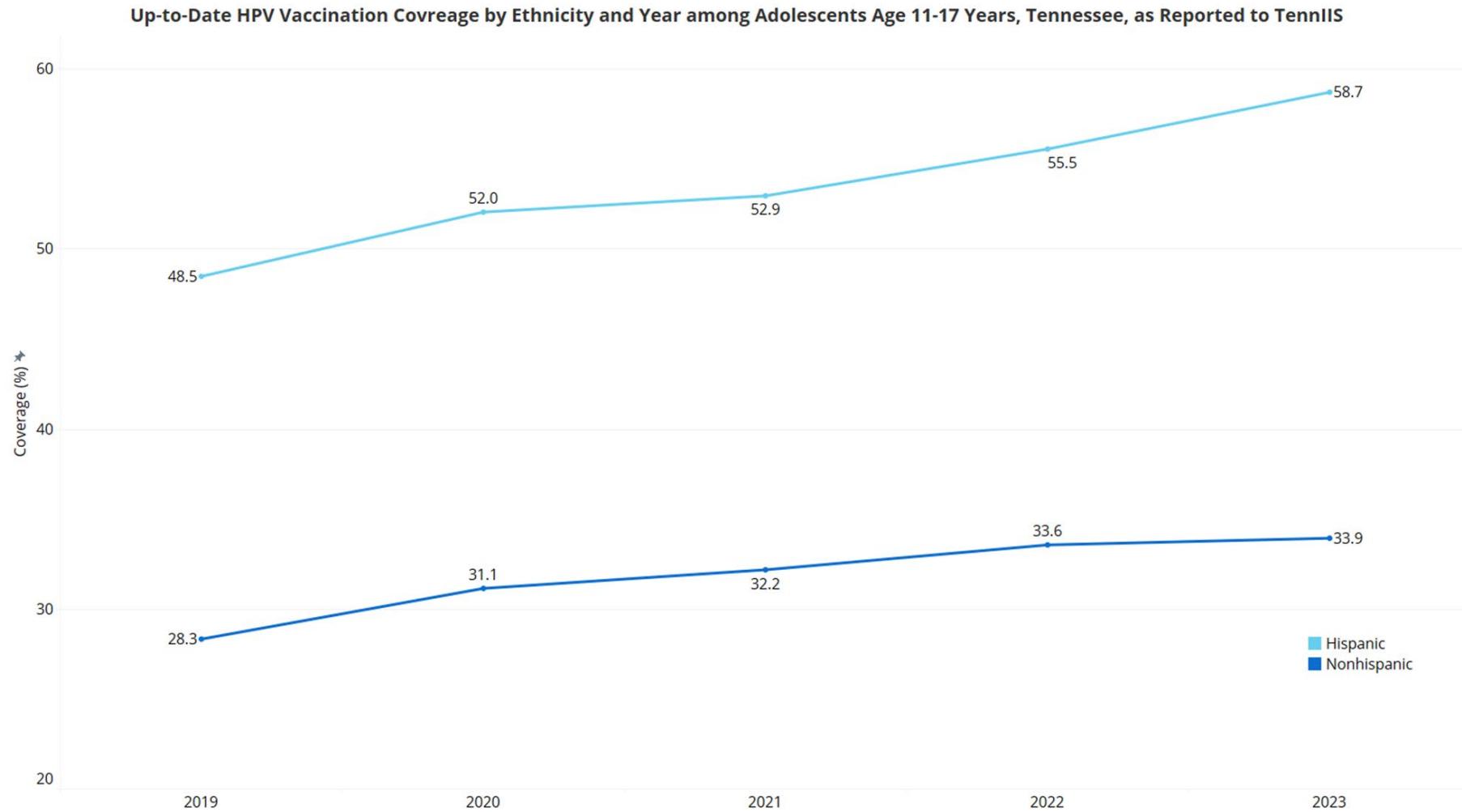
# Tennessee HPV Coverage Rates (Sex)



# Tennessee HPV Coverage Rates (Race)



# Tennessee HPV Coverage Rates (Ethnicity)

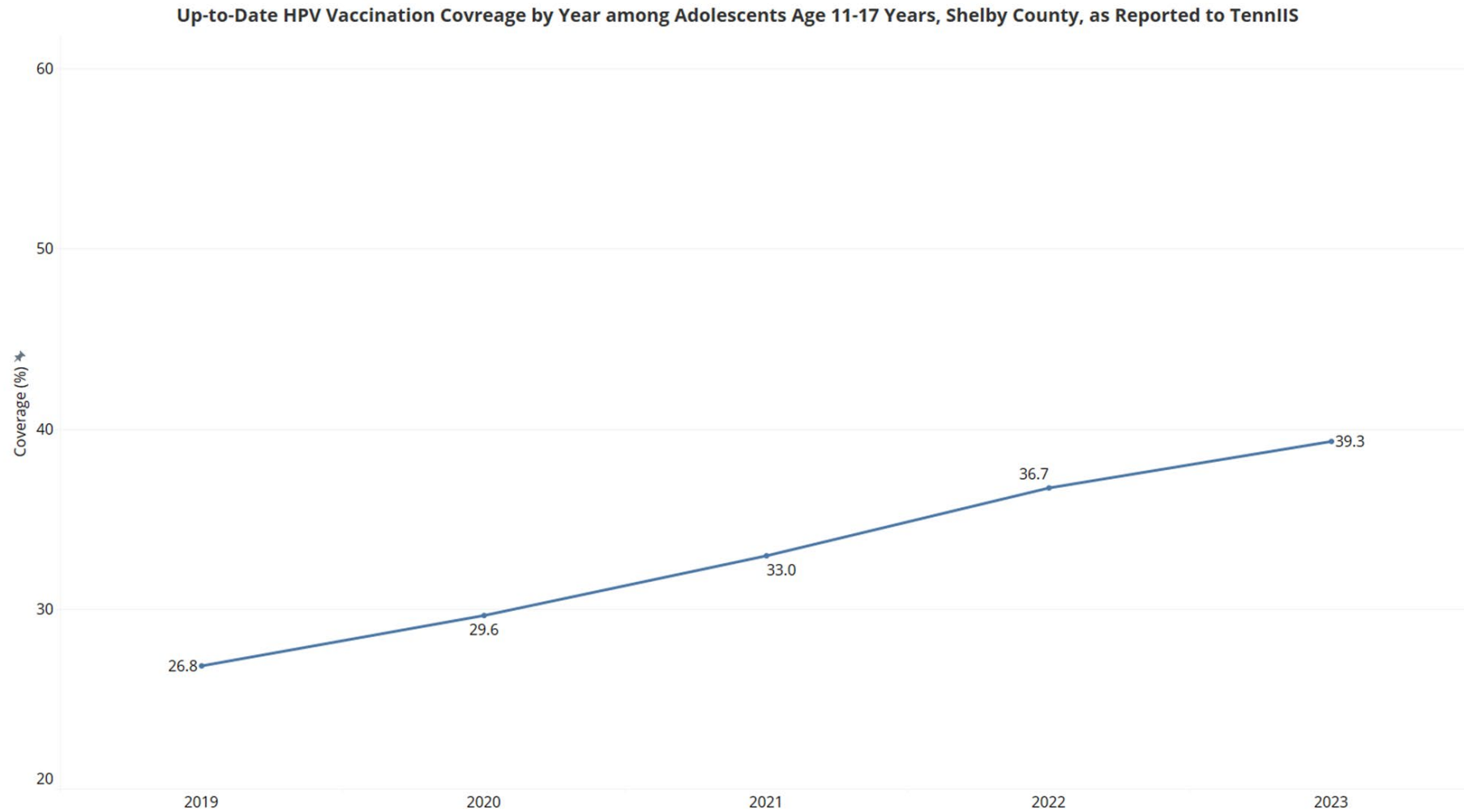


# HPV Coverage Rate Overview

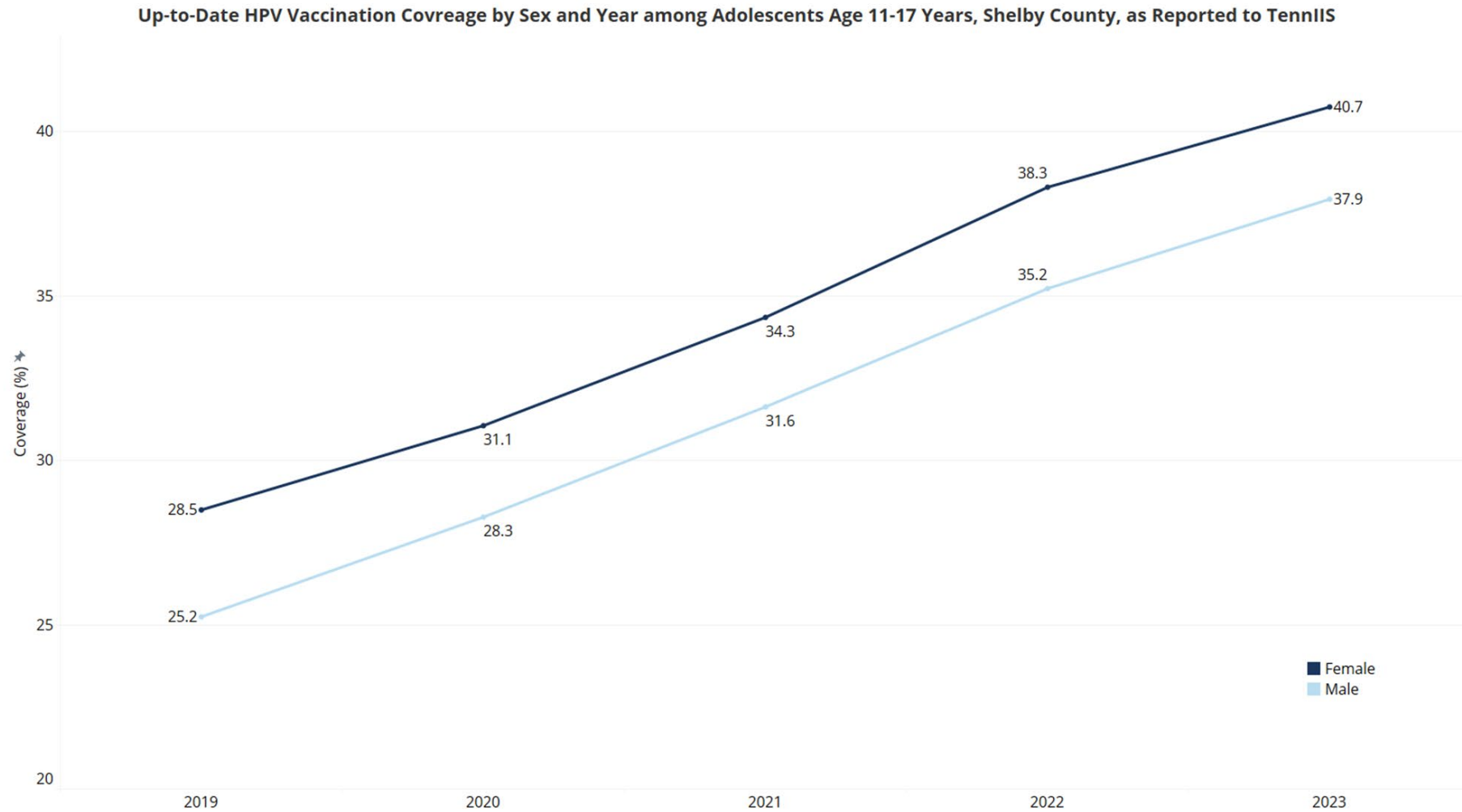
## HPV Coverage Rates as of 2023

| Geography          | Up-to-Date |
|--------------------|------------|
| National Rate      | 61.4%      |
| Tennessee Rate     | 36.5%      |
| <b>Target: 80%</b> |            |

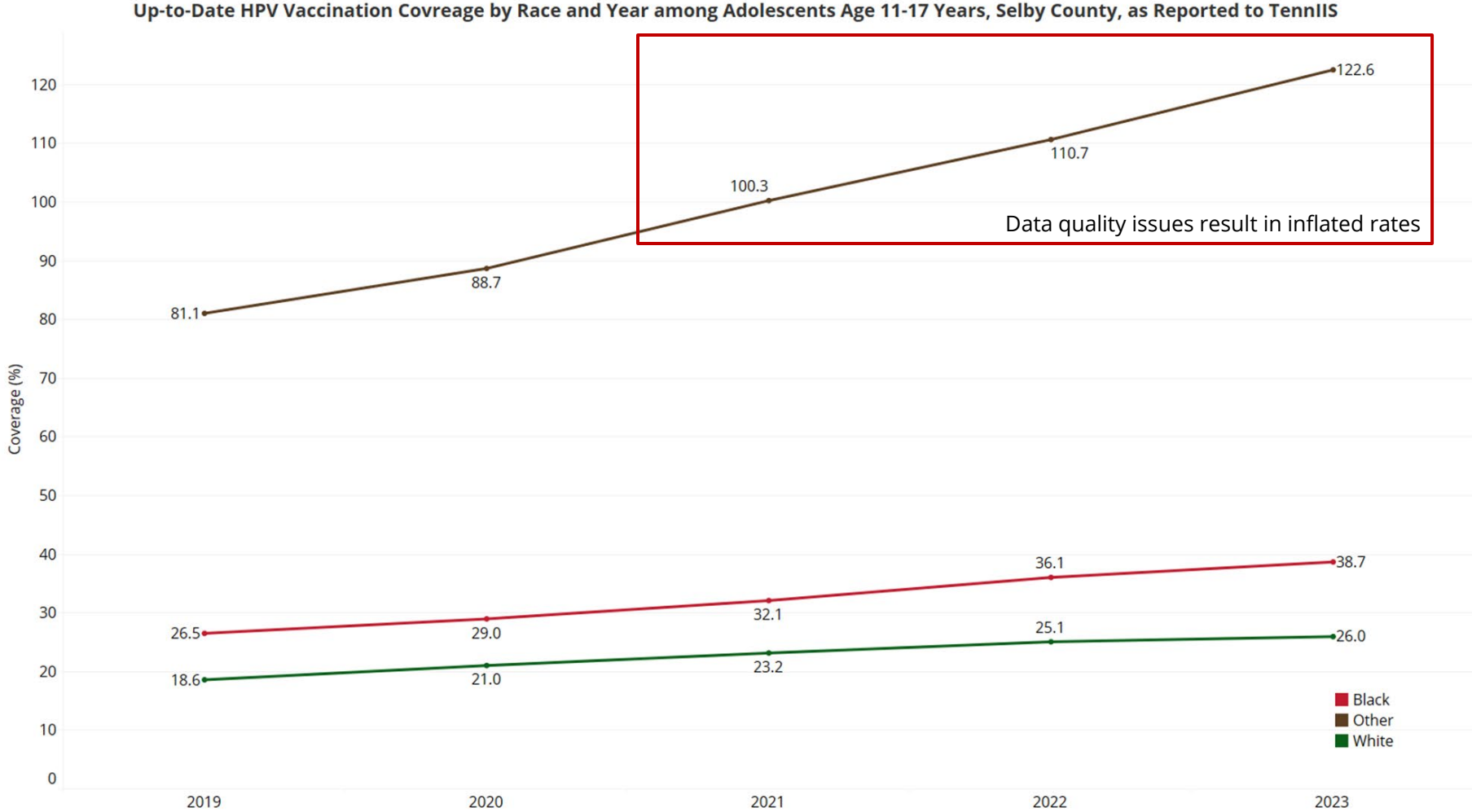
# Shelby County HPV Coverage Rates (Overall)



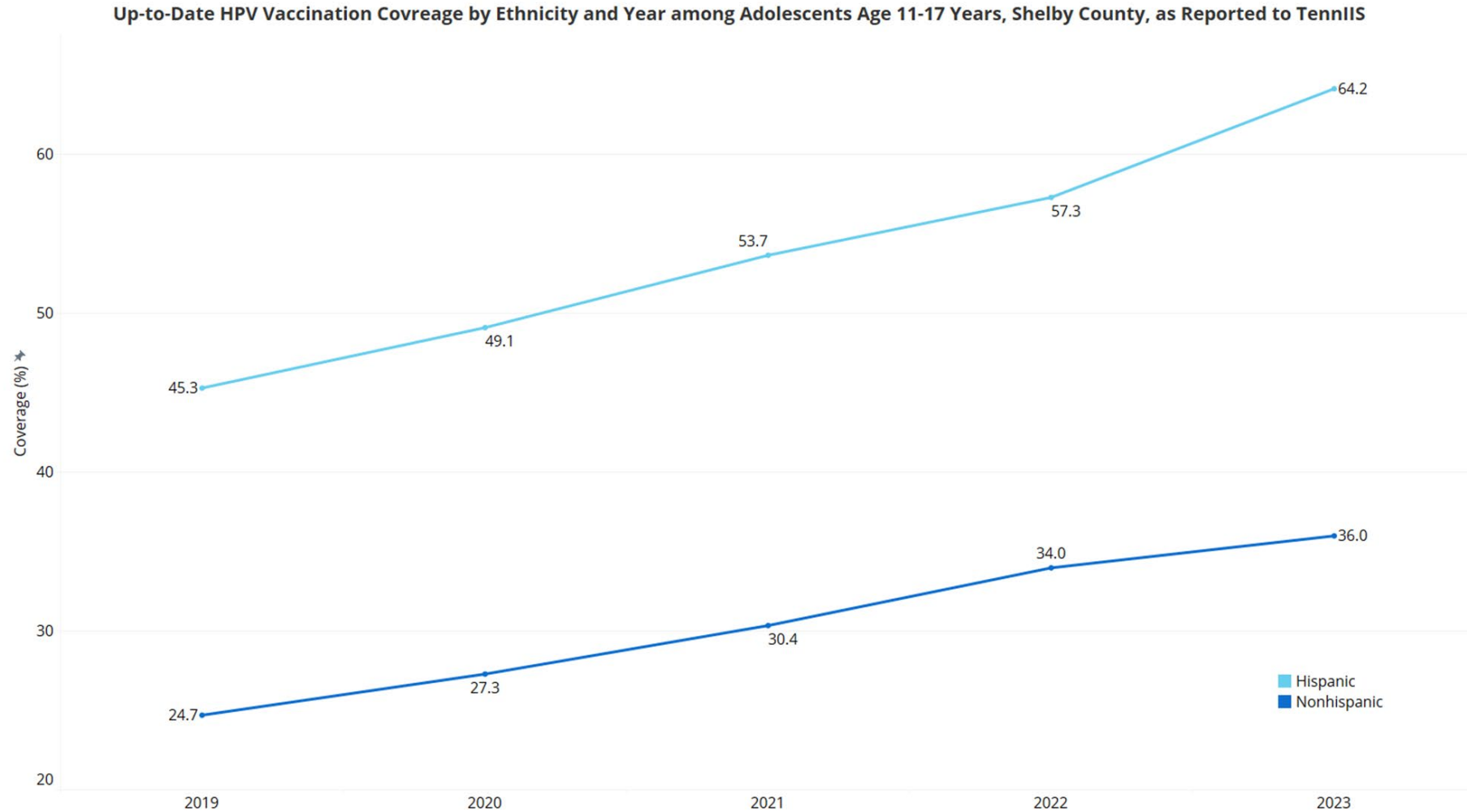
# Tennessee HPV Coverage Rates (Sex)



# Shelby County HPV Coverage Rates (Race)



# Tennessee HPV Coverage Rates (Ethnicity)



# HPV Coverage Rate Overview

## HPV Coverage Rates as of 2023

| Geography          | Up-to-Date |
|--------------------|------------|
| National Rate      | 61.4%      |
| Tennessee Rate     | 36.5%      |
| Shelby County Rate | 39.3%      |
| <b>Target: 80%</b> |            |

# What does it mean?

- HPV coverage rates are improving across all geographies
  - Education is a key component to improving vaccination uptake
- As HPV vaccine administration increases, the reporting must also increase for accurate monitoring
  - The quality of data directly impacts the ability to provide meaningful and accurate evaluations

## Most importantly

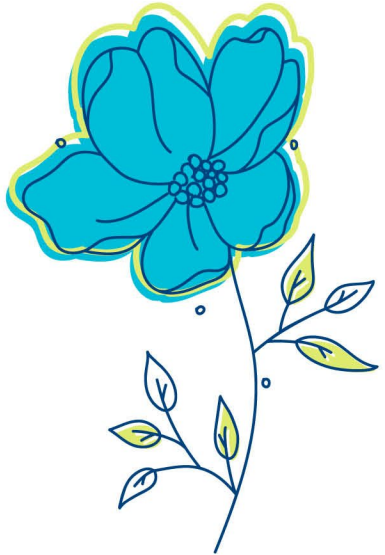
Cancer caused by HPV is being prevented





TM

**Thank You!**



# HPV Vaccination in Full Bloom

## 4<sup>TH</sup> ANNUAL MEETING

**HPV Cancer  
Prevention**  
→  
**Roundtable**  
MEMPHIS & SHELBY COUNTY



# Networking in Nature Break



# 20:00

Start Stop Reset mins: 20 secs: 0 type: None ▾

Breaktime for PowerPoint by Flow Simulation Ltd. Pin controls when stopped

at the **Memphis Botanic Garden**  
>>> [stjude.org/memphis-roundtable](http://stjude.org/memphis-roundtable)



# Producing Perennial HPV Cancer Prevention Results

## Emily Delikat, MPH

Clinical and Translational Research  
Coordinator II, HPV-IMPACT Project  
Vanderbilt University Medical  
Center, Department of Health Policy

Director, Tennessee Families for  
Vaccines



# HPV-IMPACT Program



Emily Delikat, MPH, CPH

Clinical Translational Research Coordinator II,  
Vanderbilt University Medical Center, HPV-IMPACT

September 24, 2024

Memphis & Shelby County  
HPV Cancer Prevention Roundtable



# Our Team



**Jessica Castilho, MD, MPH**  
Project PI



**Tiffanie Markus, PhD**  
EIP Project Director



**Sheelah Blankenship, MS**  
Project Lead



**Emily Delikat, MPH, CPH**  
Surveillance Officer



**Sarah Clarke, MPH**  
Surveillance Officer



**Anjola Ahayi, MPH**  
Data Quality and Modernization

**EIP Data Management  
Team**

**TN Cancer Registry**

**VUMC Data  
Programmers**

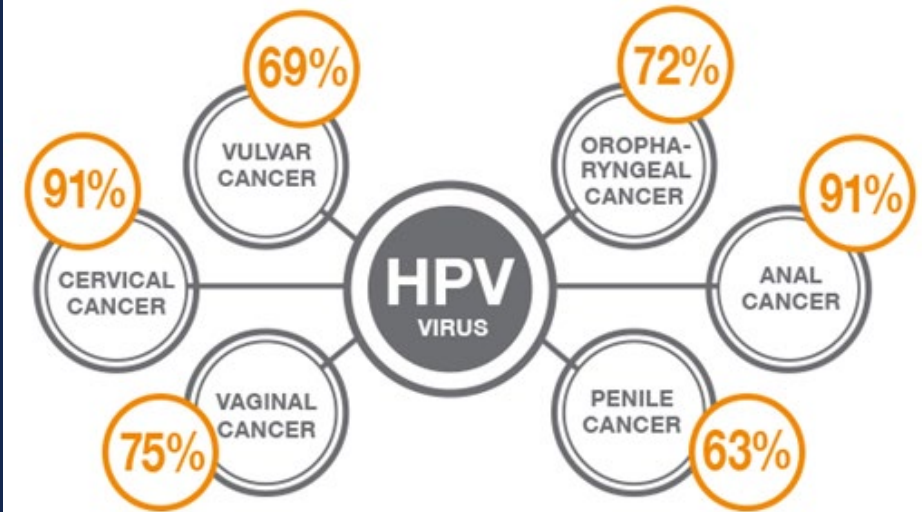
**VUMC Biostatistics**

**VUMC Pathologists**



# Human Papillomavirus (HPV) and Cancer

## HPV CAUSES SIX TYPES OF CANCER

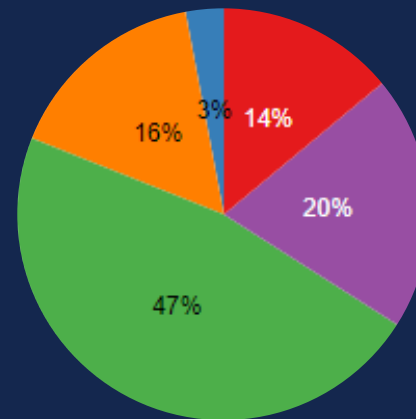


Source: HPVAlliance.org

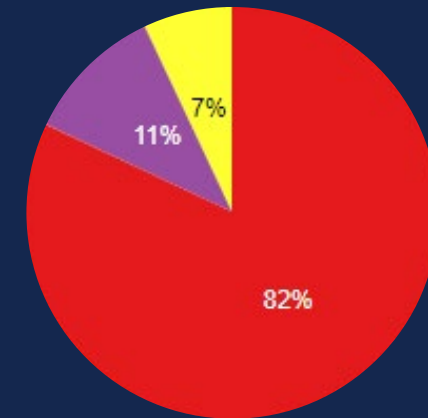
## Number of new HPV-associated cancer cases each year

According to data from 2015 to 2019, an estimated 47,199 new cases of human papillomavirus (HPV)-associated cancers occurred in the United States each year, including 26,177 among women and 21,022 among men.

### Female



### Male



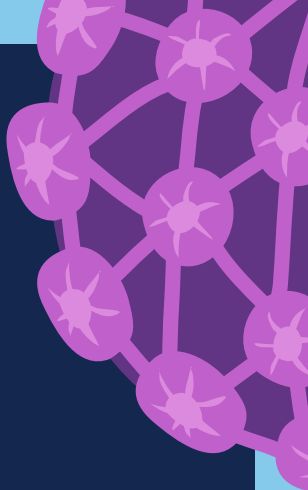
Centers for Disease Control and Prevention. Cancers Associated with Human Papillomavirus. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; 2022.

### Cancer Types

- Vagina
- Vulva
- Cervix
- Anus\*
- Oropharynx
- Penis



# Human Papillomavirus (HPV) and Cancer



3

Lifestyle



# Human Papillomavirus (HPV) and Cancer

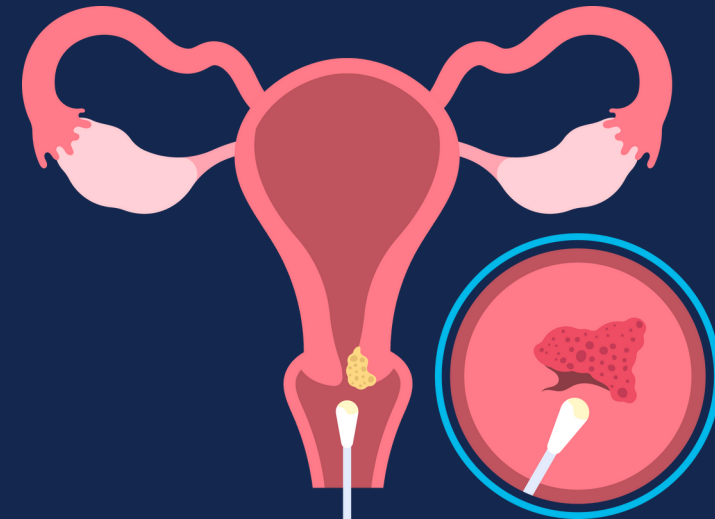
## 2 Screening and Treatment

### Pap (Papanicolaou) Test

Cervical cancer and sometimes anal cancer

- Negative/Normal
- Atypical Squamous Cells - ASC-US and ASC-H
- Squamous Intraepithelial Lesions - LSIL and HSIL
- Atypical Glandular Cells - AGC
- Adenocarcinoma

### HPV Test



# Human Papillomavirus (HPV) and Cancer

## 2 Screening and Treatment

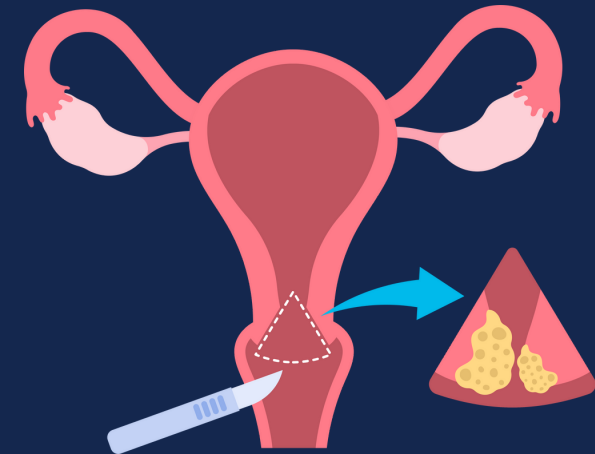
### Colposcopy with Biopsy

ASC-US or LSIL with high risk HPV+, HSIL or ASC-H with or without HPV test

- CIN 1 cervical intraepithelial neoplasia grade 1
- CIN 2
- CIN 2-3
- Squamous Cell Carcinoma

### LEEP or Cone Biopsy

CIN 2, CIN 2-3, CIN 3, Squamous Cell Carcinoma



# Preventing HPV and HPV Related Cancers

## 1

## Vaccines

- Gardasil® 9 prevents infection from high risk HPV types 6, 11, **16**, and **18**, as well as 31, 33, 45, 52, and 58.
- HPV types 16 and 18 are the two highest risk types for cancer. Bonus: HPV types 6 and 11 are responsible for 90% of cases of genital warts.
- Vaccination is nearly 100% effective and offers long-lasting protection
- Simulation based research done in 2017 suggests that 50% of cervical cancers are caused by HPV infections acquired by the age of 20 and 75% by the age of 30. (Burger, et. al)
- The vaccine is recommended for males and females at 11-12yrs, but can be given as early as age 9 and as late as age 45.



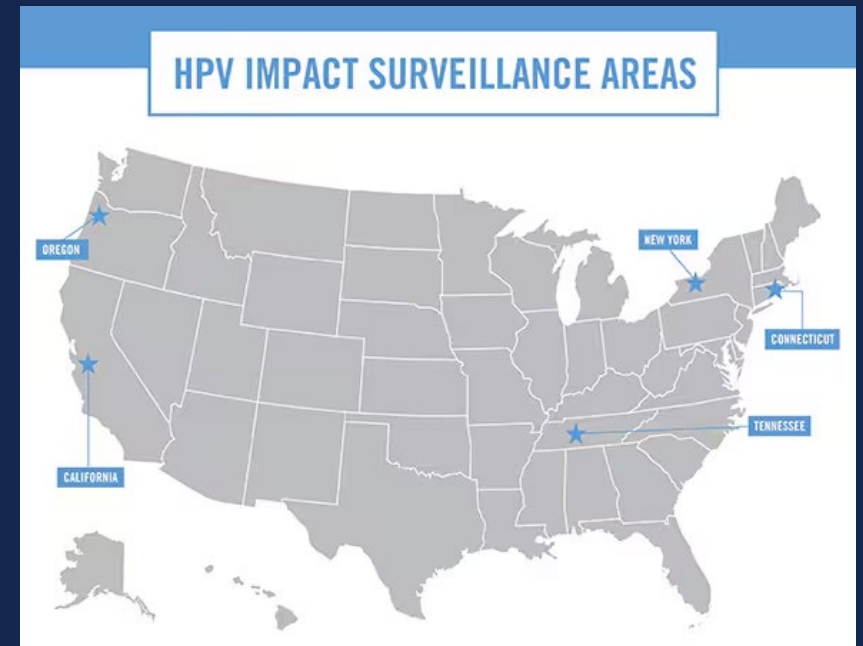
# HPV IMPACT Monitoring Project

Since 2008, HPV-IMPACT has monitored pre-cancerous and cancerous cervical lesions (CIN2+) among women ages 18 and older in five communities around the United States. Monitoring these high-grade cervical lesions enables the CDC to describe trends in cervical lesions, screening practices, and the rates of cancer-causing HPV types like HPV16 and HPV18. These trends serve as an early indicator of the impact of HPV vaccination.

The HPV-IMPACT network conducts surveillance of **over 1.5 million women ages 18 and older** in five states, including enhanced surveillance among **over half a million 18–39-year-olds**.

The main objectives of this surveillance project are to:  
Monitor trends in overall incidence of high-grade cervical lesions (CIN2+) over time;

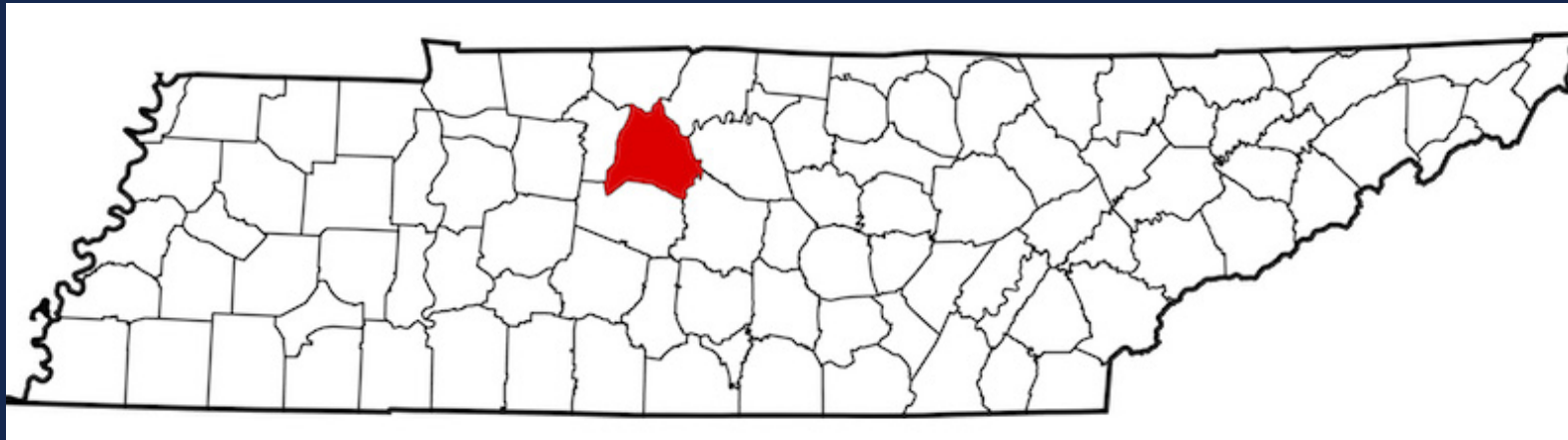
- Monitor HPV genotypes in women aged 18-39 years with CIN2+;
- Describe demographic, clinical, and HPV type characteristics among women with CIN2+;
- Estimate and monitor trends in cervical cancer screening utilization; and
- Estimate vaccine effectiveness.



# HPV IMPACT Monitoring Project

## Davidson County, TN

approx. 280,000 women and 250,000 ages 18 and older



# HPV IMPACT Monitoring Project

Cervical pre-cancer and cancer are reportable conditions in Tennessee.

Variables of interest:

- Demographics
- Pathology Diagnosis
- HPV Vaccine History
- Pap and HPV Screening History

Surveillance Methods & Data Sources

- Pathology Laboratory Reports
- Tennessee Immunization Registry
- Medical Records - 65 clinical partners, many part of one of our four large hospital systems
- Administrative Data: HDDS, ASTC, TennCare



# Case Study - How We Do What We Do

Martha - 37yr old female living in Antioch, TN

Pap Test and HPV test in June 2023

| Report                | Result  | Ref. Range | Units | ⚠               | Status       | Lab       |
|-----------------------|---|------------|-------|-----------------|--------------|-----------|
| <b>INTERPRETATION</b> | <b>EPCA,MDYB,ASCHB</b>  |            |       | <b>ABNORMAL</b> | <b>Final</b> | <b>01</b> |
|                       | <b>EPITHELIAL CELL ABNORMALITY.</b><br><b>LOW-GRADE SQUAMOUS INTRAEPITHELIAL LESION (LSIL) ; MILD DYSPLASIA.</b><br><b>ATYPICAL SQUAMOUS CELLS, CANNOT EXCLUDE HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESION (ASC-H) .</b> |            |       |                 |              |           |
| <b>CATEGORY:</b>      | <b>LSIL</b>   |            |       | <b>ABNORMAL</b> | <b>Final</b> | <b>01</b> |
|                       | <b>Low-Grade Squamous Intraepithelial Lesion</b>  |            |       |                 |              |           |



Pap - LSIL and ASC-H

HPV - High Risk Positive - Type 16

|             |           |           |        |
|-------------|-----------|-----------|--------|
| PATIENT DOB | COLLECTED | ORDERED   | REPORT |
| SSN #       | RECEIVED  | PERFORMED |        |
| PATIENT ID  |           |           |        |
| SPEC ID     |           |           |        |

| MOLECULAR TEST RESULTS |  |
|------------------------|--|
| RESULT                 | Positive HPV 16; Negative HPV 18/45<br><small>(Reference intervals: <b>negative</b>: HPV 16, 18/45 genotypes not detected. <b>Positive</b>: specified genotype detected)</small> |
| SPECIMEN               | ThinPrep   |
| METHODOLOGY            | HOLOGIC® APTIMA® HPV 16/18/45 Genotyping Assay   |
| CPT CODES              | 87625  |

FDA approvals for the HOLOGIC® Aptima® HPV GT Test include cervical specimens collected and placed in ThinPrep (PreservCyt) solution.

Pursuant to CLIA regulation 493.1253, MPLN has also validated the use of cervical specimens collected in SurePath liquid cytology media. Molecular Pathology Laboratory Network, Inc. is certified by CLIA for high-complexity clinical testing. **Federally required statement:** With the use of SurePath™ liquid cytology samples, this test was developed and its performance characteristics determined by Molecular Pathology Laboratory Network, Inc. It has not been cleared or approved by the U.S. Food and Drug Administration (FDA). However, the FDA has determined that such approval and clearance are not necessary. The NYSDOH has approved MPLN's use of SurePath™ samples for CTNG testing.

Due to the rarity of testing requests for other specimen types and pursuant to CAP MIC 64770, these samples will be run at the discretion of MPLN, with the following disclaimer: Clinical samples other than those specifically described above have not been validated for use in the HOLOGIC® Aptima® HPV GT assay.

Dr. Gynny at Happy OBGYN



This case study includes images from real lab reports. The actual case progression, PHI, and dates are fictional.



# Case Study - How We Do What We Do

Martha - 37yr old female  
living in Antioch, TN



Colposcopy with Cervical Biopsy a few weeks later, June 2023

**S U R G I C A L P A T H O L O G Y**


**CLINICAL HISTORY**  
Colposcopic biopsy at 10:00; history ASC-H Pap smear; R87.611

**FINAL DIAGNOSIS**  
CERVIX, 10:00, BIOPSY: HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESION (MODERATE TO SEVERE SQUAMOUS DYSPLASIA/CIN 2-3); NEGATIVE FOR INVASIVE CARCINOMA

**GROSS DESCRIPTION**  
The patient identification is verified on the requisition and the container.  
  
Received in formalin labeled "10:00" are two tan-gray tissues (0.8 x 0.4 cm and 0.9 x 0.7 cm) with attached clear mucinous material. The specimen is entirely submitted in cassette A1, 2/1.

**MICROSCOPIC DESCRIPTION**  
Microscopic examination performed.

Acetowhite changes and abnormalities seen at 1 o'clock, 5-7 o'clock, and 9-10 o'clock



Biopsy was taken from 10 o'clock

Dr. Gynny  
at Happy  
OBGYN



CIN 2-3

This case study includes images from real lab reports. The actual case progression, PHI, and dates are fictional.



# Case Study - How We Do What We Do

Cone Biopsy - August 2023

Martha - 35yr old  
living in Antioch, TN



CIN 3

*S U R G I C A L P A T H O L O G Y*

**CLINICAL HISTORY**  
CIN 3; D06.9

**FINAL DIAGNOSIS**

**A. CERVIX, ECTOCERVIX, CONIZATION:**

- SEVERE SQUAMOUS DYSPLASIA (CIN-3), INVOLVING ENDOCERVICAL GLANDS.
- NO INVASIVE CARCINOMA IS IDENTIFIED.
- HIGH-GRADE DYSPLASIA IS PRESENT AT THE ENDOCERVICAL MARGIN.
- THE ECTOCERVICAL MARGIN IS FREE OF HIGH-GRADE DYSPLASIA.

**B. CERVIX, "TOP-HAT", EXCISION:**

- SEVERE SQUAMOUS DYSPLASIA (CIN-3), INVOLVING ENDOCERVICAL GLANDS.
- NO INVASIVE CARCINOMA IS IDENTIFIED.
- HIGH-GRADE DYSPLASIA IS PRESENT AT AN UNDESIGNATED SURGICAL MARGIN.

**C. CERVIX, ENDOCERVICAL CURETTAGE:**

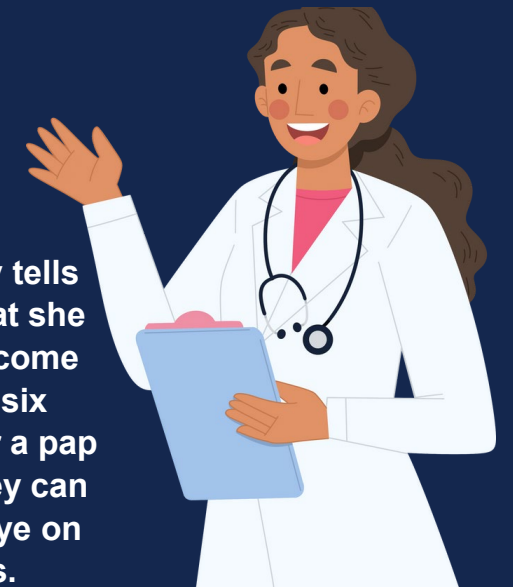
- BENIGN ENDOCERVICAL GLANDS AND STROMA.
- MINUTE STRIP OF SQUAMOUS EPITHELIUM WITH MARKED ARTIFACTUAL DISTORTION, INSUFFICIENT FOR FURTHER CHARACTERIZATION.

**GROSS DESCRIPTION**  
The patient identification is verified on the requisition and the containers.

**A.** Received in formalin labeled "ectocervix" is an unoriented, rubbery conical excision of tan-gray, fibrous tissue (2.0 x 1.5 cm excised to maximum depth of 0.5 cm). The tissue is surfaced by pale pink-gray, submitted slightly wrinkled ectocervical mucosa encircling a 1.2 cm slit-like os. No endocervical mucosa is identified. The ectocervical rim is marked with blue ink and the remainder of the deep margin is marked with black ink. Sectioning reveals tan-gray, smooth, fibrous cut surfaces. The specimen is entirely submitted in cassettes A1-A4, 4/1 each.

**B.** Received in formalin labeled "Top-Hat" are two unoriented, tan-gray, rubbery portions of fibrous tissue (1.1 x 0.8 cm and 1.5 x 1.0 cm) displaying minimal pale pink, slightly granular endocervical mucosa. The

Dr. Gynny  
at Happy  
OBGYN



Dr. Gynny tells Martha that she needs to come back in six months for a pap test so they can keep an eye on things.

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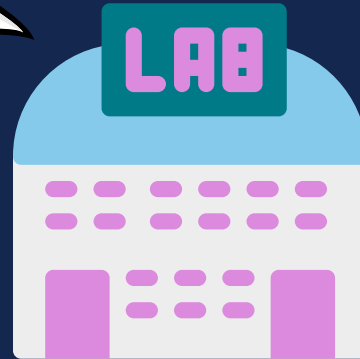


# Case Study - How We Do What We Do

**M**EANWHILE....

Hey, Doc. We've got some of those CIN2+ cervical cancer pathology reports.

Thanks, Rob. Better send those on over to the HPV IMPACT team at Vanderbilt

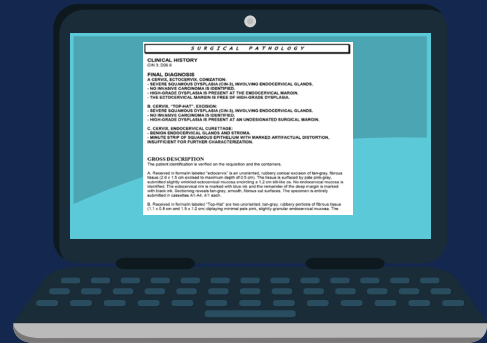


Wow, that sun is bright! We better get inside and work on those path reports!



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# Case Study - How We Do What We Do



**Demographics**

Editing existing Patient Identifier **TN07001**. Goodpatient, Martha, 08-13-1987

Event: **Event** 03-08-2024 CIN3 1

**Patient Identifier** TN07001  
To rename the record, see the record action drop-down at top of the Record Home Page.

**Last Name** \* must provide value  
Goodpatient

**First Name** \* must provide value  
Martha

**Middle Initial**  
Ima

**Alias/Other Name**

**Last 4 SSN**  
9999  
0 characters remaining

**Date of Birth** \* must provide value  
08-13-1987 M-D-Y

**Full Address** \* must provide value  
5301 Hickory Hollow Lane, Antioch, TN, USA

**Street Number** \* must provide value  
5301

**Address**  
Hickory Hollow Lane

**City** \* must provide value  
Antioch

**County** \* must provide value  
Davidson

**State** \* must provide value  
TN

**Zip Code** \* must provide value  
37013

**Telephone** \* must provide value  
(615) 867-5309

**Longitude**  
-86.6520803

## Who is Martha?

**Race** \* must provide value

- White
- Black or African American
- Asian
- American Indian/Alaska Native
- Native Hawaiian or Pacific Islander
- Not available/Unknown
- Other

**Ethnicity** \* must provide value  
Not Hispanic or Latino

**Sex Assigned at Birth**  
Female

**Gender Identity**  
Unknown

**Health insurance for this procedure (select all that apply)** \* must provide value

- Private/PPO/HMO/managed care plan
- Medicaid/State assistance
- Indian Health Service
- Medicare
- Military/VA
- Self Pay
- No Coverage
- Screen Prog
- Prison
- Not Available
- Other

**File Upload** [Upload file](#)

**Form Status**

**Complete?**  
Incomplete



This case study includes images from real lab reports. The actual case progression, PHI, and dates are fictional.

# Case Study - How We Do What We Do

## What procedure did she have?

### Cervical Pathology

Initiate Data Piping

Editing existing Patient Identifier **TN07001**. Goodpatient, Martha, 08-13-1987

Event: Event 1

Patient Identifier: TN07001

number instance: 1

#### Pathology Laboratory Information

Pathology Laboratory Name: Center for Disease Detection

Add a lab

Pathology Laboratory ID: 45DO660475

Pathologist: Missy Smartypants

Add a pathologist

Pathology Laboratory Medical Record Number/PtID:

#### Ordering Provider Information

Ordering Provider Name: Abbie Gynny

Add a provider

Practice Name: Happy OBGYN

Ordering Provider Medical Record Number/PtID:

### Specimen Information

Age: 35

Path Report Accession Number: SB-8009jd71

Specimen Collection Date: 08-02-2023

Final Event Diagnosis: CIN3

IHC Stain: No

Block Number: A1-A4

Specimen Diagnosis: CIN3

Specimen Procedure: LEEP/Cone biopsy

Block Number: B2

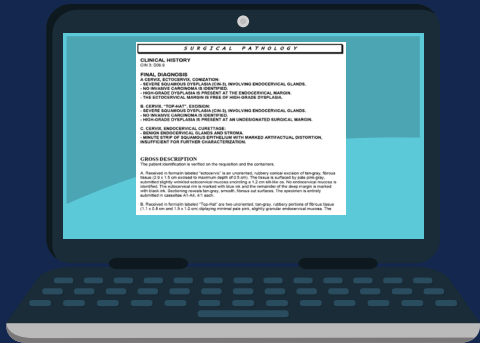
Specimen Diagnosis: CIN3

Specimen Procedure: LEEP/Cone biopsy

Block Number:

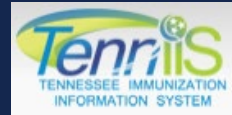
Specimen Diagnosis:

Specimen Procedure:



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# Case Study - How We Do What We Do



Was she vaccinated?

Was she screened?

|  |  |
|--|--|
| DTaP-IPV (Kinrix® / Quadracel®)                            |  |
| DTaP-IPV,Hib,HepB (VAXELIS®)                               |  |
| Hep A, ped/adol, 2 dose (Vaqta® / Havrix®)                 |  |
| Hep A, adult (Vaqta® / Havrix®)                            |  |
| Hep B Ped/Adol - Preserv Free (Recombivax HB® / EngerixB®) |  |
| Hep B, adult (Recombivax® / EngerixB®)                     |  |
| HepB (recombinant), CpG adjuvanted (Hepisav-3®)            |  |
| HepB recombinant, 3-antigen, Al(OH)3 (PREHEVBRIO)          |  |
| Hib (PRP-OMP) (PedvaxHIB®)                                 |  |
| Hib (PRP-T) (ActHIB® / Hiberix®)                           |  |
| HPV9 (Gardasil® 9)   |  |

**Vaccine Data**

Editing existing Patient Identifier **TN07001**. Goodpatient, Martha, 08-13-1987

**Event: Patient Info**

Patient Identifier: TN07001

**Vaccine Information Not Required**  
 Box may be unchecked at a later date if an invasive cancer diagnosis occurs.

**Any HPV Vaccine**  
 \* must provide value  
 Unknown

Sources of HPV Vaccine Information Checked (select all that apply)  
 \* must provide value

- Lab Report
- Medical Record
- Patient Interview
- Vaccine Registry
- Vaccine Prov. Record
- Administrative
- Other

HPV vaccine information found in Medical Record?  
 \* must provide value  
 Yes  
 No

HPV vaccine information found in Vaccine Registry?  
 \* must provide value  
 Yes  
 No  
 Patient not in registry

Vaccine comments (CDC Reported-No PHI)  
 255 characters remaining

HIV infection or AIDS  
 \* must provide value  
 Unknown

**Screening Data**

Editing existing Patient Identifier **TN07001**. (Instance #1) Goodpatient, Martha, 08-13-1987

**Event: Patient Info**

Patient Identifier: TN07001

**Screening Information Not Required**  
 Box may be unchecked at a later date if an invasive cancer diagnosis occurs.

No screen data available

Screen Type:  
 \* must provide value  
 Precancer screen

Pap Test Done  
 \* must provide value  
 Yes, documented

Date of Pap Test  
 \* must provide value  
 06-03-2023 M-D-Y

Proxy Pap test date

Result of Pap test  
 \* must provide value  
 ASC-H

HPV Test Done  
 \* must provide value  
 Yes, documented

Date of HPV Test  
 \* must provide value  
 06-03-2023 M-D-Y

Proxy HPV test date

HPV Test  
 \* must provide value

- Cervista
- Aptima
- HC2
- Cobas
- Other
- Unknown

HPV Test Result  
 \* must provide value  
 High Risk Positive

HPV Types  
 \* must provide value

- HPV type 16
- HPV type 18
- HPV type 18/45
- HPV type Other High Risk Type
- HPV type Unknown



This case study includes images from real lab reports. The actual case progression, PHI, and dates are fictional.

# Case Study - How We Do What We Do

What if her diagnosis had been invasive cancer?



**Add'l Cancer Variables**

Editing existing Patient Identifier **TN07001**. Goodpatient, Martha, 08-13-1987

**Event: Patient Info**

**Patient Identifier** TN07001

**Cancer registry invasive cancer stage**  \* must provide value

**Cancer registry source variable for invasive cancer stage**  \* must provide value

**Invasive cancer stage**  \* must provide value

**Did the patient present with signs or symptoms**  \* must provide value

**If yes, which signs/symptoms were documented (check all that apply):** \* must provide value

- Vaginal bleeding or discharge
- Pelvic pain
- Pain with intercourse
- Abdominal pain
- Back, flank, or hip pain
- Gastrointestinal symptoms
- Mass
- Urinary symptoms
- Fatigue, weakness, or dizziness
- Weight loss/ loss of appetite
- Other
- Unknown, no documentation

**Any immunocompromising condition?**  \* must provide value

- AIDS
- HIV
- Organ Transplant
- Immunosuppressive therapy (e.g. steroids, chemotherapy, radiation, biologics)
- Diabetes
- Malignancy or history of malignancy
- Renal failure/disease or dialysis
- Other immunocompromising condition

**Smoking**  \* must provide value

**Language barriers**  \* must provide value

**Height**  inches

**Weight**  lbs

**BMI Calc**  [View equation](#)

**BMI > 40 or morbid obesity**  \* must provide value

**Cancer comments**

**How is this cancer event classified?**  \* must provide value

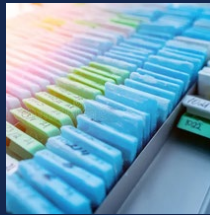
**Cancer Class Notes**



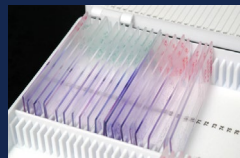
This case study includes images from real lab reports. The actual case progression, PHI, and dates are fictional.



# Case Study - How We Do What We Do



Request specimen blocks from the labs, have specimens cut, and send to the CDC for genotyping.



Images are representations and do not depict actual cervical specimens.

# What happens to the data? What have we learned?

> *Vaccine*. 2020 Jan 3;38(1):39-45. doi: 10.1016/j.vaccine.2019.09.103. Epub 2019 Oct 11.  
**Prevalence of human papillomavirus (HPV)-vaccine types by race/ethnicity and sociodemographic factors in women with high-grade cervical intraepithelial neoplasia (CIN2/3/AIS), Alameda County, California, United States**  
Kayla Saadeh<sup>1</sup>, Ina U Park<sup>2</sup>, Julia W Gargano<sup>3</sup>, Erin Whitney<sup>4</sup>, Troy D Querec<sup>5</sup>, Leo Hurley<sup>6</sup>, Michael Silverberg<sup>6</sup>

> *Int J Cancer*. 2020 Feb 1;146(3):810-818. doi: 10.1002/ijc.32340. Epub 2019 May 6.  
**Cervical adenocarcinoma in situ: Human papillomavirus types and incidence trends in five states, 2008–2015**  
Angela A Cleveland<sup>1</sup>, Julia W Gargano<sup>1</sup>, Ina U Park<sup>2</sup>, Marie R Griffin<sup>3</sup>, Linda M Niccolai<sup>4</sup>, Melissa Powell<sup>5</sup>, Nancy M Bennett<sup>6</sup>, Kayla Saadeh<sup>7</sup>, Manideepthi Pemmaraju<sup>3</sup>, Kyle Higgins<sup>4</sup>, Sara Ehlers<sup>5</sup>, Mary Scahill<sup>6</sup>, Michelle L Johnson Jones<sup>1</sup>, Troy Querec<sup>1</sup>, Lauri E Markowitz<sup>1</sup>, Elizabeth R Unger<sup>1</sup>; HPV-IMPACT Working Group

**Human Papillomavirus 16/18-Associated Cervical Lesions: Differences by Area-Based Measures of Race and Poverty**  
Monica M Brackney<sup>1</sup>, Julia W Gargano<sup>2</sup>, Susan E Hannagan<sup>3</sup>, James Meek<sup>3</sup>, Troy D Querec<sup>4</sup>, Linda M Niccolai<sup>3</sup>

> *Am J Epidemiol*. 2020 Apr 2;189(4):265-276. doi: 10.1093/aje/kwz253.  
**Effectiveness of 1, 2, and 3 Doses of Human Papillomavirus Vaccine Against High-Grade Cervical Lesions Positive for Human Papillomavirus 16 or 18**  
Michelle L Johnson Jones<sup>1</sup>, Julia Warner Gargano<sup>1</sup>, Melissa Powell<sup>2</sup>, Ina U Park<sup>3</sup>, Linda M Niccolai<sup>4</sup>, Nancy M Bennett<sup>5</sup>, Marie R Griffin<sup>7</sup>, Troy Querec<sup>8</sup>, Elizabeth R Unger<sup>8</sup>, Lauri E Markowitz<sup>1</sup>; HPV-IMPACT Working Group

> *Cancer Epidemiol Biomarkers Prev*. 2019 Mar;28(3):602-609. doi: 10.1158/1055-9965.EPI-18-0885. Epub 2019 Feb 21.  
**Trends in Human Papillomavirus Vaccine Types 16 and 18 in Cervical Precancers, 2008–2014**  
Nancy M McClung<sup>1</sup>, Julia W Gargano<sup>3</sup>, Nancy M Bennett<sup>4</sup>, Linda M Niccolai<sup>5</sup>, Nasreen Abdullah<sup>6</sup>, Marie R Griffin<sup>7</sup>, Ina U Park<sup>8</sup>, Angela A Cleveland<sup>3</sup>, Troy D Querec<sup>9</sup>, Elizabeth R Unger<sup>9</sup>, Lauri E Markowitz<sup>9</sup>; HPV-IMPACT Working Group

> *MMWR Morb Mortal Wkly Rep*. 2019 Apr 19;68(15):337-343. doi: 10.15585/mmwr.mm6815a1.  
**Estimated Number of Cases of High-Grade Cervical Lesions Diagnosed Among Women – United States, 2008 and 2016**  
Nancy M McClung, Julia W Gargano, Ina U Park, Erin Whitney, Nasreen Abdullah, Sara Ehlers, Nancy M Bennett, Mary Scahill, Linda M Niccolai, Monica Brackney, Marie R Griffin, Manideepthi Pemmaraju, Troy D Querec, Angela A Cleveland, Elizabeth R Unger, Lauri E Markowitz; HPV-IMPACT Working Group



# What happens to the data? What have we learned?



Publications and Resources | HPV-IMPACT | CDC

HPV-IMPACT has enabled CDC to describe trends in the cervical lesions that could progress to cancer and the reduction of cancer-causing HPV types (such as HPV16 and HPV18) in these cervical lesions.

- From 2008 to 2016, in 20- to 24-year-olds, there were significant reductions in new cervical precancers caused by HPV types 16 and 18. There was also a reduction in precancers caused by HPV type 31, a high-risk HPV type not targeted by vaccination, suggesting cross-protection.
- Compared to 2008-2009, cervical precancer rates in 2014-2015 were 50% lower in 18- to 20-year-olds and 36% lower in 21- to 24-year-olds.
- By 2014, the percentage of cervical lesions due to types that are prevented by the HPV vaccine had dropped by 40% among those vaccinated.
- HPV-IMPACT data were used for the first national estimate of CIN2+ cases. We estimated that 196,000 CIN2+ cases were diagnosed in the United States. In 2016, 36% of which were in 18- to 29-year-olds.



# What happens to the data? What have we learned?

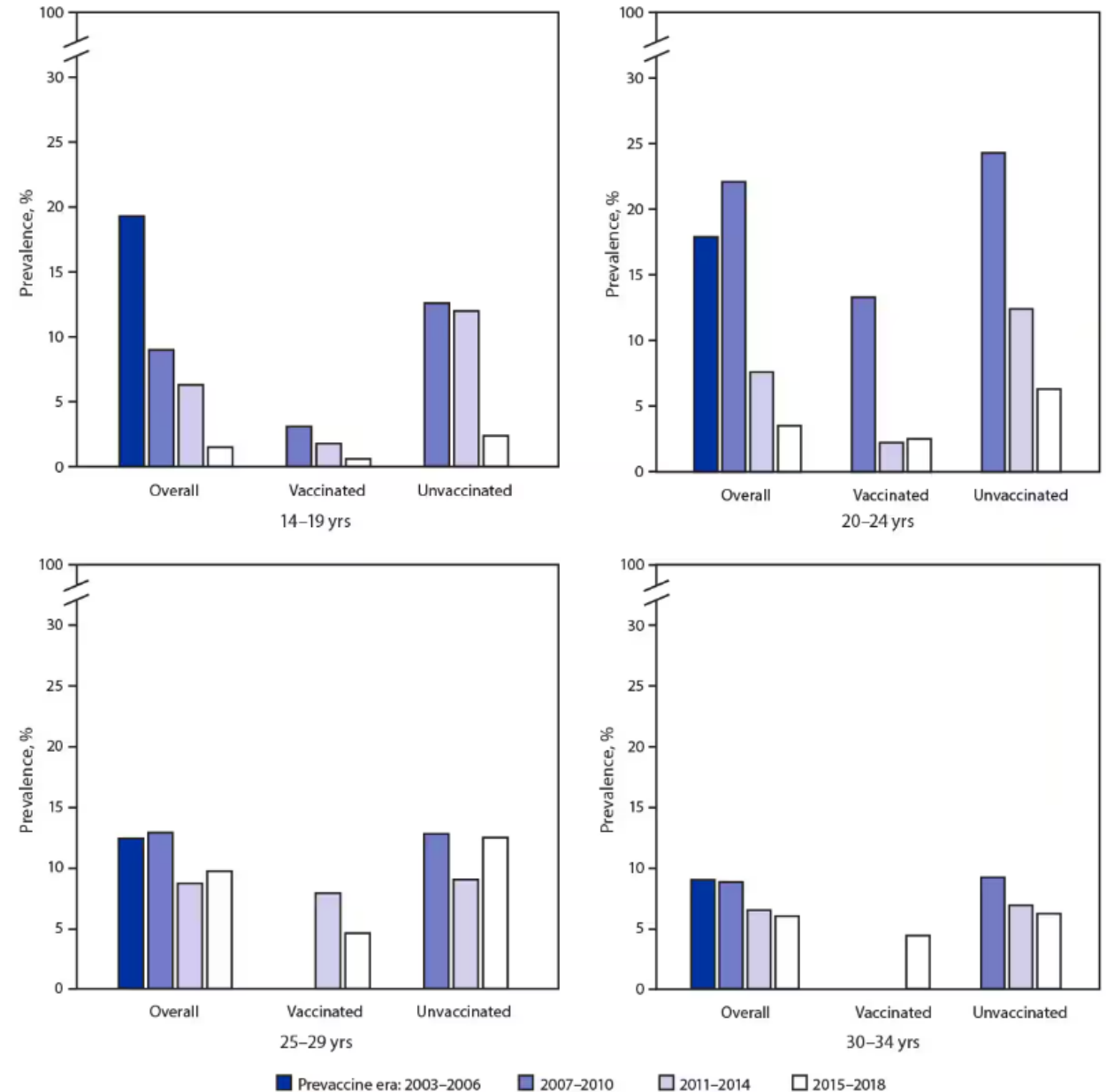
Nationally representative data through 2018 indicate that HPV vaccine-type prevalence continues to decline among females aged 14–19 (88%) and 20–24 (81%) years compared with before vaccination. The findings also show evidence of indirect protection of unvaccinated females through herd effects in these age groups.

\*\* Reported receipt of  $\geq 1$  HPV vaccine dose.

† All analyses were weighted using the examination sample weights.

§ Estimates are not shown for vaccinated females aged 25–29 years in 2007–2010 and for vaccinated females aged 30–34 years in 2007–2010 and 2011–2014 because of the low proportion of females in those age groups who were vaccinated.

FIGURE. Quadrivalent vaccine-type (4vHPV-type) prevalence among sexually experienced females aged 14–34 years, by age group, vaccination history,\* and survey years – National Health and Nutrition Examination Survey, United States, 2003–2018<sup>†,§</sup>

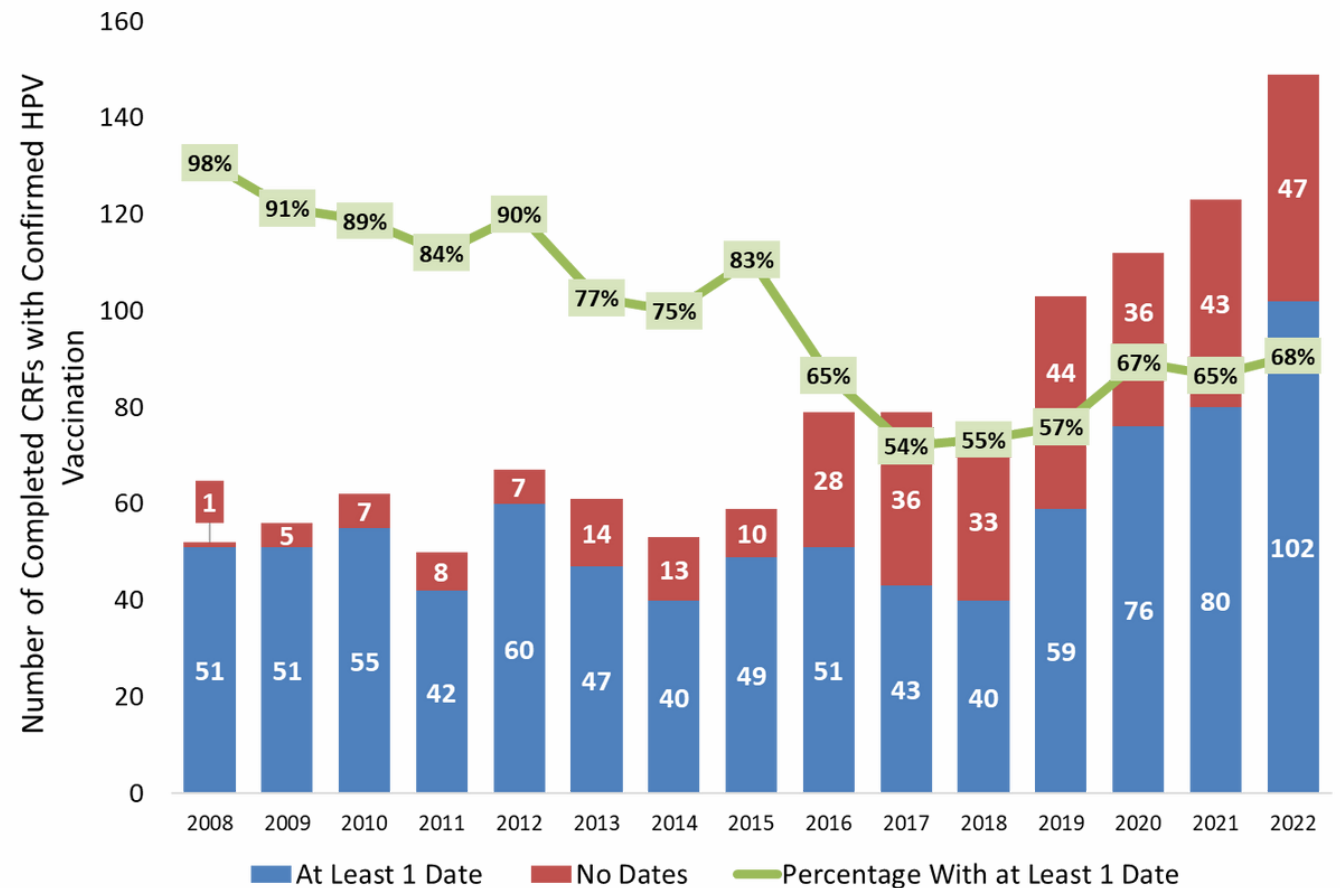


# A Data Challenge

- Vaccination data are the challenging for us to obtain
- While ascertainment of vaccine status improved from medical records, the percentage with available dates decreased
- If status is based upon patients recall, they may not be asked nor able to report dates



### HPV Vaccination Date Capture Among those with Confirmed HPV Vaccination



# A Data Challenge

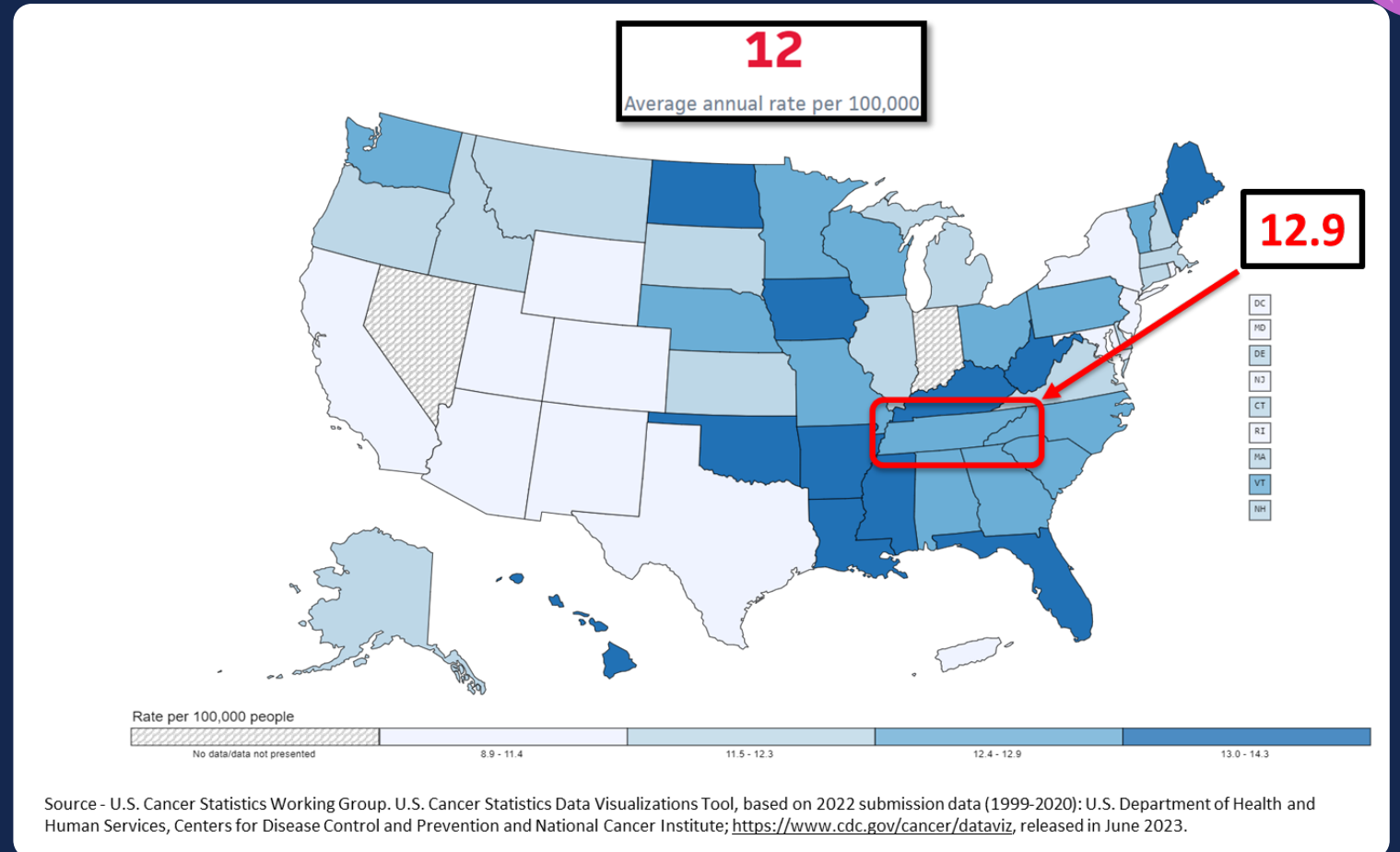
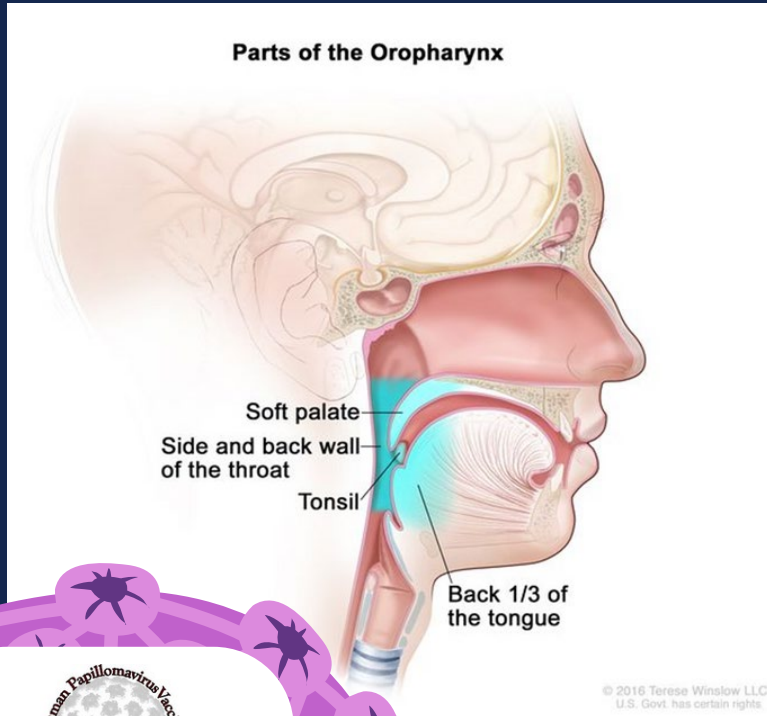
## Findings

- Medical record most common source; incomplete immunization registry due to lack of mandatory reporting requirements and full inter-state registry communication
- Demographic differences in vaccination status & date ascertainment by race/ethnicity. However, differences may be confounded by clinic characteristics
  - Black women were more likely to have both known vaccination status and date than white women
  - Hispanic women less likely to have known vaccination status compared to non-Hispanic women but vaccinated Hispanic women were >2X likely to have known vaccination date than non-Hispanic women



# A New Venture - Oropharyngeal Cancer (OPC)

Rate of OPCs in the United States, 2016-2020  
All Ages, All Races and Ethnicities, Male and Female



# A New Venture - Oropharyngeal Cancer (OPC)

## OPC Surveillance New Data Collection



### Demographics

- Sex
- Gender

### Risk Factors

- Sexual partners
- Previous sexual activity
- Marijuana use
- Oral hygiene
- Betel chewing
- Prior tonsillectomy
- Other HPV associated conditions

### Diagnosis

- Presenting symptoms
- Anatomical location
- Cancer stage

### Surveillance Process

- Diagnosing providers
- Referring providers
- Number of unique medical charts/systems
- Availability of stored specimens

# Questions and Discussion



# Thank you!

emily.delikat@vumc.org

1. Centers for Disease Control and Prevention. Cancers Associated with Human Papillomavirus. Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; 2022.
2. <https://www.HPVAlliance.org>
3. Burger EA, Kim JJ, Sy S, Castle PE. Age of Acquiring Causal Human Papillomavirus (HPV) Infections: Leveraging Simulation Models to Explore the Natural History of HPV-induced Cervical Cancer. *Clin Infect Dis*. 2017 Sep 15;65(6):893-899. doi: 10.1093/cid/cix475. PMID: 28531261; PMCID: PMC5850533.
4. <https://www.cdc.gov/hpv-impact/about/index.html>
5. Rosenblum HG, Lewis RM, Gargano JW, Querec TD, Unger ER, Markowitz LE. Declines in Prevalence of Human Papillomavirus Vaccine-Type Infection Among Females after Introduction of Vaccine — United States, 2003–2018. *MMWR Morb Mortal Wkly Rep* 2021;70:415–420. DOI: <http://dx.doi.org/10.15585/mmwr.mm7012a2>.
6. Delikat E. MPH Graduate Thesis 2023: Factors Associated with HPV Vaccination Status and HPV Vaccination Date Ascertainment for the TN HPV-IMPACT Monitoring Project



# Creating the Healthiest Environment for HPV Vaccination Coverage to Grow

**Samantha Williams, MPA**

Immunization Program Manager

Tennessee Chapter of the American Academy of Pediatrics



# Creating the Healthiest Environment for HPV Vaccination Coverage to Grow

## TNAAP Increasing Childhood Immunizations: Quality Improvement Project

Samantha Williams, MPA  
Immunization Program Manager

### Tennessee Chapter

---

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN®



# Tennessee Chapter of the American Academy of Pediatrics



## Our Mission

The Tennessee Chapter of the American Academy of Pediatrics is committed to being a leading voice, advocate and authority for the physical, mental and social welfare of infants, children and adolescents, as well as for the pediatricians who care for them.

**Tennessee Chapter**

American Academy of Pediatrics  
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# TNAAP 2024 Board Members

**President**, Carlenda Smith, MD  
(Nashville)

**Immediate Past President**, Jason  
Yaun, MD (Memphis)

**Vice President**, Catherine  
Wiggleton, MD (Hendersonville)

**Secretary-Treasurer**, Tatanisha  
Smith, MD (Nashville)

**Membership Chair**, Karen  
Schetzina, MD (Johnson City)

**Fellow At-Large**, West TN,  
Paty Carasusan, MD (Memphis)

**Fellow At-Large**, West TN,  
Michelle Bowden, MD (Memphis)

**Fellow At-Large**, Middle TN,  
Maya Neeley, MD (Nashville)

**Fellow At-Large**, Middle TN,  
Toni-Ann Wright, MD (Goodlettsville)

**Fellow At-Large**, East TN,  
Sarah Trimiew, MD (Chattanooga)

**Fellow At-Large**, East TN,  
Gayatri Jaishankar, MD (Johnson City)

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# TNAAP Helps YOU!!

**JOIN US...**

**“Day on the Hill”**



**Date: March 2025**

- Advocacy
- Meet w/Payers (Pediatric Council)
- Interact with Policy-makers
- Payment Reform
- Coding Updates
- CME/MOC/CEU Opportunities

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# Annual Conferences & Pediatric Awards



- **Annual Pediatric Practice Management Conference**  
May 2025 **(Hybrid)**  
TMA Office in Nashville, TN



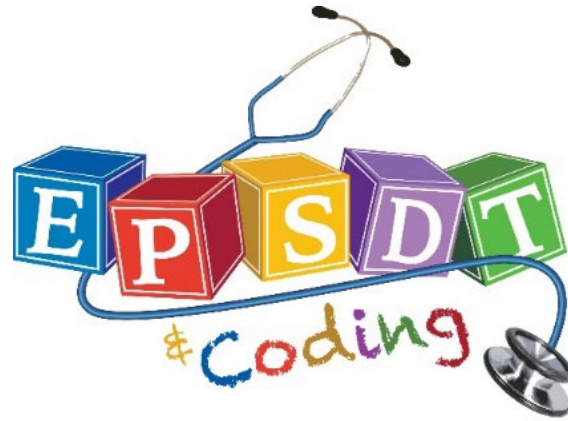
- **Excellence in Pediatrics Awards**  
During Tennessee State Pediatric Conference
- **Tennessee State Pediatric Conference **(In-person)****  
August 2025

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# Education & Training Programs



Pediatric Healthcare Improvement Initiative for Tennessee



**Tennessee Chapter**

American Academy of Pediatrics  
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# Stay in Touch!



- Publications
  - *TNAAP Annual Report*
  - *The Inside Story* (monthly e-news)
- Topic-Specific E-blasts
- Social Media
- TNAAP Website  
[www.tnaap.org](http://www.tnaap.org)



@TNAAPChapter



@TennesseeChapterofAAP



@TennesseeAAP

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# Increasing Childhood Immunizations

The Tennessee Chapter of the American Academy of Pediatrics (TNAAP) can be a tremendous resource to you in increasing childhood vaccines rates in your practice.

## **TNAAP Can Help You:**

- Increase vaccines completion rates for all ages
- Address vaccine hesitancy
- Improve patient recall strategies
- Implement Quality Improvement initiatives
- Optimize reimbursement for vaccines
- Reduce administrative costs
- Improve audit outcomes

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# Quality Improvement Project for Practices

- Quality Infrastructure Development
- Using Data to Measure Outcomes
- Evidence Based Process Measures
- Quality Coaching and Support



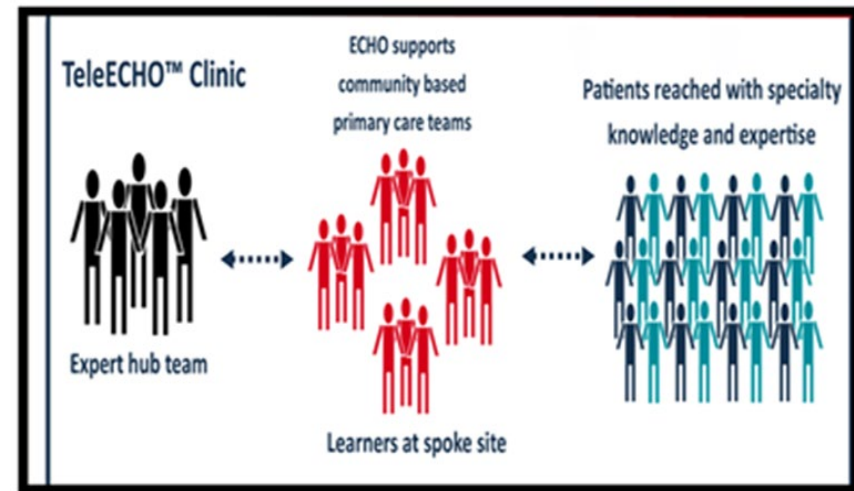
# ECHO Model

## EXTENSION FOR COMMUNITY HEALTHCARE OUTCOMES

A tele-mentoring program designed to create communities of learners by bringing together healthcare providers and experts in topical areas using didactic and case-based presentations, fostering an "all learn, all teach" approach

### Key Components:

- **Hub:** Regional center that coordinates multidisciplinary team of subject matter experts
- **Spoke:** Community partner site at which individual or team of learners is located
- **TeleECHO:** Regular scheduled videoconferencing sessions featuring didactic and case-based presentations



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# ECHO vs QI Learning Collaborative

## Immunization Program ECHO®

- Physician participation focus
- 15-minute didactic presentations by content experts
- Case presentations by participants
- Interactive
- Peer to peer learning
- Collaborative problem solving

## QI Learning Collaborative

- Quality Improvement Training
- Practice focus
- Focused on practice-based process improvement
- Evidence based process changes
- Practices implement small tests of change-based practice specific data
- Data reporting via TennIIS
- Individualized coaching sessions

# Topics for ECHO Sessions

- Declining Immunization Rates
- Increasing Immunizations through Quality Improvement
- Addressing Vaccine Hesitancy
- Engaging with Communities to Encourage Vaccinations
- Using Best Practices for Immunization Coding
- Improving HPV Vaccination Rates
- Motivational Interviewing

\* Approved for *AMA PRA Category 1 Credit(s)*<sup>TM</sup>

# Staff/Practice Training Modules

- Addressing Vaccine Hesitancy
- Evaluation and Management Components
- TennIIS Resources
- Process Improvement
- Coding/Billing for Immunizations
- Social Media for Strategies for Immunizations



# Resources

- Patient Handouts
- Sample Social Media Posts
- Vaccination resources including publications and educational websites

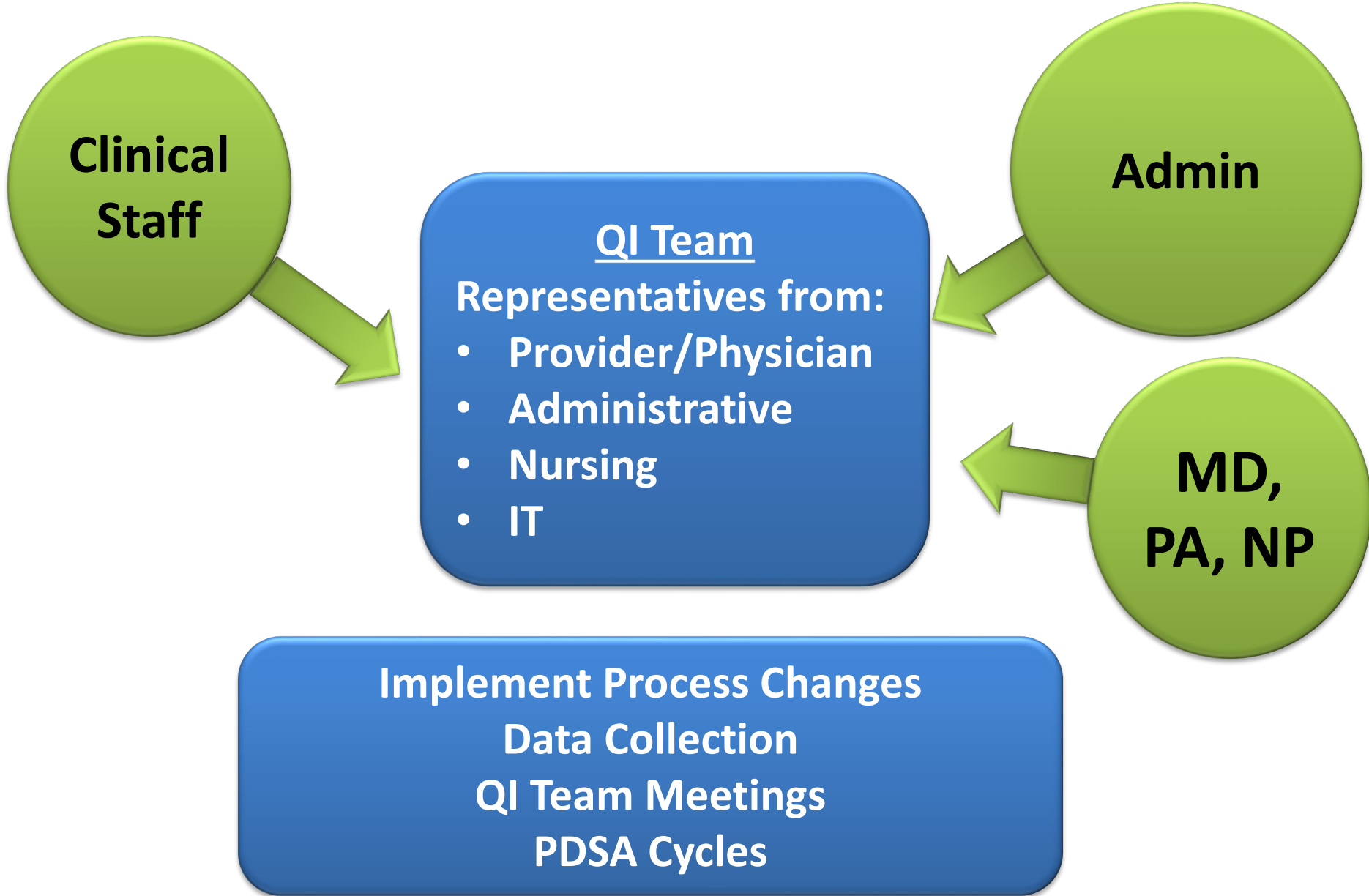


# Increasing Immunizations

## Quality Improvement Project Smart AIM

- Increase the percent of the children who have all the Bright Futures recommended vaccines before their 2nd birthday **by 5% in 9-12 months**
  - COMBO 10 which includes: 4 DTaP; 3 IPV; 1 MMR; 3 Hib; 3 Hep B; 1 VZV; 4 PCV; 1 Hep A; 2 or 3 Rotavirus; 2 Influenza
- Increase the percent of adolescents who have all the Bright Futures recommended vaccines before their 13th birthday **by 5% in 9-12 months**
  - Combo2: 1 Meningococcal; 1 Tdap; at least 2 HPV





# Model for Improvement



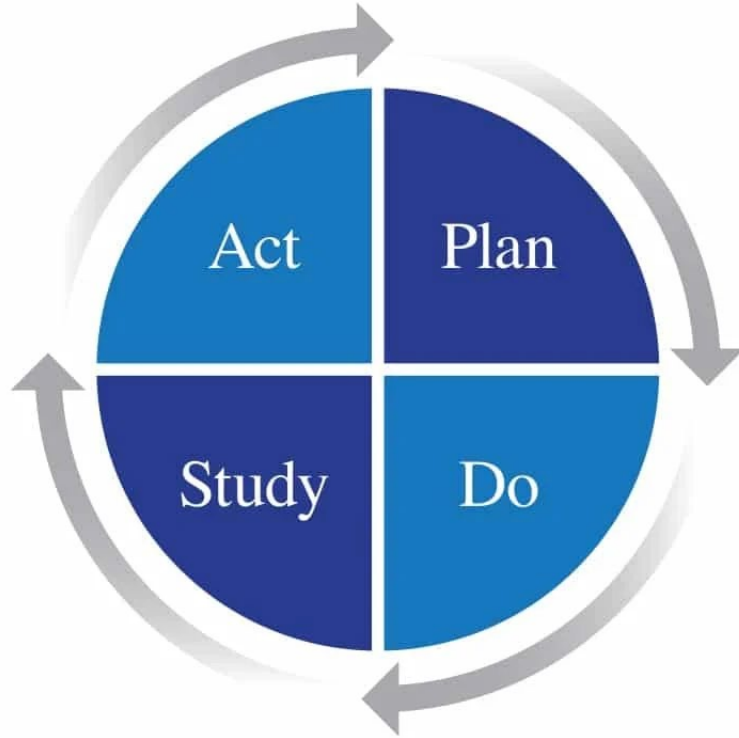
The Model for Improvement, as seen on the Institute for Healthcare Improvement's website (IHI.org), was developed by Associates in Process Improvement [Langley, Nolan, Nolan, Norman, Provost. The Improvement Guide. San Francisco: Jossey-Bass Publishers; 1996].

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# PDSA Cycles



Source: The Deming Institute ([www.deming.org](http://www.deming.org))

## **Plan**

- Objectives for the cycle
- Questions/predictions
- Plan how to carry out the cycle

## **Do**

- Carry out the plan
- Document problems & unexpected observations

## **Study**

- Complete analysis of data from the cycle
- Compare data to predictions
- Summarize learnings

## **Act**

- Adopt, adapt, or abandon the change?
- What changes should be made now?
- What should be done for the next cycle?

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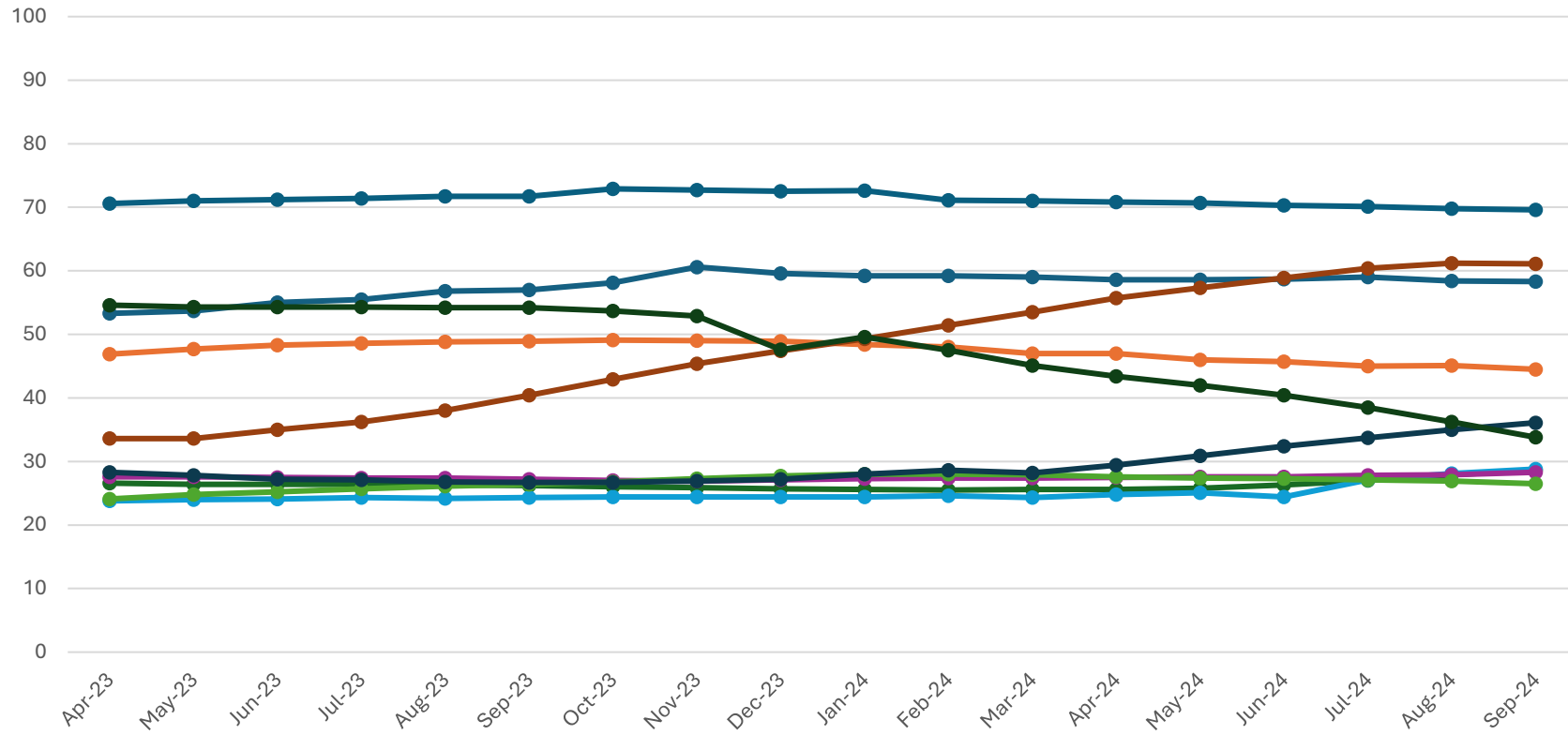


# Potential Process Changes

- Strong Provider recommendation
- Provider reminders of patients that are due vaccines
- Standing orders for age-appropriate vaccines
- Implementation of a reminder recall system
- Identification of gaps in vaccines at non-well visits
- Use of recall/gap lists to do targeted outreach
- Promotion of consistent staff messaging around immunizations
- Use of text messages and/or emails for reminders of needed vaccines
- Social media to promote vaccine to patients
- Utilization of available resources to address vaccine hesitancy



### HPV Rates



# What Worked

- Recommend at age 9
- Train ALL staff
- Use every opportunity to vaccinate
- Use EHR to provide reminders



# Program Contact Information

- Samantha Williams
  - [Samantha.Williams@tnaap.org](mailto:Samantha.Williams@tnaap.org)
  - Call or text (615) 513-8370
- Becky Brumley
  - [Becky.Brumley@tnaap.org](mailto:Becky.Brumley@tnaap.org)
  - Call or text (615) 427-7638

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# **Creating the Healthiest Environment for HPV Vaccination Coverage to Grow**

**Benita Carney, RN, M.Ed.**

**Vaccines for Children Regional  
Immunization Representative**

**Shelby County Health Department**



# Vaccines for Children or VFC



# History of the VFC Program

## Celebrating 30 years of operation this year!

- The VFC Program began in response to a 1989-1991 measles epidemic resulting in thousands of cases and hundreds of deaths.
- Congress created The VFC Program August 10, 1993. VFC became operational October 1, 1994.
- Provides vaccines to children whose parents or guardians may not be able to afford them.
- The program helps increase equity ensuring that all children have a better chance of getting the recommended vaccines on schedule.



# Funding for VFC

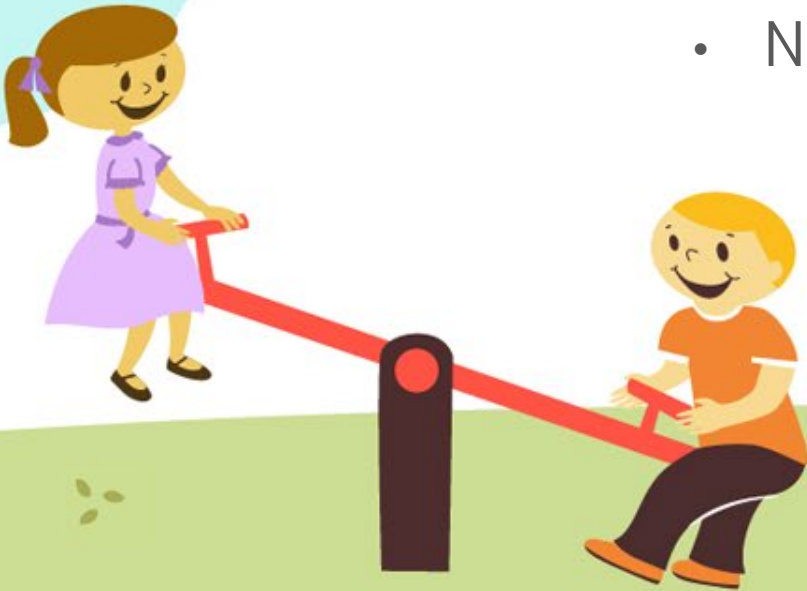
VFC is federally-funded and administered by each state through the Medicaid program.

Tennessee Vaccine-Preventable Diseases and Immunization Program VIPDIP



# Eligibility for VFC

- Children age birth until age 19
- Medicaid-Eligible
- Uninsured children
- Underinsured children
- Native Americans and Alaskan Natives

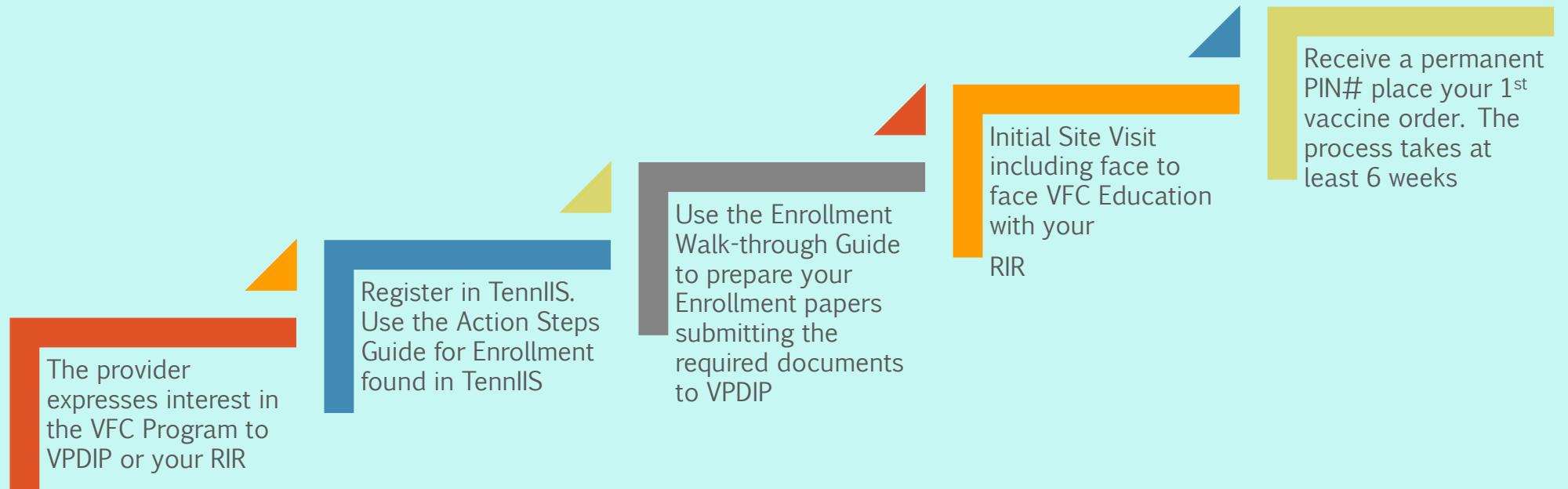


# Who Can Be a VFC Provider ?

- Pediatricians
- Family Practitioners
- General Practitioners
- Local Health Departments
- Specialty Care Providers
- OB/GYNs
- Pharmacists
- Specialty Care Practices
- Urgent Care Clinics
- Hospitals
- School Based Clinics
- Juvenile Correction Facilities



# Enrollment with VFC



# Types of VFC Visits

- Enrollment Visits
- Scheduled Compliance Visits
- Scheduled and Unscheduled Storage and Handling Visit
- VFC Education Visit

## Benefits of being in VFC for Providers

Reduces your up-front costs

Enables clients to get vaccines during routine visits

Provides quality care to children and adolescents



# What Does VFC Do For Children?



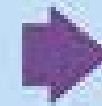
CDC estimates that vaccination of children born between 1994 and 2021 will:

prevent **472 million** illnesses  
*(29.8 million hospitalizations)*



more than the current population of the entire U.S.A.

help avoid **1,052,000** deaths



greater than the population of Seattle, WA

save nearly **\$2.2 trillion** in total societal costs



# Avoiding Vaccines Can...

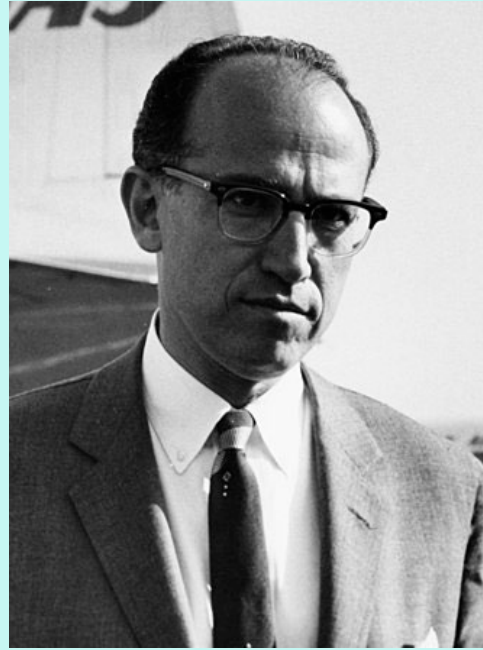
Result in a lifetime of consequences



30% of measles cases 1987-2000 developed complications



# Polio eradicated in USA thanks to vaccine developed by Jonas Salk



Dr. Jonas Salk



Survivors of Polio



# HPV Cancer Prevention

- Cancer Prevention
- Possibility of eliminating cervical cancer
- Recombinant DNA technology
- Rapid vaccine development
- Possibilities of vaccines in the future beyond the scope of imagination.





Protection  
and  
Prevention  
thanks to  
VFC

---

Be a part of  
the solution  
not the  
problem.



# Creating the Healthiest Environment for HPV Vaccination Coverage to Grow

**Emily Delikat, MPH**

Director, Tennessee Families for Vaccines





# Pro-Vaccine Advocacy in Tennessee

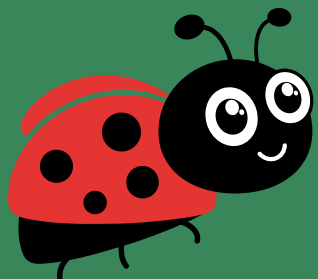
Emily Delikat, MPH, CPH

Director - Tennessee Families for Vaccines

September 24, 2024

Memphis & Shelby County

HPV Cancer Prevention Roundtable



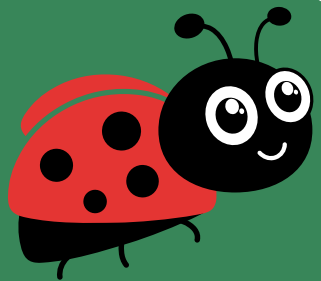


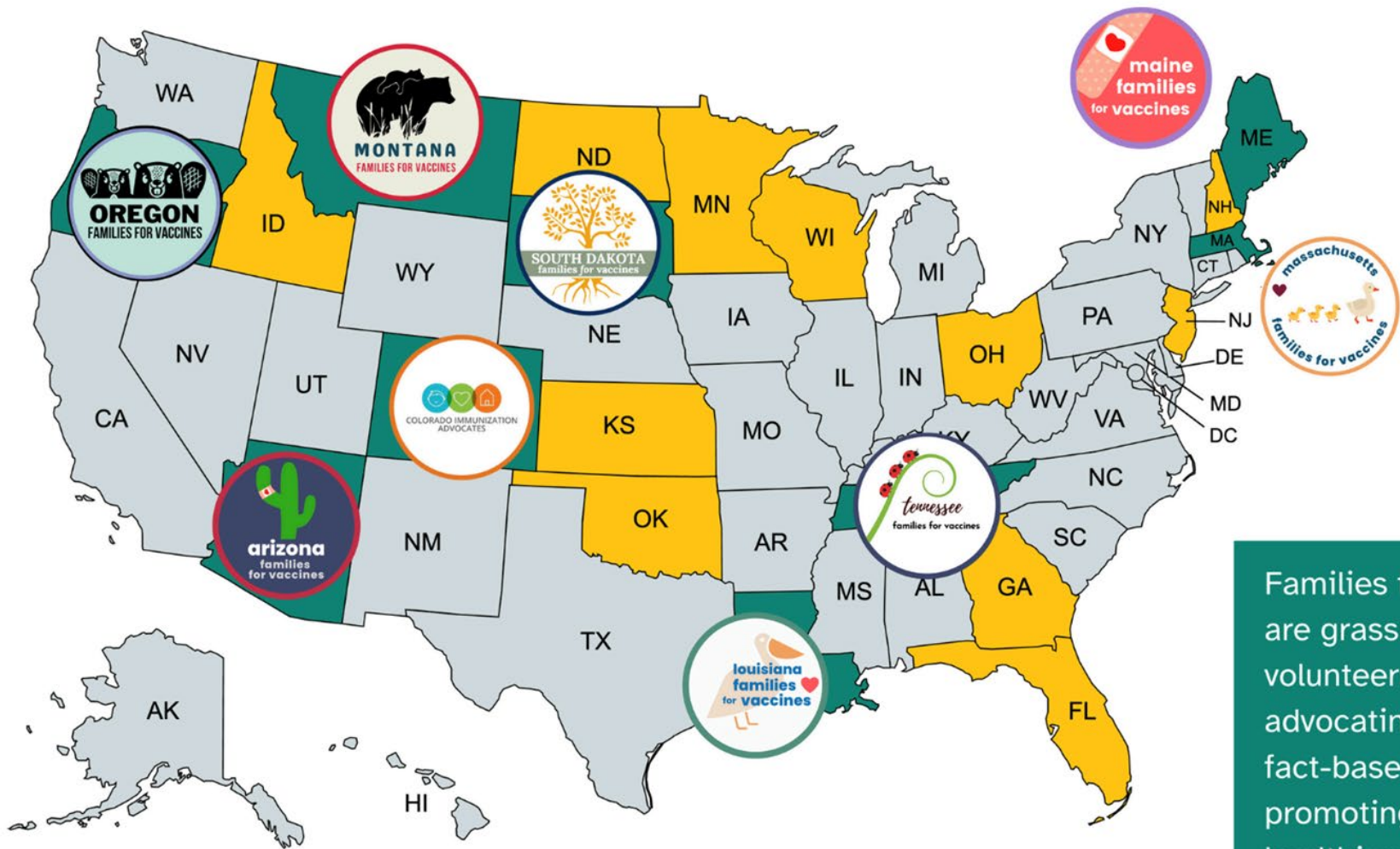
# SAFE

COMMUNITIES  
COALITION

**SAFE (Science and Families Engaging) is the nation's first pro-vaccine political advocacy organization.**

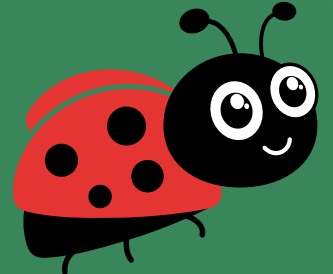
**SAFE Communities Coalition supports pro-vaccine legislation and lawmakers. We empower everyday people, the often silent pro-vaccine majority, to advocate for health and safety alongside medical and public health professionals. As a 501c4 advocacy organization and a political action committee, SAFE is the only organized bipartisan political force opposing the anti-vaccine agenda in statehouses across the country.**





Families for Vaccines chapters are grassroots networks of volunteers dedicated to advocating for public health and fact-based public policy and promoting immunizations for healthier kids and communities.

FAMILIES FOR VACCINES CHAPTERS
  MONITORING AND BUILDING



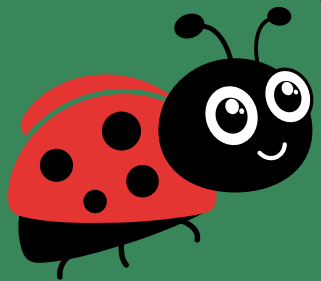
# Our Mission

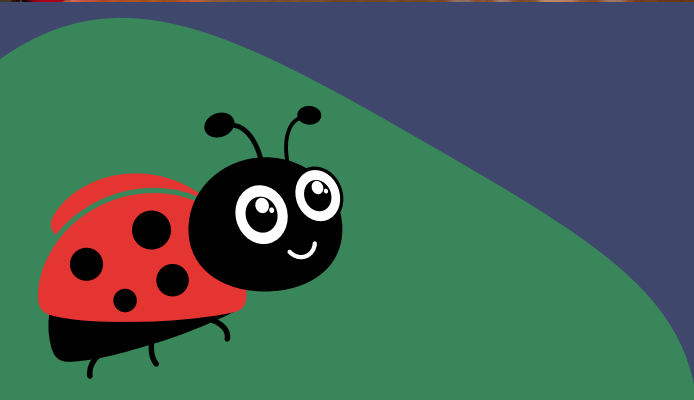
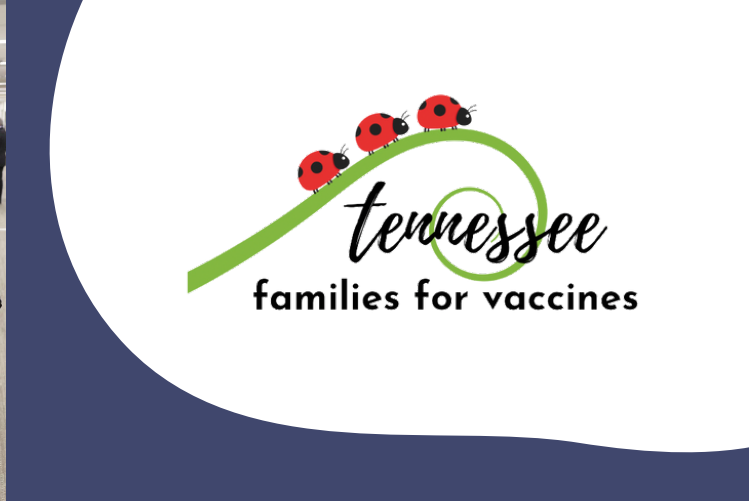
Tennessee Families for Vaccines is a volunteer-led, grassroots network of family members dedicated to advocating for public health and evidence-based public policy and promoting immunizations for healthier kids and communities.

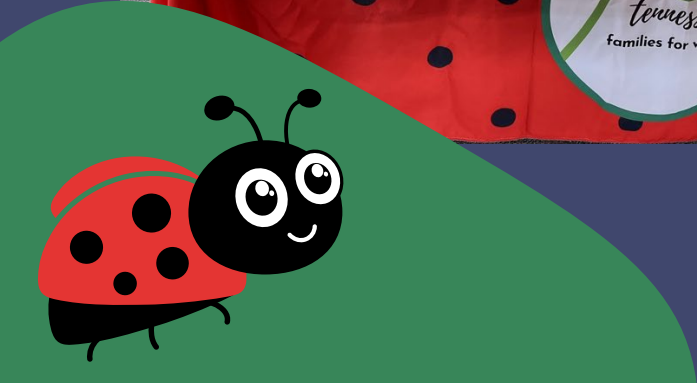
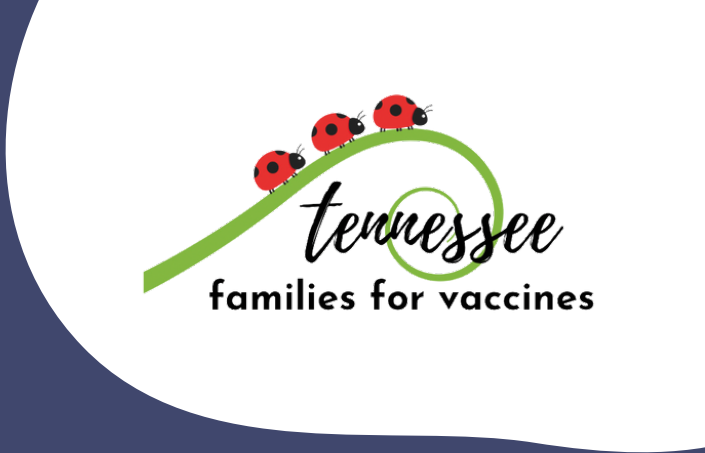


# Our Vibe

Did you know a group of ladybugs is called a loveliness? It is our goal as Tennessee Families for Vaccines to be positive, non-partisan pro-vaccine advocates. We strive to always act with respect and kindness toward those with whom we disagree, while also sharing evidence-based truths about life-saving vaccines and promoting pro-vaccine policy.












NEW AND EXPERIENCED ADVOCATES OF ALL AGES ARE INVITED TO

# THE GIFT OF VACCINES

VACCINE ADVOCATES LUNCH AND LEARN  
FREE EVENT - LUNCH INCLUDED  
SATURDAY, DECEMBER 7, 2024  
11:30AM-1:30PM  
CHATTANOOGA, TN  
SPECIFIC EVENT LOCATION WILL BE SENT FOLLOWING REGISTRATION.

HOSTED BY



# Anti-Vaccine Organizations



## INFORMED CONSENT ACTION NETWORK

- Del Bigtree
- Additional 501(c)4 formed in 2023
- Confirmed source of model legislation
- Focus on litigation - Aaron Siri, attorney
- Raised \$13.4 million in 2022

## CHILDREN'S HEALTH DEFENSE

- RFK Jr
- 21 domestic state chapters
- Raised \$22.5 million in 2022

## STAND FOR HEALTH FREEDOM

- Founded in 2019
- Heavily focused on elections
- Raised \$400k in 2022

## NATIONAL VACCINE INFORMATION CENTER

- Oldest anti-vaccine organization
- Raised \$2 million in 2022

## AMERICA'S FRONTLINE DOCTORS

- Raised \$13 million in 2022



Created by: Sarah Barry  
aka 42believer  
Updated 7/19/2023



# Children's Health Defense

- Founded by RFK Jr in 2007
- 501(c)3
- Fundraised \$22.5 million in 2022
- Large and organized source of disinformation
- Works closely with ICAN, NVIC, Stand for Health Freedom
- Traveling the country
  - 19 established state chapters to impact policies



Sign Up Now to Tell Your Story on the CHD Bus

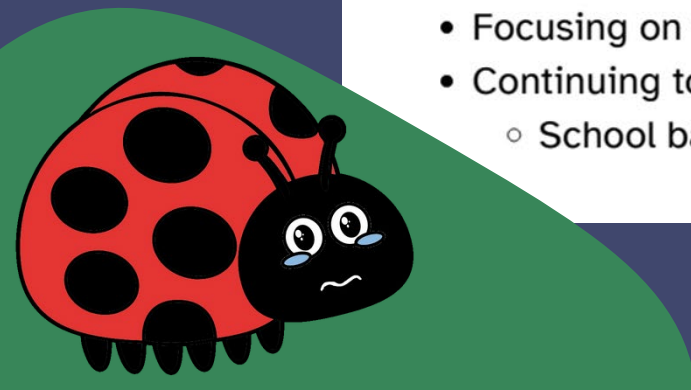
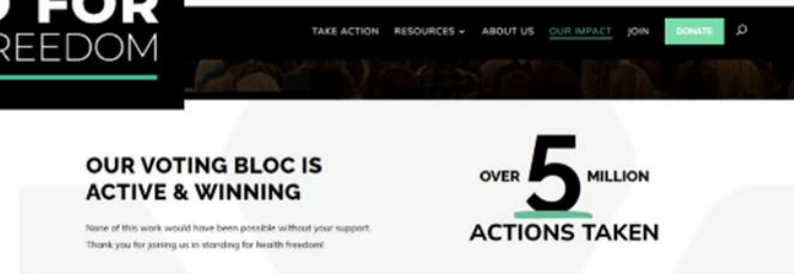
Thursday Jan. 25 Chattanooga  
Saturday Jan. 27 Johnson City



Thursday Feb. 1 Knoxville  
Saturday Feb. 3 Jackson

# Stand for Health Freedom

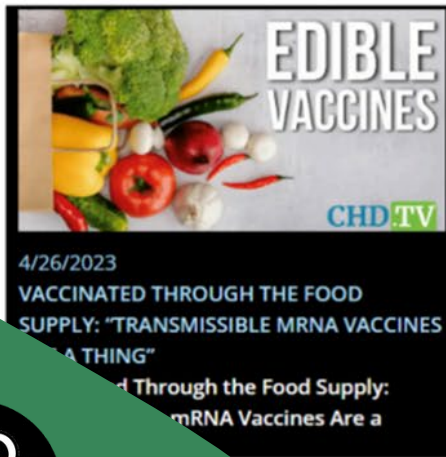
- 501(c)4
- Fairly new to the scene
- \$400k in 2022
- Heavily focused on elections
- Focusing on federal policy
- Continuing to work in state policy
  - School based health clinics





# Tennessee

- Children’s Health Defense Chapter
  - Focused on mRNA in food
  - Parental rights
- Targeted legislation from ICan
  - Engineered pathogen bill
- Stand for Health Freedom is working with TN Stands
- AFLD has made an appearance in TN Committee



Sign Up Now to Tell Your Story on the CHD Bus

Thursday Jan. 25 Chattanooga  
Saturday Jan. 27 Johnson City



Thursday Feb. 1 Knoxville  
Saturday Feb. 3 Jackson

INVESTIGATES

## “Medical freedom” at the forefront of 2022 Tennessee elections

In part four of “A darker shade of red”: New groups on the far-right of the political spectrum launch out of COVID-19 masking concerns

BY: DEVON HEINEN - THURSDAY AUGUST 3, 2023 6:01 AM

## Engineered Pathogen Bill

This bill assures that individuals will not be infected with engineered viruses and bacteria without their express consent.

### The Bill

[DOWNLOAD DOC](#)

**TITLE:** An act to regulate infecting individuals with self-spreading engineered pathogens.

**PURPOSE:** Assures that individuals will not be infected with engineered viruses and bacteria without their express consent.

**JUSTIFICATION:** Recognizes that infecting individuals with engineered viruses and bacteria without express consent impinges upon cherished civil and individual rights



JANUARY 03, 2024

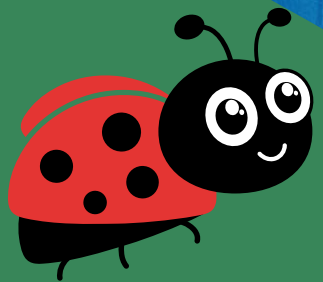
CHD Bus Tour Coming to Tennessee!



# TNFV Day on the Hill

20 pro-vaccine advocates gathered at the State Capitol to nurture relationships and to educate lawmakers on the importance of immunizations and evidence-based vaccine policy.

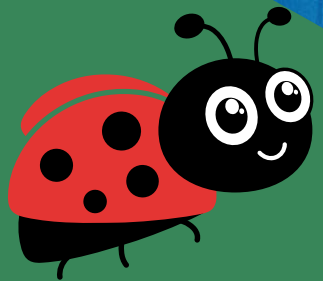
- 🐞 Pre-Day on the Hill “Be a Better Advocate” training
- 🐞 Breakfast with more than 100 lawmakers and legislative staff members
- 🐞 131 Legislative packets delivered to the offices of 99 representatives and 32 Senators including district-specific immunization rate data and information about TNFV’s vaccine hotline which connects lawmakers and staff to licensed medical providers in the state who can answer questions about vaccines and public health.
- 🐞 Six scheduled meetings with Senators and Representatives including the Speaker of the House.
- 🐞 1 great news article written by Amy Maxmen of KFF News [Tennessee vaccine law pits parental rights against public health \(nbcnews.com\)](https://www.nbcnews.com/health/tennessee-vaccine-law-pits-parental-rights-against-public-health-123456789)



# Legislative Session 2024



- 🐞 held 10+ weekly virtual legislative update meetings with partners
- 🐞 sent 7 legislative update emails to our e-mail list
- 🐞 had 2 op-eds published
- 🐞 sent more than 15 thank you cards and emails to legislators
- 🐞 had 2 successful calls-to-action with almost 200 emails sent to legislators through EveryAction



# HB 1726/SB 2359

House Sponsor: Rep. Gant  
Senate Sponsor: Sen. Watson

## Foster Family Immunization



Exempts prospective families from the immunization requirements for adopting or fostering a child if they object based on religious or moral convictions.

**Passed**, but Rep. Gant acknowledged on the House floor that the legislation may have gone too far in removing protection for children with special medical needs, saying more work could be done to fix the law in 2025. We are considering how we might hold him to that in 2025.

## Action

- 130 emails sent to legislators through EveryAction
- Additional advocate phone calls and emails to legislator
- Pertussis and influenza fact sheets distributed to legislators by email and in person
- OpEd from Tennessee foster parent Vaccine law: Don't let politics harm foster children's health ([tennessean.com](http://tennessean.com))



Children have the right to live in a home that is as safe as possible.

This legislation would endanger the health of children in state custody. Help us make a difference by contacting your legislators today!  
Ask them to vote

**NO**

on  
HB1726/SB2369  
SB2379/HB2050



[www.tnfamiliesforvaccines.org/action](http://www.tnfamiliesforvaccines.org/action)



The image is a flyer for a campaign. It features a woman holding a baby. The text is centered and reads: "Children have the right to live in a home that is as safe as possible." followed by "This legislation would endanger the health of children in state custody. Help us make a difference by contacting your legislators today! Ask them to vote". Below this is a large "NO" in bold. Underneath "NO" is "on" followed by "HB1726/SB2369" and "SB2379/HB2050". At the bottom left is a QR code and the URL "www.tnfamiliesforvaccines.org/action". At the bottom right is the "Tennessee Families for Vaccines" logo.

# Newborn Screening and Immunization

## HB 2861/SB 2151

House Sponsor: Rep. Carringer  
Senate Sponsor: Sen. Johnson

Prohibits a healthcare provider from coercing a person to receive a vaccination and misleading or misrepresenting that a vaccination or newborn screening is required by state law when state law provides a person with an exemption.

**Passed**, but final version included a definition of “coerce” thanks to coordinated efforts between TNFV, TNAAP, THA, and TMA.



# Mature Minor Clarification Act Fix

## HB 2902/SB 2176

House Sponsor: Rep. Kumar

Senate Sponsor: Sen. Hensley

This bill attempted to update problematic and confusing portions of the Mature Minor legislation passed in 2023, while striving to keep the spirit of the current law around consent intact. After getting the bill through the committee process in both the House and Senate, it stalled out on each floor and was re-referred to its respective committees. Credit to Rep. Sabi Kumar who remained dedicated to presenting this bill on the floor.



## Action

-  94 emails sent to legislators through EveryAction
-  Additional advocate phone calls and emails to legislators



Protect parents' rights to vaccinate their children against life-threatening diseases.

Ask your lawmakers to vote  
**YES**  
on  
HB2902/SB2176

[www.tnfamiliesforvaccines.org/action](http://www.tnfamiliesforvaccines.org/action)



# CDC Immunization Guidance

## HB 2452/SB 2641

House Sponsor: Rep. Leatherwood

Senate Sponsor: Sen. Hensley

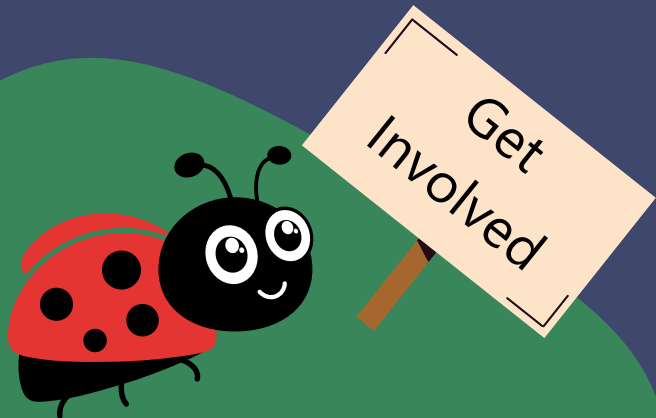
Would have replaced in statute the declaration and recommendation that a legal guardian ensure their child is vaccinated according to CDC or AAP guidelines with recommendations according to state Department of Health commissioner.

This bill **failed** when it was double-referred to Senate Health Committee.



**YOUR VOTE  
MATTERS**

**2024**



[www.tnfamiliesforvaccines.org/voter-guide](http://www.tnfamiliesforvaccines.org/voter-guide)

# Get to Know Your Legislators

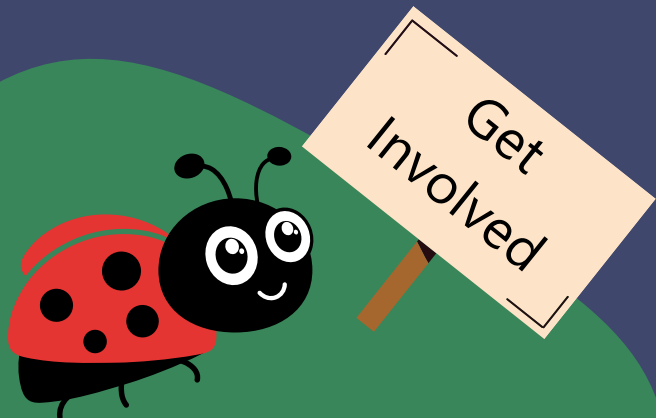


My Representative

is  
rep. \_\_\_\_\_ is \_\_\_\_\_@capitol.tn.gov  
District \_\_\_\_\_

My Senator

is  
sen. \_\_\_\_\_ is \_\_\_\_\_@capitol.tn.gov  
District \_\_\_\_\_

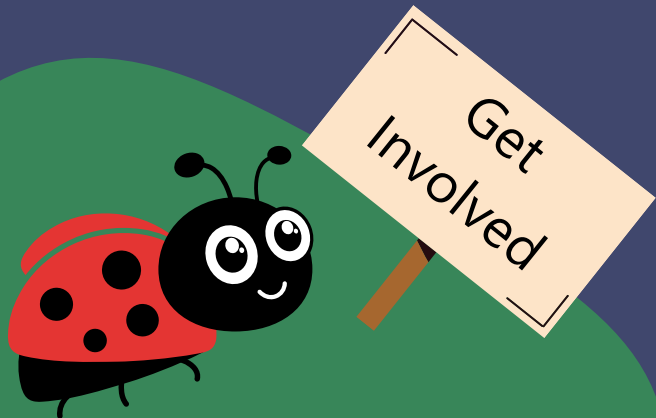


[www.tnfamiliesforvaccines.org/toolkit](http://www.tnfamiliesforvaccines.org/toolkit)

# Sign Up for Updates



Enter  
to Win



[www.tnfamiliesforvaccines.org/updates](http://www.tnfamiliesforvaccines.org/updates)

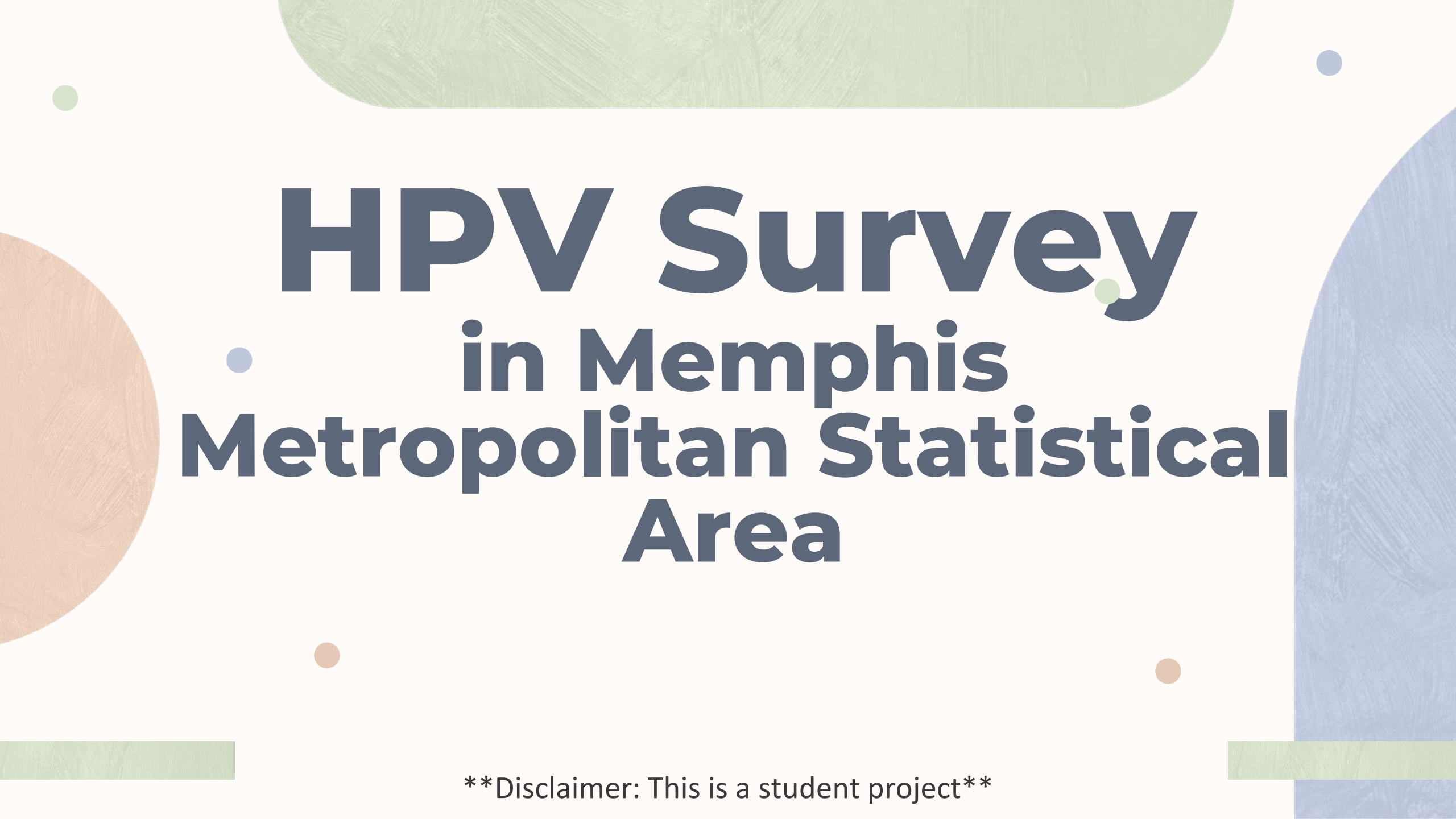
# Creating the Healthiest Environment for HPV Vaccination Coverage to Grow

**Whitney Ziegenhorn, BS**

Masters Student  
Clinical Investigations

St. Jude Graduate School





# **HPV Survey**

## **in Memphis Metropolitan Statistical Area**

**\*\*Disclaimer: This is a student project\*\***

# Whitney Ziegenhorn, BS

## Education

**MSc in Clinical Investigations**

**Eckerd College: Biology Major, Art Minor**

## St. Jude Children's Research Hospital

**Global Infectious Disease Program**

**Regulatory Affairs Office – Medical Writer**



# Master's of Clinical Investigations Thesis

Institution Requirements: The thesis is the demonstration of the student's mastery of both a specific content area as well as the methodology necessary to make significant contributions to medical literature. It serves as the primary locus for translation of the knowledge, tools, and skills that students acquire through the program.

My Goal: Create and produce a public health initiative that can directly affect the community.



# Thesis Committee Members



**Miguela Caniza, MD**

Academic Field of Interest

Member, St. Jude Faculty/ Director,  
Infectious Diseases Program, St.  
Jude Global



**Guolian Kang, PhD**

Biostatistician

Member, St. Jude Faculty



**Heather Brandt, PhD**

Thesis Committee Chair

Member, St. Jude Faculty/ Director, HPV  
Cancer Prevention Program / Co-  
associate Director for Outreach, St.  
Jude Comprehensive Cancer Center

# Thesis Project Overview

**Title:** Exploring HPV Vaccination Determinants in the Memphis MSA

**Objective:** The study will explore HPV vaccination determinants, including characteristics of respondents, social determinants, knowledge and awareness, vaccination beliefs, and vaccination behavior and intentions, among people living in the Memphis Metropolitan Statistical Area (MSA) to ultimately inform interventions that address low HPV vaccination coverage. This study will be conducted in partnership with the Memphis and Shelby County HPV Cancer Prevention Roundtable (Memphis Roundtable)

**Methods:** A cross-sectional, online survey of adults aged 18+ living in the Memphis MSA will be conducted using convenience sampling methods.

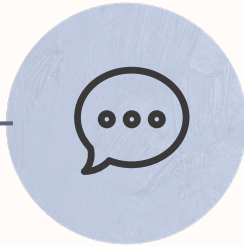
# Recruitment

| Inclusion Criteria  | Procedures  | Goals  |
|---|---|--|
| <ul style="list-style-type: none"><li>❑ Aged 18 years or older;</li><li>❑ Male or female;</li><li>❑ Ability to read English; and</li><li>❑ Live currently in the Memphis MSA (includes 11 counties)</li></ul> | <p>Conducted with the Memphis Roundtable using existing channels of dissemination</p> <ul style="list-style-type: none"><li>• Annual meeting</li><li>• Monthly newsletter communication</li><li>• Flyers</li><li>• Emails</li></ul> | <p>September-<br/>November 2024</p> <p>Sample Size = 500</p> |

# Question Categories

25-30 questions

**Characteristics &  
Social Determinants**



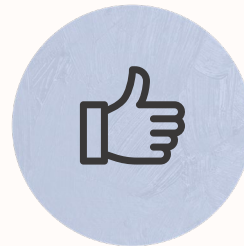
**Knowledge &  
Awareness**



**Vaccination  
Beliefs**



**Vaccination  
Behavior &  
Intentions**



# Data

## Collection

Qualtrics  
URL and QR Code

## Management

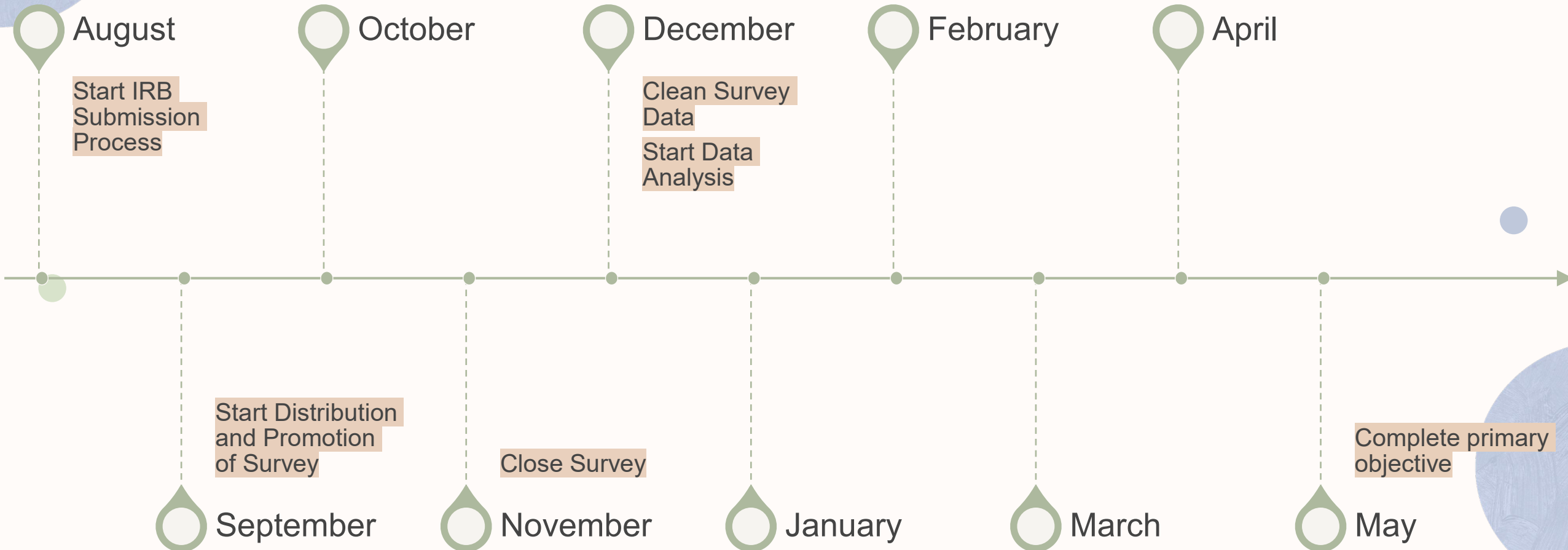
Collected through Qualtrics  
and downloaded as CSV file  
in Excel format

## Analysis

Quantitative survey  
data: descriptive,  
bivariate, and  
multivariate statistics

Qualitative survey data:  
thematic analysis  
procedures through the  
review of open-ended  
responses.

# Timeline- Survey



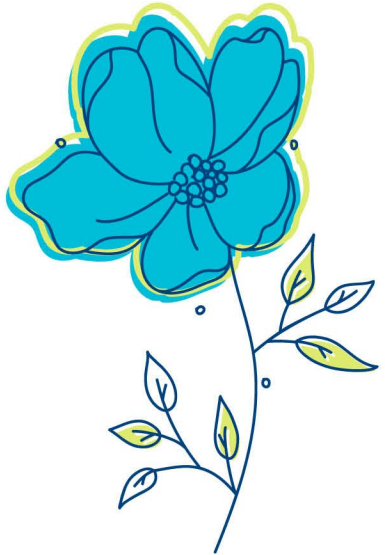


# Thanks!

Do you have any questions?

**CREDITS:** This presentation template was created by **Slidesgo**, and includes icons by **Flaticon** and infographics & images by **Freepik**





# HPV Vaccination in Full Bloom

## 4<sup>TH</sup> ANNUAL MEETING

# Evergreen Lunch



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Breaktime for PowerPoint by Flow Simulation Ltd.

Pin controls when stopped



**HPV Cancer  
Prevention**  
 Roundtable  
 MEMPHIS & SHELBY COUNTY



at the **Memphis Botanic Garden**  
 >>> [stjude.org/memphis-roundtable](http://stjude.org/memphis-roundtable)



# Brooke Morgan Community Champion Award

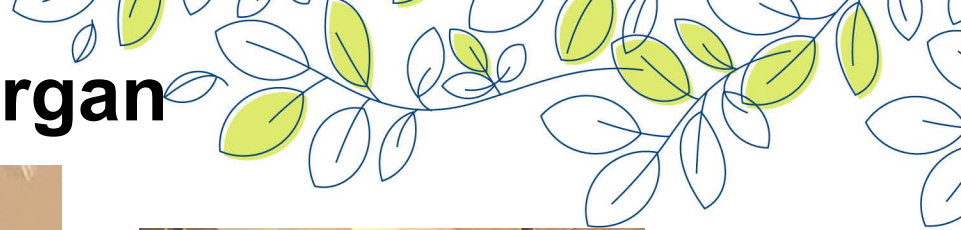
**Andrea Stubbs, MPA**

Administrative Director

St. Jude HPV Cancer Prevention  
Program



# Remembering Brooke Morgan



# Brooke Morgan Community Champion 2024 Award Recipient

**Benita Carney, RN, MEd**



# Blooming Against All Odds

**Greg Tacker**

Oral Cancer Survivor



# Flourishing Partnerships



## Expanding HPV Vaccine Outreach Beyond Clinical Settings

**Portia Knowlton, MHRM**



Program Coordinator

St. Jude HPV Cancer  
Prevention Program

**Felicia Williams, MHA, BSHA**



Immunization Program  
Manager

Shelby County Health  
Department and General  
Representative

Executive Committee,  
Memphis and Shelby  
County HPV Cancer  
Prevention Roundtable

PATH →  
to prevention

# Assessing Community-facing Opportunities to Improve Adolescent HPV Vaccination Rates

**Felicia Williams, MHA**

Immunization Program Manager

**Portia Knowlton, MHRM**

Program Coordinator

September 24, 2024

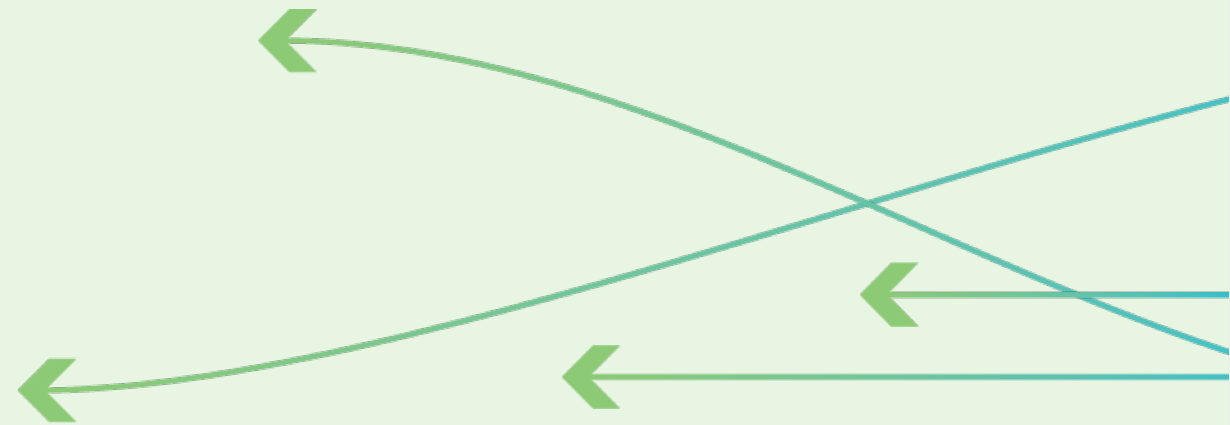


**HPV Cancer  
Prevention  
Program**



# AGENDA

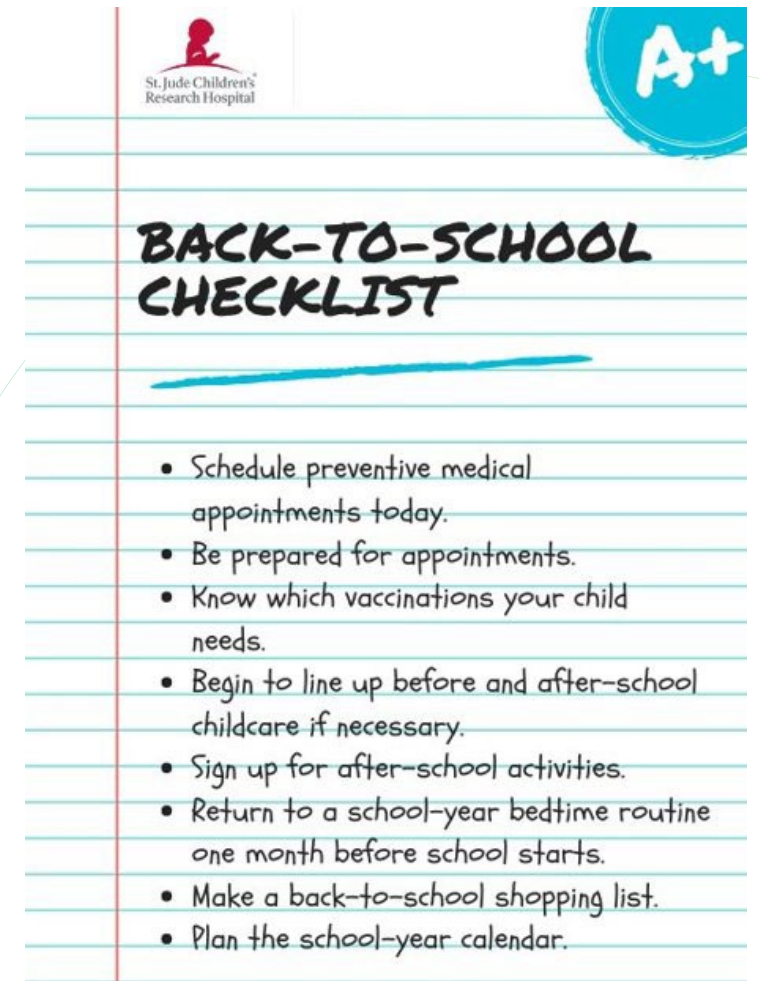
- HPV Vaccination Rates
- Convening of the MSCS Back-to-School Vaccination Drive Planning Committee
- School-based HPV Vaccination Efforts through Community Engagement
- Results & Lessons Learned
- Questions and Answers



# HPV Vaccination Rates

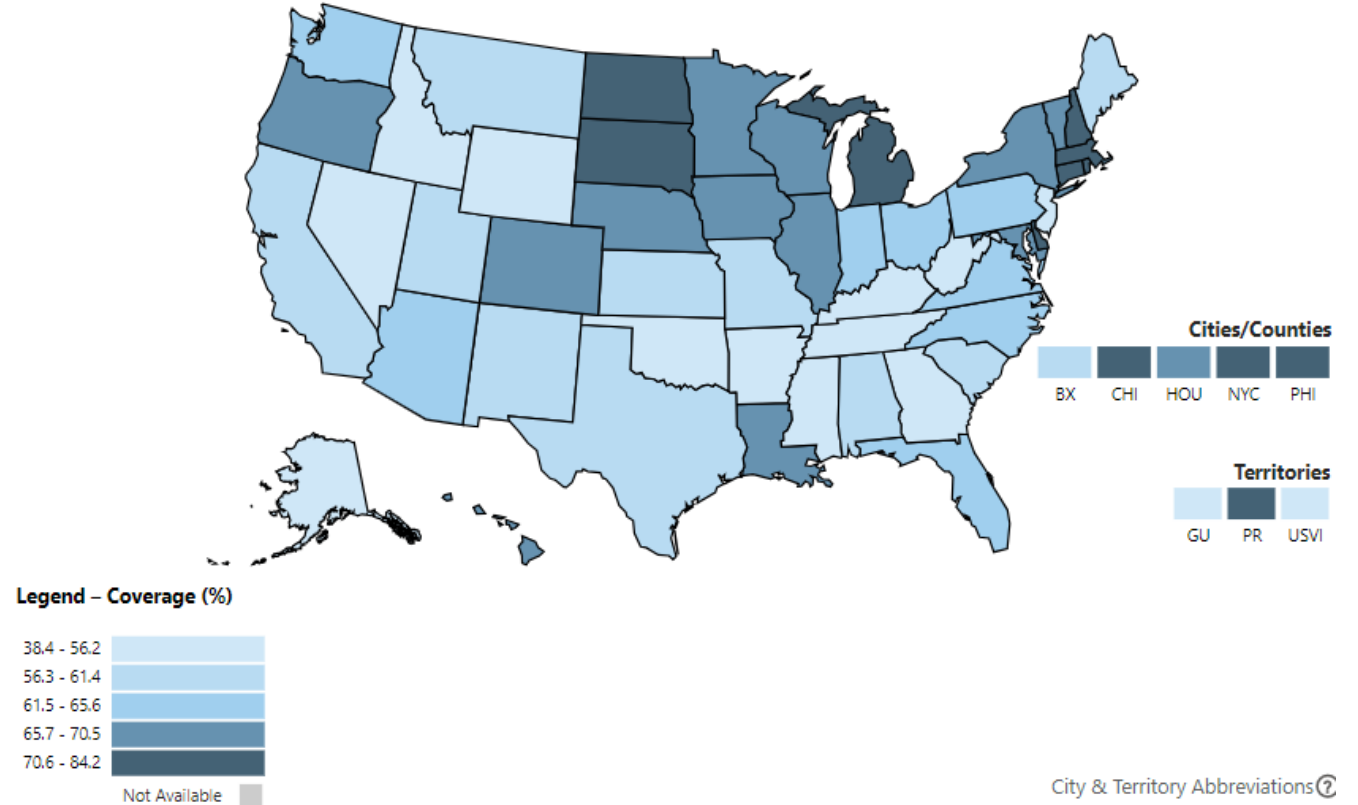
# HPV Vaccination Rates

- HPV vaccination is recommended for routine vaccination at ages 9-12 years and through age 26 and for some people ages 27-45 who were not vaccinated when younger.
- In Memphis and Shelby County, Tennessee, HPV vaccination coverage was 39% UTD for 11-17-year-olds, based on most recent Tennessee Immunization Information System (TennIIS) estimates, which is about half of the *Healthy People* goal.
- Overall, HPV vaccination coverage is also much lower compared to other routinely recommended vaccines for adolescents, meningitis and whooping cough, in this same age group in Tennessee and in Shelby County.



# Estimated Percentage HPV Up-to-Date (UTD), NIS-Teen 2023

| Selected States      | 2019          | 2020          | 2021          | 2022          | 2023          |
|----------------------|---------------|---------------|---------------|---------------|---------------|
| <b>United States</b> | <b>54.20%</b> | <b>58.60%</b> | <b>61.70%</b> | <b>62.60%</b> | <b>61.40%</b> |
| Alabama              | 47.30%        | 52.90%        | 62.50%        | 59.20%        | 60.30%        |
| Arkansas             | 50.50%        | 49.60%        | 56.80%        | 55.70%        | 52.90%        |
| DC                   | 75.50%        | 72.30%        | 79.40%        | 77.80%        | 72.40%        |
| Florida              | 56.00%        | 51.60%        | 49.00%        | 58.90%        | 64.40%        |
| Georgia              | 49.70%        | 54.90%        | 60.90%        | 61.50%        | 40.50%        |
| Kentucky             | 54.90%        | 55.70%        | 57.00%        | 55.00%        | 47.90%        |
| Louisiana            | 59.50%        | 60.40%        | 63.90%        | 67.30%        | 66.20%        |
| Mississippi          | 30.50%        | 31.90%        | 32.70%        | 38.50%        | 38.40%        |
| North Carolina       | 49.50%        | 60.70%        | 67.80%        | 54.80%        | 63.50%        |
| Puerto Rico          | 58.40%        | 49.80%        | 67.20%        | 70.30%        | 76.00%        |
| South Carolina       | 53.00%        | 47.00%        | 62.10%        | 54.40%        | 61.00%        |
| Virginia             | 55.20%        | 56.40%        | 64.90%        | 62.70%        | 62.90%        |
| West Virginia        | 47.40%        | 43.40%        | 56.40%        | 51.50%        | 49.80%        |
| <b>Tennessee</b>     | <b>43.00%</b> | <b>52.90%</b> | <b>56.50%</b> | <b>64.40%</b> | <b>55.00%</b> |



National Center for Immunization and Respiratory Diseases. (n.d.). Vaccination Coverage among Adolescents (13 – 17 Years). TeenVaxView. Retrieved September 11, 2024, from <https://www.cdc.gov/vaccines/imz-managers/coverage/teenvaxview/data-reports/index.html>

# HPV Vaccination Recommendation

## ON-TIME



AGE:  
9-12 years

2 DOSES

*Each dose 6-12  
months apart*

## LATE

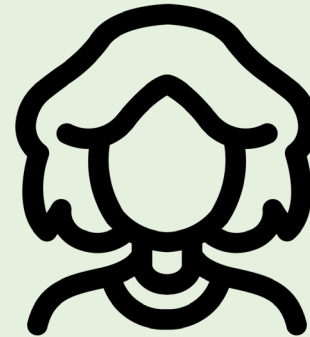


AGE:  
13-14 years

2 DOSES

*Each dose 6-12  
months apart*

## LATE: EXTRA DOSE

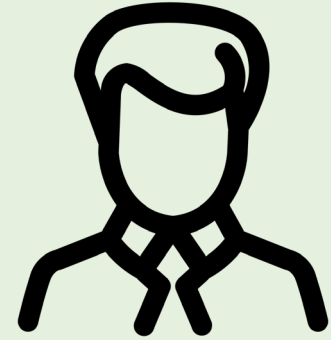


AGE:  
15-26 years

3 DOSES

*Second dose 1-2 months  
after first; Third dose 6  
months after first dose*

## CONSULT



AGE:  
27-45 years

3 DOSES

*Talk with health care  
provider about HPV  
vaccination*

# Rate of New HPV-associated Cancers by Cancer Type

## All HPV-associated Cancers

### Male and Female, United States

In terms of number of HPV cancer cases diagnosed in the U.S. each year, oropharyngeal cancers have surpassed cervical cancer.

HPV vaccination  
IS FOR EVERYONE

The reason for this change is due to oropharyngeal cases diagnosed among men (17,899).



## Convening of the MSCS Back-to-School Vaccination Drive Planning Committee

# Objectives for Planning Committee:

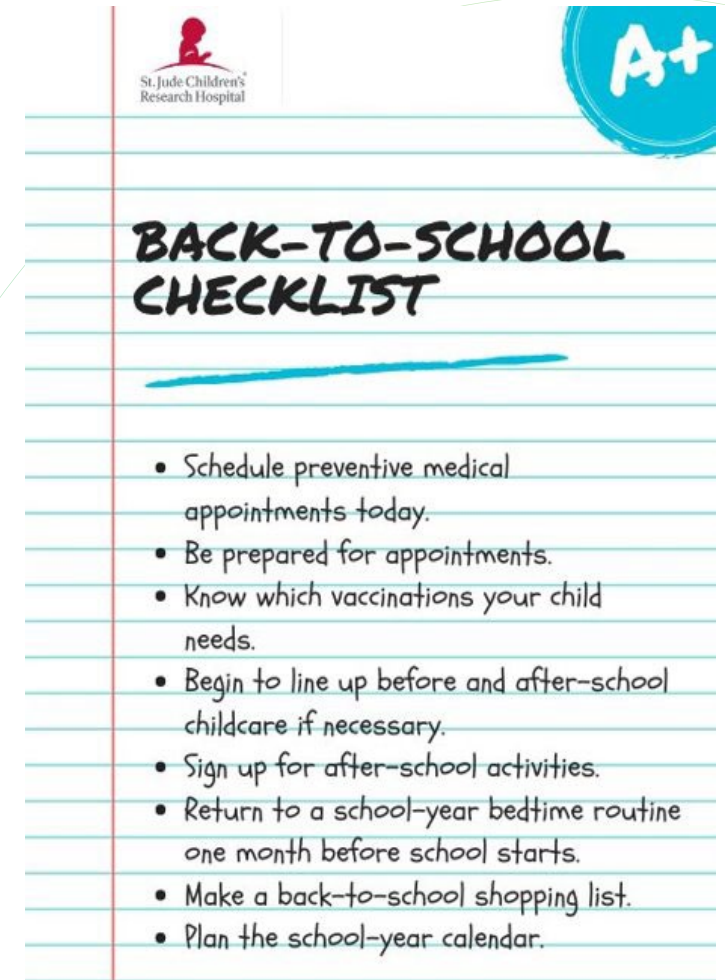
- To Improve community access to childhood immunizations via multiple pop-up scheduled immunization events
- Improve engagement with families to increase the awareness related to childhood immunization requirements

# Goals for Planning Committee:

- Increase year over year immunization rates for children in Shelby County by 8%
- By November 1, of each year increase required immunization for MSCS to 95%

# Community Collaborative Efforts

- Beginning in 2022, a planning committee of community partners was convened to design vaccination events to offer all routinely recommended, including HPV vaccination, and school-entry vaccinations for K-12 children who were students in Memphis and Shelby County Schools at no charge to the student and their families
- **Partners:** Memphis Shelby County Schools, Shelby County Health Department, University of Tennessee Health Science Center, Shot RX, Le Bonheur Children's Hospital, Latino Memphis, Memphis Area Transit, and St. Jude Children's Research Hospital
- **Setting:** Vaccination events were held in central locations in Memphis and Shelby County, Tennessee
- **Population:** School-aged children K-12 in need of vaccinations required for school-entry and also specifically those aged 9-18 eligible for HPV vaccination



# Key Facts about Memphis Shelby County School District



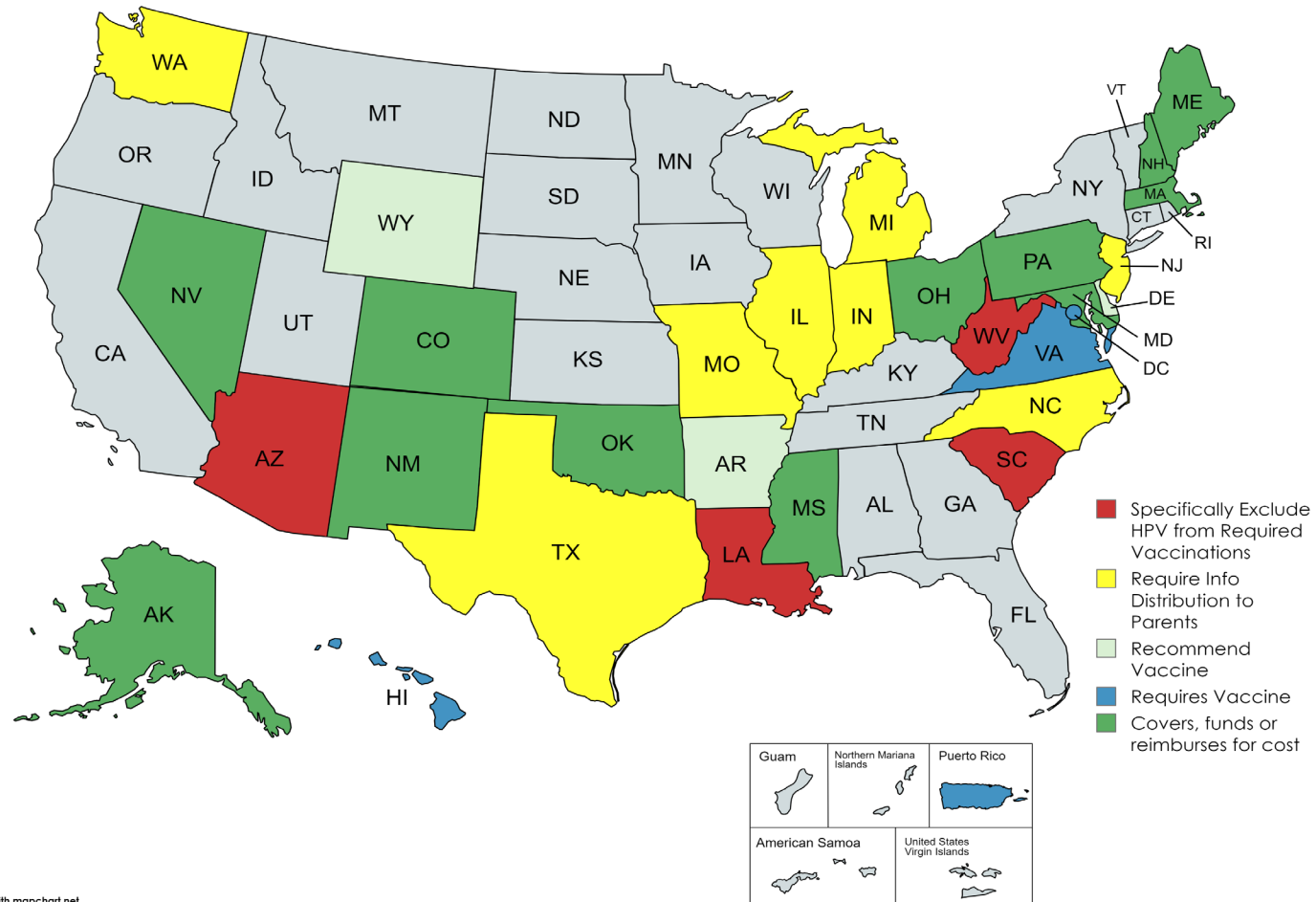
- Memphis Shelby County Schools is the largest district in Tennessee
- Top 25 largest public education system in America
- Serving over 106,000 students



# School-based HPV Vaccination Efforts through Community Engagement

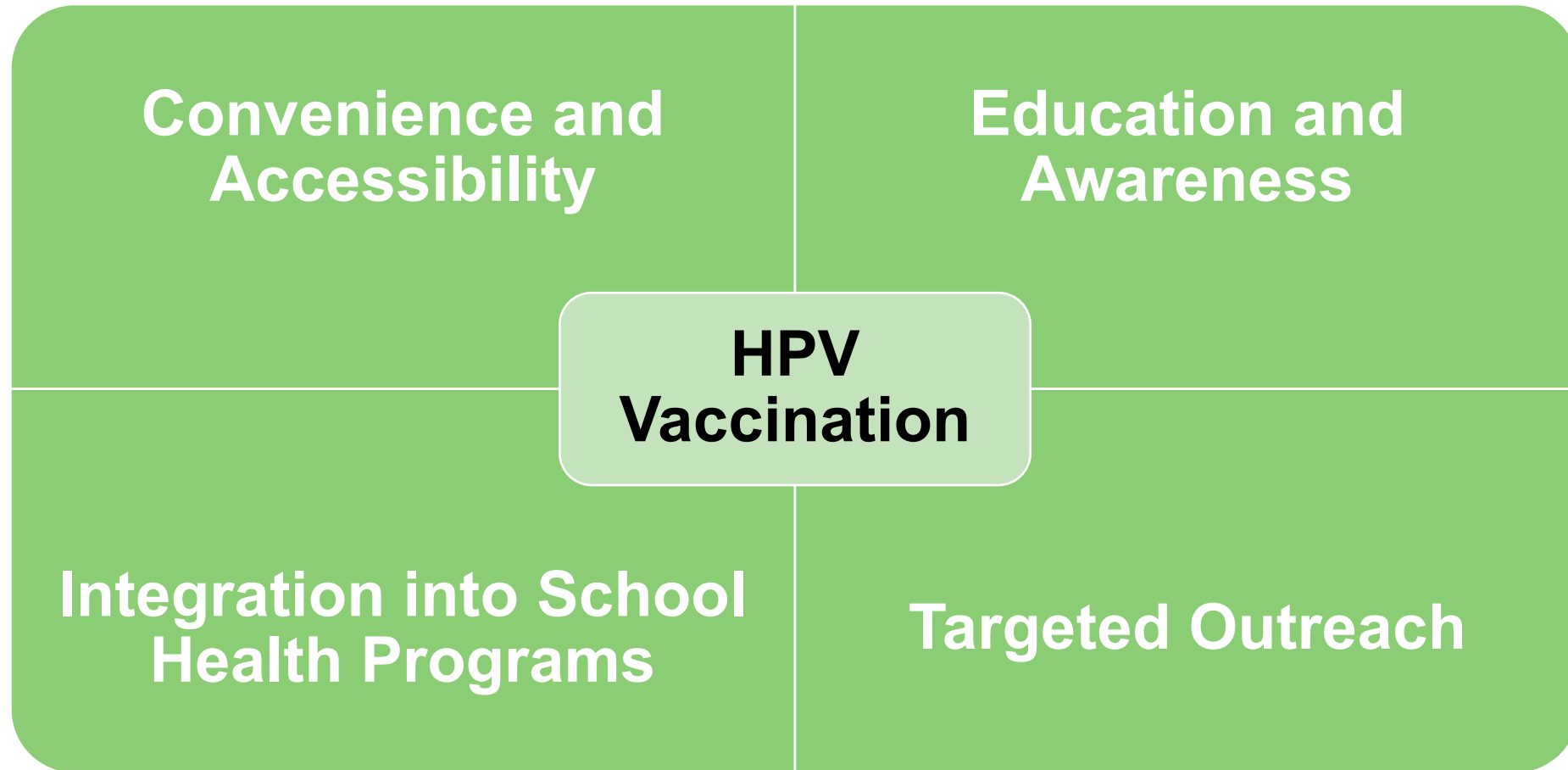
[stjude.org/hpv](https://stjude.org/hpv) • [stjude.org/PreventHPV](https://stjude.org/PreventHPV) • [#EndHPVCancers](https://twitter.com/EndHPVCancers)

# School-entry Requirements: HPV Vaccination

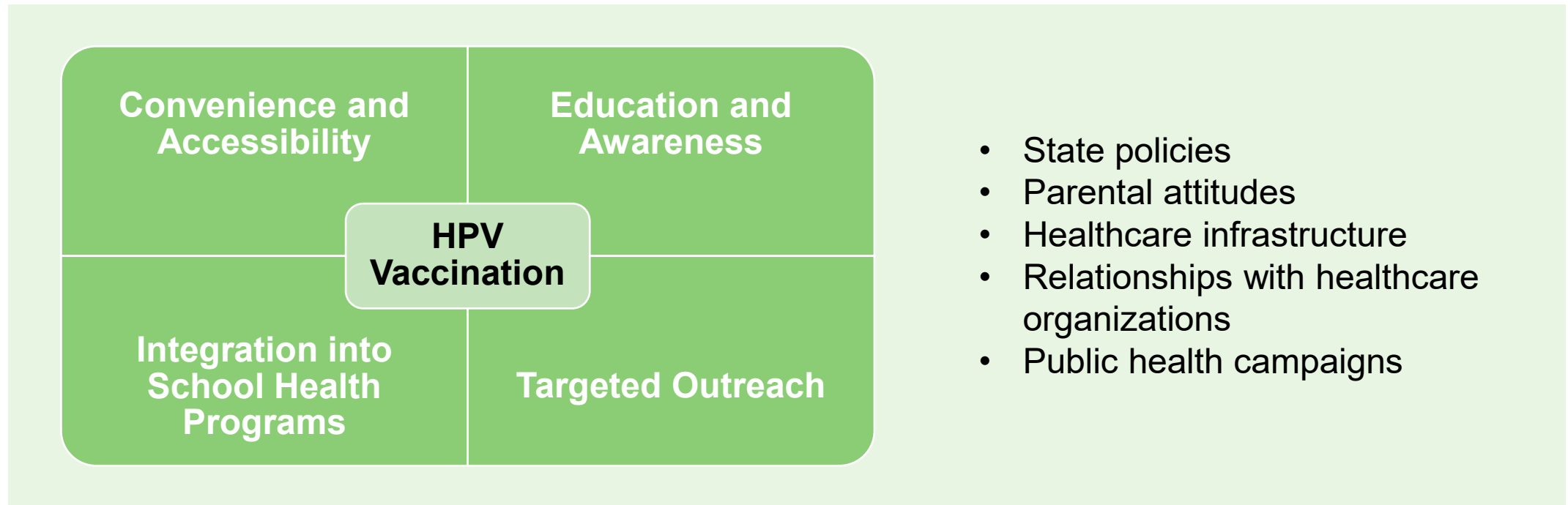


Created with mapchart.net

# Factors that Affect School-based HPV Vaccination



# Other Factors in School-based HPV Vaccination



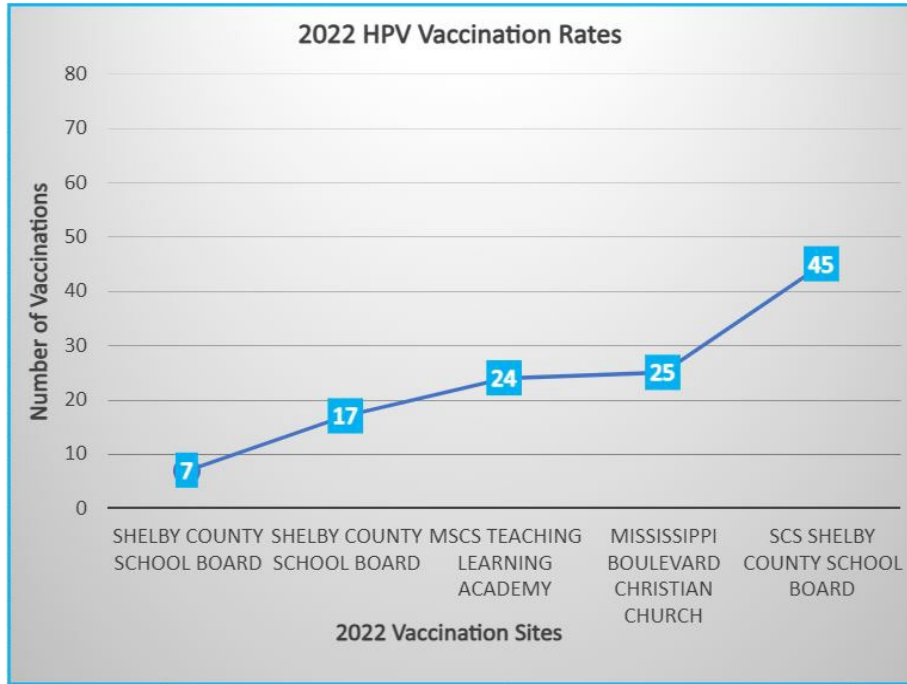
- State policies
- Parental attitudes
- Healthcare infrastructure
- Relationships with healthcare organizations
- Public health campaigns



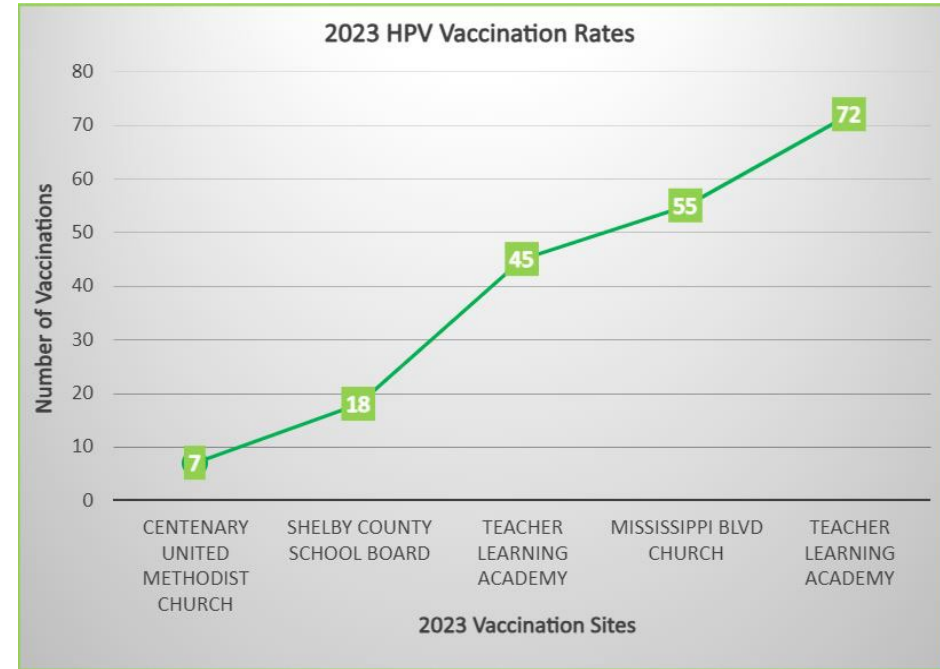
# Results and Lessons Learned

[stjude.org/hpv](https://stjude.org/hpv) • [stjude.org/PreventHPV](https://stjude.org/PreventHPV) • [#EndHPVCancers](https://twitter.com/EndHPVCancers)

# MSCS Back-to-School Vaccination Rates



**Total: 118**



**Total: 197**



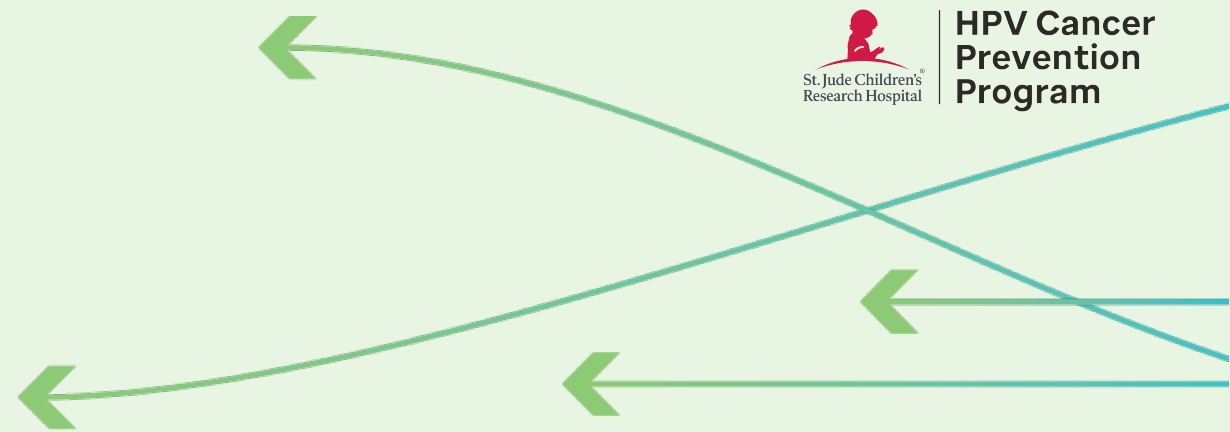
# Call to Action:

- **Meet the community where they are**
- **Educate parents and students about HPV vaccination**
- **Highlight awareness months**

# My Why!!!!!!!!!!!!!!



My mommy and daddy  
are protecting me by  
getting me the HPV  
vaccination in 2032!!



# Thank you!

*I look forward to your  
questions.*

# Flourishing Partnerships

## Expanding HPV Vaccine Outreach Beyond Clinical Settings

**Theodore Lyons II, PharmD**

Clinical Director

ShotRX

Association of Immunization Managers  
(AIM) 2024 Immunization Champion Award  
Recipient





ShotRx

Mobile Vaccination Services



ShotRx was started in 2021 to combat the COVID Pandemic, by providing vaccinations and education throughout West TN. ShotRx expanded its services in late 2021 to include childhood immunizations & family medicine. We have now become a trusted provider in immunizations and health services, offering traditional clinic services, and mobile services.

# WHAT WE LEARNED..

## CONVERSATION EQUALS VACCINATION!

- Partnering in the community makes a difference.
- Health professionals making the “recommendation” makes a difference.
- Having short creative conversations makes a difference.
- Having cultural competence makes a difference.

...MOBILE SOLUTIONS MATTER!



# WHAT DID WE DO?

**WE LITERALLY ROLLED UP OUR SLEEVES AND WENT TO WHERE THE PEOPLE ARE!**

- Our team takes the time to have the conversation.
- Our team answers the questions.
- Our team assists and reassures.
- Our team makes the necessary adjustments.
- Our team cares with a smile!

***...AS YOU DID IT UNTO THE LEAST OF THESE...MATT 25:40***



# WHERE WE'VE BEEN

## VACCINATIONS

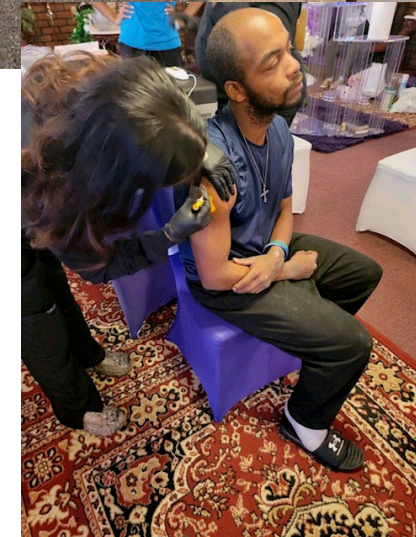
- Over 18,000 COVID vaccinations given
- 100 educational seminars and town hall meetings conducted
- Over 4000 VFC immunizations
- **1400 HPV vaccinations**
- 35 zip codes and all 13 Districts

## CORRECTIONAL FACILITIES

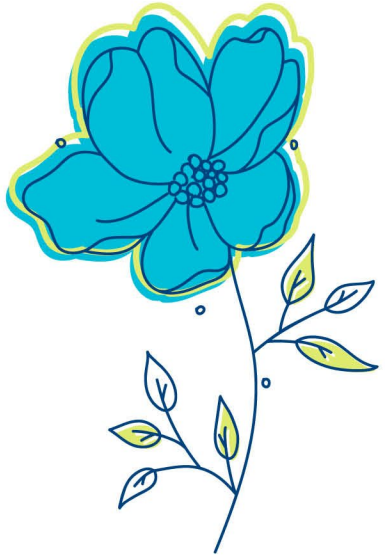
- DCS
- Youth Villages
- MYA
- WellPath (Shelby Co. Corrections)
- Provides health services and vaccinations on-site

## SCHOOLS

- Provided immunization & health services to over 70 schools and charter schools in Shelby County







# HPV Vaccination in Full Bloom

## 4<sup>TH</sup> ANNUAL MEETING

**HPV Cancer Prevention Roundtable**  
MEMPHIS & SHELBY COUNTY



# Networking in Nature Break



1 00:00

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None ▾

Breaktime for PowerPoint by Flow Simulation Ltd. Pin controls when stopped

at the **Memphis Botanic Garden**  
>>> [stjude.org/memphis-roundtable](http://stjude.org/memphis-roundtable)



# Forget-me-nots



## Allene Xing, MPH

**Epidemiologist**

**Outreach & Analytics, Vaccine-  
Preventable Diseases and Immunization  
Program (VPDIP)**

**Tennessee Department of Health**



A large, abstract blue watercolor splash is on the left side of the slide. Below it, a series of black lines radiate from a single point, resembling a fan or a stylized sunburst.

# Forget-Me-Nots

## HPV Reminder/Recall

**Allene Xing, MPH**

September 24, 2024



# Outline

1. The Importance of Reminder/Recall
2. Evaluation of TDH's Reminder/Recall Campaign
3. Call to Action and Next Steps



# What is Reminder/Recall?

- An intervention designed to help improve immunization rates
- Reminder messages inform patients about vaccines that **will be due**
- Recall messages inform patients about vaccines that are **overdue**
- Delivery modality
  - Text messages, phone calls, e-mails, postcards, etc.



The background features two large, irregular watercolor splashes in shades of blue and purple, one on the left and one on the right, framing the central text. The splashes have a soft, textured appearance with varying intensities of color.

# **Evidence-Based Practice: A Journal Article from Texas**

# Using Electronic Reminders to Improve Human Papillomavirus (HPV) Vaccinations among Primary Care Patients

## Background

- Impacts of the COVID-19 pandemic
- Decline in HPV vaccination rates

## Methods

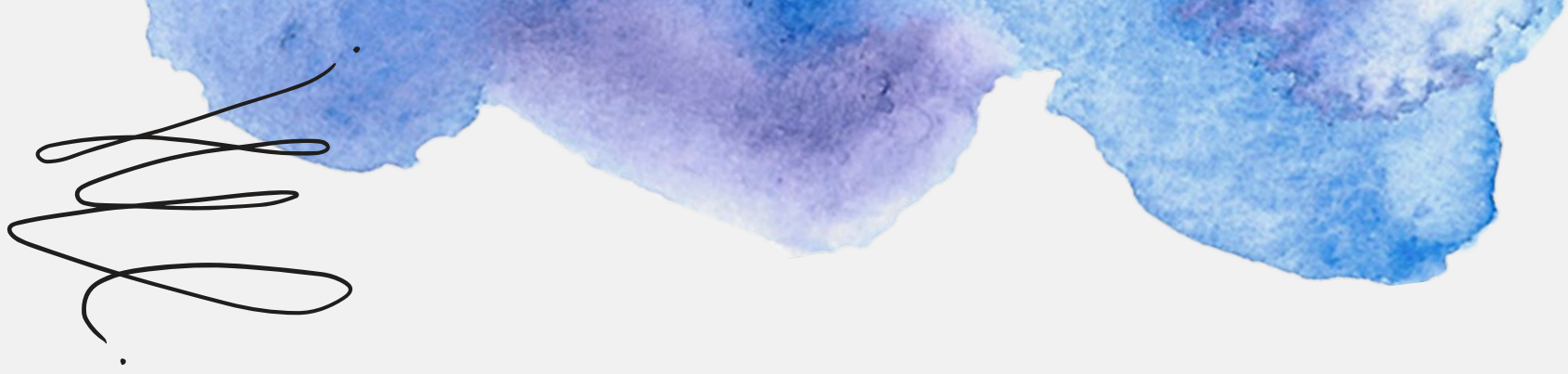
- Sample size: 7,408
- Adolescents and young adults aged 9-25 years old
- Stratified randomization
- Control group ( $n = 3,703$ ) vs. Intervention group ( $n = 3,705$ )
- Intervention: one type of **customized** electronic reminder (SMS, patient portal message via MyChart, e-mail) in addition to usual care

## Table 3

Multiple logistic regression \* analysis results of HPV outcomes.

| HPV Outcomes                      | Electronic Reminder | Usual Care  | Adjusted OR<br>(95% CI *) | p-Value |
|-----------------------------------|---------------------|-------------|---------------------------|---------|
|                                   | (N = 3705)          | (N = 3703)  |                           |         |
|                                   | N (%)               | N (%)       |                           |         |
| Appointment Scheduling            | 752 (20.3)          | 700 (18.9)  | 1.12<br>(1.00, 1.26)      | 0.056   |
| Clinic Visit                      | 423 (11.42)         | 419 (11.32) | 1.07<br>(0.94, 1.23)      | 0.300   |
| All Additional HPV Vaccination(s) | 450 (12.15)         | 402 (10.86) | 1.17<br>(1.01, 1.36)      | 0.036   |

\* Model controlled for age, sex, race/ethnicity, insurance and vaccine status.

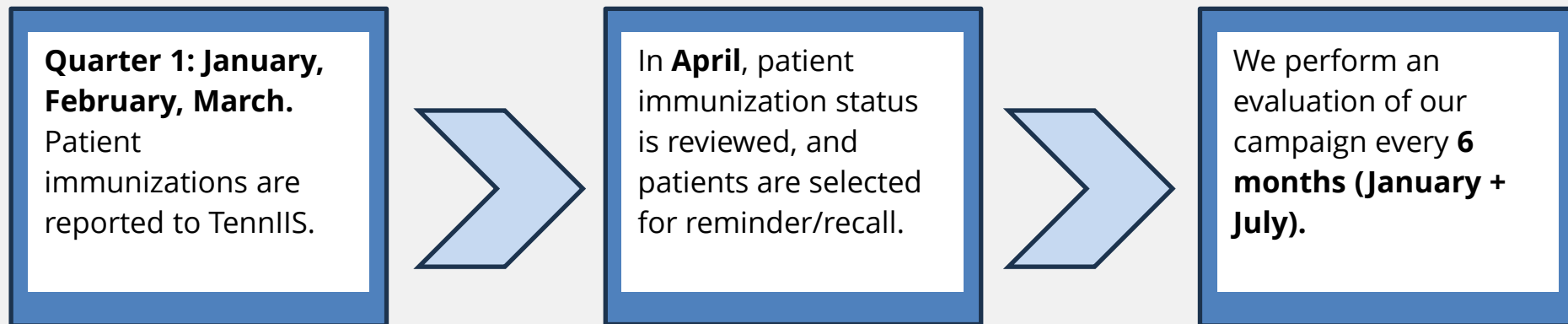


# **TDH HPV Reminder/Recall Campaign**



# TDH HPV Reminder/Recall Campaign

- Started in 2023
- Quarterly campaign
- Cohort of interest: adolescents and young adults aged 9-26 years old in Tennessee



# Patient Population

- Incomplete Series Cohort
  - Patients who have initiated the HPV vaccination series but have not yet completed it
- If a patient is a minor (<18 years old), we send messages to their guardians

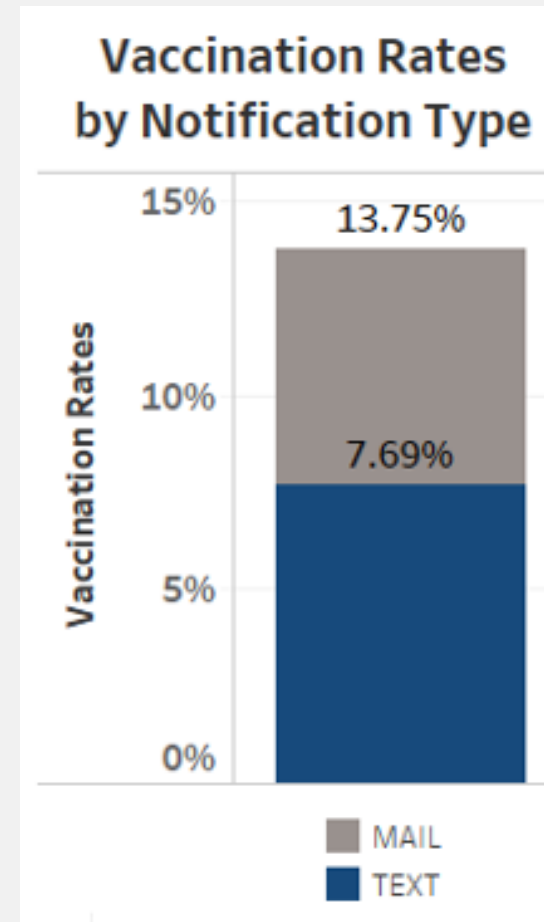
## Example Text Message:

TN Dept of Health: If you or a family member received an HPV vaccine, be sure to get maximum protection by completing the recommended doses. Protection against HPV & the six different cancers it can cause requires more than one dose. Contact your healthcare provider about scheduling the next HPV dose or visit [tn.gov/health/hpv](http://tn.gov/health/hpv) for more information. Informacion acerca de la vacunas contra el HPV: [tn.gov/health/hpv](http://tn.gov/health/hpv).



# Intervention

- First started with text-only campaigns
- In Q2 of 2023, we decided to include postcards in our campaigns
- However, we recently decided to exclude postcards due to the following reasons:
  - Expenditures
  - Time intensive
  - Methodology evaluation



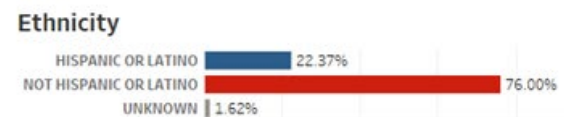
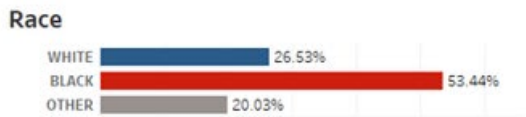
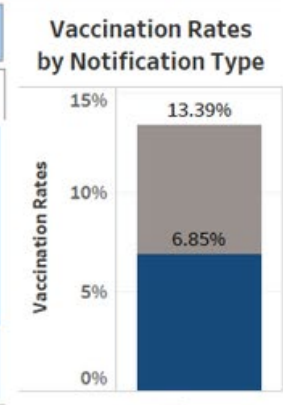
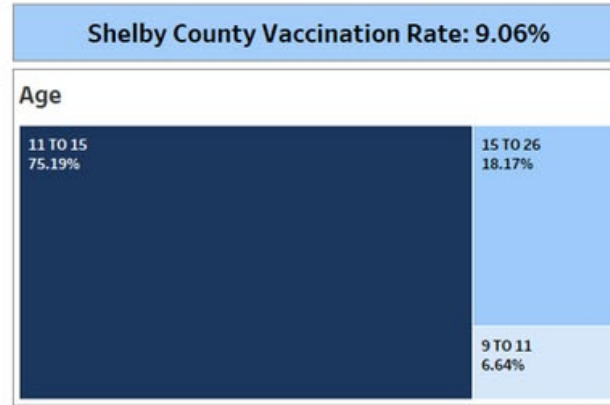
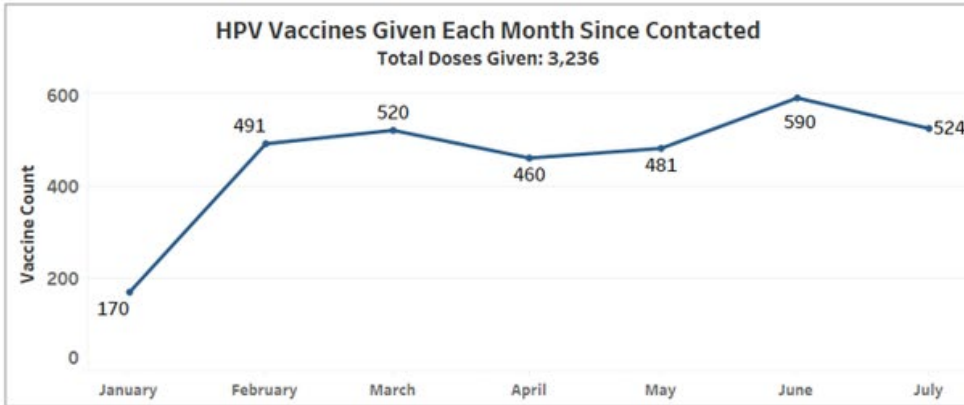
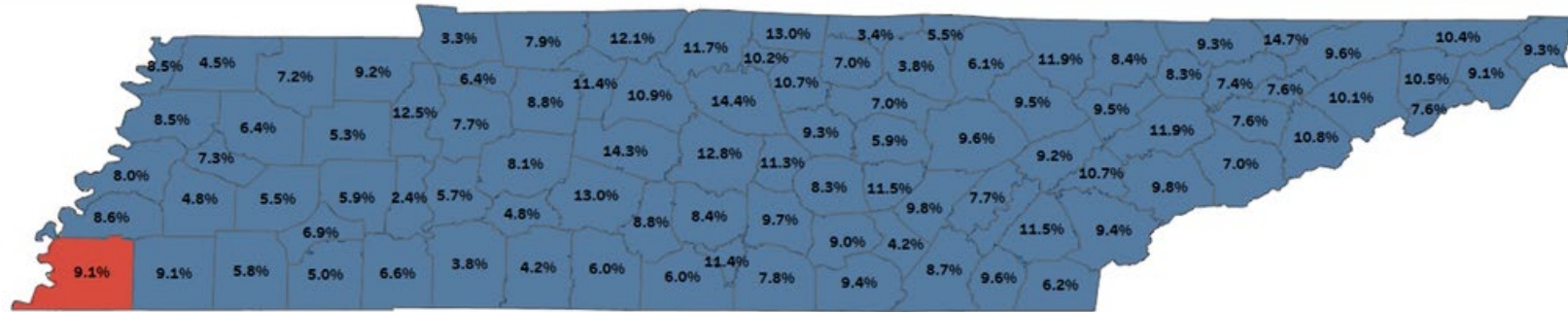


# Main Takeaways - Statewide

- Evaluation Period: 1/19/2024 – 7/19/2024
- Of the patients we sent reminder/recall messages to, 9.73% got an HPV vaccination
- A total of 20,903 doses were given
- The majority of those who got vaccinated were:
  - In the 11–15-year age range (75.67%)
  - White (64.24%)
  - Not Hispanic or Latino (81.16%)

# HPV Recall Campaign 6-Month Follow Up Evaluation - Shelby County

Evaluation Period: 01/19/2024-07/19/2024



# Main Takeaways – Shelby County

- Evaluation Period: 1/19/2024 – 7/19/2024
- Of the patients we sent reminder/recall messages to, 9.06% got an HPV vaccination
- A total of 3,236 doses were given
- The majority of those who got vaccinated were:
  - In the 11–15-year age range (75.19%)
  - Black (53.44%)
  - Not Hispanic or Latino (76.00%)

# Call to Action

- Expanded Cohorts
  - No Dose Cohorts
- Opportunities for a more multi-dimensional intervention
  - Customized messages
- Reminder/Recall campaigns are only as good as the data driving it
  - Centralized Immunization Information System (IIS)



# TennIS Resources

18 14 15 1 0

What do you want to do with your selected recall group?

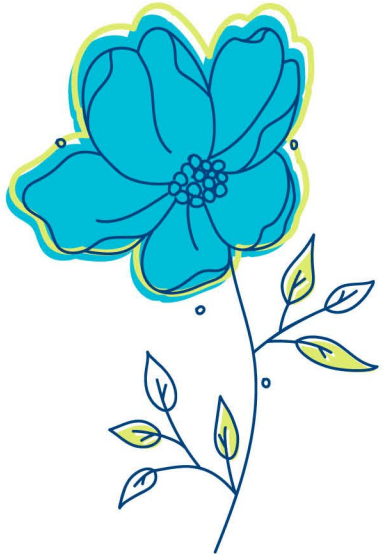
- Generate A Patient List
- Print Letters
- Generate Auto-Dialer Content
- Generate Mail-Merge
- Create Custom Post Cards
- Create Avery 8387 Postcards
- Print Labels
- Save As a Patient Group (Cohort)
- Send Email

# Contact Information

- Program: Tennessee Department of Health, Communicable and Environmental Diseases and Emergency Preparedness Division (CEDEP), Vaccine Preventable Disease Immunizations Program, **Outreach & Analytics**
- Email: [VPDIP.Quality@tn.gov](mailto:VPDIP.Quality@tn.gov)
- Phone Number: 800-342-1813, ext 9.



**Thank you!**



# HPV Vaccination in Full Bloom

## 4<sup>TH</sup> ANNUAL MEETING

**HPV Cancer Prevention Roundtable**  
MEMPHIS & SHELBY COUNTY



# Networking in Nature Break



1 00:00

Start Stop Reset mins: 10 secs: 0 type:

None ▾

Breaktime for PowerPoint by Flow Simulation Ltd. Pin controls when stopped

at the **Memphis Botanic Garden**  
>>> [stjude.org/memphis-roundtable](http://stjude.org/memphis-roundtable)



# Discussion Tables

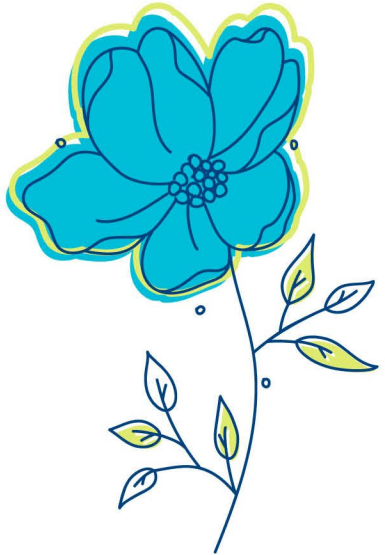
## Interactive Growth: Action Planning for 2025 and Beyond



| Table and Topic                             | Facilitator     |
|---|-----------------|
| Table 1 - Maple: Engagement and Membership  | Portia Knowlton |
| Table 2 - Dahlia: Engagement and Membership | Julia Brown     |
| Table 3 - Mum: Communication                | Marlise Elgart  |
| Table 4 - Amaryllis: Communication          | Emily Delikat   |
| Table 5 - Rose: Communication               | Heather Brandt  |
| Table 6 - Hydrangea: Data                   | Andrea Stubbs   |
| Table 7 - Ivy: Data                         | Madison Toney   |
| Table 8 - Sunflower: Provider Education     | Michelle Bowden |
| Table 9 - Azalea: Provider Education        | Amanda Ibrahim  |
| Table 10 - Poppy: Provider Education        | Danielle Wright |

### Find Your Assigned Table for Group Discussion

- **Check your name badge** to find your assigned table number.
- **Locate your table** based on the number on your badge.
- **Table discussions** will focus on the 4 key priorities.
- **Engage with your group** by sharing insights and ideas.
- **Remember to collaborate** and contribute to the conversation on your assigned priorities.
- Discusses will last for **35 minutes**.



# HPV Vaccination in Full Bloom

## 4<sup>TH</sup> ANNUAL MEETING

**HPV Cancer  
Prevention**  
→  
**Roundtable**  
MEMPHIS & SHELBY COUNTY



# Interactive Growth



mins: 
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 type:

Breaktime for PowerPoint by Flow Simulation Ltd. Pin controls when stopped

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>>> [stjude.org/memphis-roundtable](http://stjude.org/memphis-roundtable)



# Blossoms of the Day – Closing

## Akeria Taylor, MPH

Program Coordinator, St. Jude HPV  
Cancer Prevention Program

Ex-Officio Member, Memphis and  
Shelby County HPV Cancer  
Prevention Program



# Registration Is Open

## Provider Education Dinner



### EMPOWERING CONVERSATIONS

#### Enhancing HPV Vaccine Uptake with the Announcement Approach

November 14, 2024, 6 - 8 pm

Join the Memphis and Shelby County HPV Cancer Prevention Roundtable and the Tennessee Chapter of the American Academy of Pediatrics as they host Empowering Conversations: Enhancing HPV Vaccine Uptake with the Announcement Approach.

This 2-hour educational activity is intended to educate local providers about the critical importance of on-time HPV vaccination to prevent HPV cancers in adulthood, through the introduction of the Announcement Approach.

Dinner will be provided, and CME credits will be available. The TMA is accredited by the ACCME to provide continuing medical education for physicians.

For more information about the Announcement Approach, visit [HPViq.org](https://HPViq.org). For questions related to this educational activity, email [PreventHPV@stjude.org](mailto:PreventHPV@stjude.org).

Learn more at [st.jude.org/memphis-roundtable](https://st.jude.org/memphis-roundtable)

**CHAR Restaurant 431 S. Highland St, #120 Memphis, TN 38111**

The Announcement Approach Training (AAT) is designed to improve providers' and nursing staff's HPV vaccine communication.

Participants will learn to:

- Build skills in effective vaccine communication
- Apply and implement the announcement approach in a clinic or system setting.



[Register Today](#)

## Empowering Conversations: Enhancing HPV Vaccine Uptake with the Announcement Approach: AAT

November 14, 2024, 6-8 pm



Scan To Register

# Registration Is Open

## Vaccine Advocates Lunch and Learn

NEW AND EXPERIENCED ADVOCATES OF ALL AGES ARE INVITED TO

### THE GIFT OF VACCINES

VACCINE ADVOCATES LUNCH AND LEARN

FREE EVENT - LUNCH INCLUDED  
SATURDAY, DECEMBER 7, 2024  
11:30AM-1:30PM

-----  
CHATTANOOGA, TN  
-----

SPECIFIC EVENT LOCATION WILL BE SENT FOLLOWING REGISTRATION.

HOSTED BY

Logos for Tennessee Families for Vaccines, Safe Communities Coalition, St. Jude Children's Research Hospital HPV Cancer Prevention Program, and HPV Cancer Prevention Roundtable Memphis & Shelby County.

### The Gift of Vaccines

Tennessee Families for Vaccine  
Supported by the Memphis and  
Shelby County HPV Cancer  
Prevention Roundtable

December 7, 2024, 11:30 am- 1:30 pm  
Chattanooga, TN

Register at:  
[www.tnfamiliesforvaccines.org/giftofvaccines](http://www.tnfamiliesforvaccines.org/giftofvaccines)



Save the Date for the Mid Year Meeting

# **Memphis and Shelby County HPV Cancer Prevention Roundtable**

**Mid-year Meeting  
March 18, 2025**

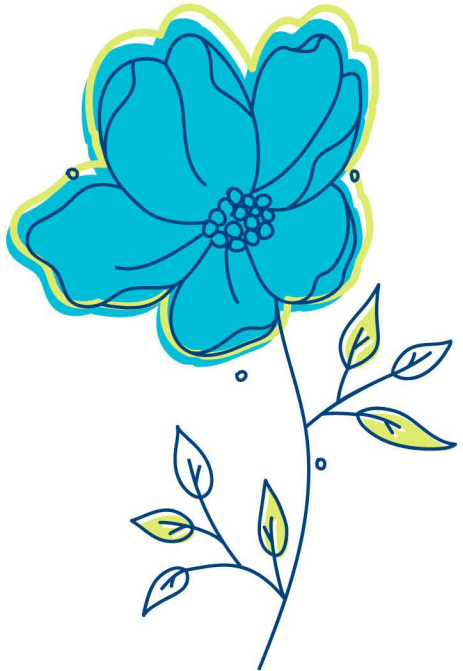


# Annual Meeting Evaluation

## We Want To Hear From You

**Please take a moment to completed the evaluation for today's event.**





# HPV Vaccination in Full Bloom

4<sup>TH</sup> ANNUAL MEETING



at the **Memphis Botanic Garden**  
>>> [stjude.org/memphis-roundtable](https://stjude.org/memphis-roundtable)

