



RESULTS OF THE 2025 IMMUNIZATION STATUS SURVEY OF 24-MONTH-OLD CHILDREN IN TENNESSEE



Acknowledgements

Birth data were provided by the Tennessee Department of Health, Office of Vital Records, and Statistics. Immunization data were collected by county and regional health department nurses, immunization representatives, and disease investigation staff. Data entry, analysis, and reporting were conducted by staff of the Tennessee Vaccine-Preventable Diseases and Immunization Program. Survey data were collected using REDCap electronic data capture tools hosted at the Tennessee Department of Health. REDCap (Research Electronic Data Capture, <http://projectredcap.org/>) is a secure web-based application.

Executive Summary

The 2025 Immunization Status Survey of 24-month-old Children (Immunization Status Survey) in Tennessee is conducted by the Tennessee Department of Health (TDH) Vaccine-Preventable Diseases and Immunization Program (VPDIP) and Tennessee's 13 Regional and Metro Health Departments. The purpose of this survey is to track immunization coverage for 24-month-old children in Tennessee.

This survey employs a retrospective cohort design to assess the up-to-date (UTD) immunization rates of 24-month-old children born in Tennessee. The survey population consists of random samples selected from birth certificates of infants born in each of the state's 13 health department regions. These children were born in the first quarter of 2023 and celebrated their second birthdays between January 1 and March 31, 2025. Identifying information was sourced from electronic birth records, while immunization data were primarily collected from the Tennessee Immunization Information System (TennIIS), the statewide immunization registry.

Immunization rates for the Combined 7 Series (4:3:1:FS:3:1:FS), including 4 doses of DTaP, 3 doses of Polio, 1 dose of MMR, 3 doses of Hib, 3 doses of Hepatitis B, 1 dose of Varicella, and 4 doses of PCV, were calculated based on the 2025 childhood immunization and catch-up schedules recommended by the US Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP). The survey results are aggregated to provide regional and statewide statistics on immunization coverage rates across Tennessee, and to track progress toward meeting Healthy People 2030 (HP2030) objectives. Additionally, the Tennessee Department of Health's VPDIP has set a state-specific goal of achieving 90% on-time immunization coverage for each routinely recommended vaccine by age two.

Each child's immunization record was thoroughly reviewed to assess whether they were UTD. For children who were not UTD, local public health staff made efforts to contact parents, guardians, and healthcare providers to obtain any missing immunization information. If subsequent follow-up confirmed that the child was still not UTD, the data collection process served as a reminder for both parents and providers to ensure timely immunizations.

A child was classified as UTD by 24 months of age if all Combined 7 Series (4:3:1:FS:3:1:FS) vaccination doses were administered before the child reached 24 months of age, or if the series was completed according to the CDC catch-

up schedule. Children were excluded from the UTD by 24 months classification if any of the Combined 7 Series (4:3:1:FS:3:1:FS) doses were given after the child turned 24 months and did not meet the CDC catch-up schedule requirements.

In 2025, Tennessee's statewide up-to-date (UTD) immunization rate for 24-month-olds increased to 76.4% up from 74.4% in 2024 (Table 4-A, pg. 19). While Tennessee consistently maintains relatively high vaccination rates, it has struggled to meet many past and present HP objectives. In 2025, Tennessee did not meet any of the three HP2030 objectives. The state ranks in the bottom third nationally for the completion of the Combined 7 Series (4:3:1:FS:3:1:FS), holding the 35th position. Within Region 4 of the U.S. Department of Health and Human Services (HHS), which includes Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and South Carolina, Tennessee ranks 5th out of 8 states.^{1,2}

There was notable regional variation in the percentage of children found to be UTD by 24 months (based on data collection), with rates ranging from 63.2% in the Memphis Shelby-County Region (MSR) to 85.3% in the Northeast Region (NER). When interpreting immunization rates for regions with low response rates, caution is warranted, as children excluded from the study due to being unable-to-locate (UTL) may also be less likely to be UTD. The Mid-Cumberland Region saw the greatest improvement in UTD rates by 24 months, with a significant 12.5 percentage point increase from 2024 to 2025 (Table 8, pg. 39).

The survey calculated a preliminary immunization rate based on UTD status by 24 months of age, as reported to TennIIS. This rate reflects the percentage of study participants whose vaccinations were considered UTD by 24 months of age based solely on TennIIS data, without any follow-up with parents or providers. In Tennessee, healthcare providers voluntarily report vaccine administrations to TennIIS, excluding those provided through federally-funded programs like the Vaccines for Children (VFC) Program. For all 24-month-old children in Tennessee, the Combined 7 Series (4:3:1:FS:3:1:FS) UTD immunization rate, based only on TennIIS data, was 35.6%. This represents a 7.4 percentage point decrease from 2024 and is 40.8 percentage points lower than the 76.4% UTD rate by 24 months of age derived from survey data, indicating a significant underreporting of immunizations to TennIIS by Tennessee healthcare providers.

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The percentage of Tennessee children who received the fourth dose of DTaP by 24 months decreased by 3.0 percentage points from 2024 to 2025. Coverage for the fourth dose remains substantially lower than for the third dose, indicating that many children are not completing the full DTaP series within the recommended timeframe needed for optimal protection against disease. Historically, Tennessee has not met the Healthy People 2030 objective for DTaP coverage. In 2025, 91.0% of children received three doses of DTaP by 24 months, while only 79.4% received their fourth dose (Figure 16, pg. 35). The third dose can be administered as early as 6 months of age, but the fourth dose must be delayed until at least 12 months and 6 months after the third dose. These findings suggest that targeted outreach efforts for the fourth dose of DTaP, particularly following a child's one-year check-up, may be needed to improve vaccination rates.

Despite the increased risk young children face for serious flu-related complications such as pneumonia, dehydration, and even death, influenza vaccination rates remain low among Tennessee children.³ As a result, promoting timely influenza vaccination continues to be a high priority for VPDIP. In the 2025 cohort, only 34.7% of 24-month-old children had received two doses of the influenza vaccine by 24 months of age, a decrease from 37.5% in 2024 (Table 4-A, pg. 19).

In addition to individual vaccine analysis, multiple risk factors and their potential effects on UTD status were evaluated. These risk factors include safety-net program enrollment, race, number of siblings, etc. In past years, analysis included both TennCare and WIC enrollment, however, in 2025 the WIC comparison was removed due to limitations in obtaining WIC data. As a result, safety-net program enrollment reflects TennCare participation only, and participants were categorized based on whether they had ever been enrolled in TennCare. The UTD rate by 24 months of age for children who were enrolled in TennCare (74.5%) was significantly lower than children not enrolled in TennCare (79.7%) (Table 4-C, pg. 25).

The 2025 Immunization Status Survey report provides valuable demographic and immunization history data, offering Tennessee and its health regions an opportunity to analyze this information together. This report informs the development of evidence-based programs improving immunization rates to decrease vaccine-preventable diseases among Tennesseans.

Definitions of Abbreviations

Organizations and Terminology

TDH: Tennessee Department of Health
VPDIP: Vaccine-Preventable Diseases and Immunization Program
ACIP: Advisory Committee on Immunization Practices
CDC: Centers for Disease Control and Prevention
FDA: Food and Drug Administration
HHS: United States Department of Health and Human Services
TennIIS: Tennessee Immunizations Information System
NIS: National Immunization Survey (CDC)
WIC: Women, Infants, and Children Program
VFC: Vaccines for Children
UTD: Up-to-Date
UTL: Unable-to-Locate

Vaccines

COVID-19: coronavirus disease vaccine
DTaP: diphtheria, tetanus, acellular pertussis vaccine
IPV: inactivated polio vaccine
HAV: hepatitis A vaccine
HBV: hepatitis B vaccine
HIB: *Haemophilus influenzae*, type B vaccine
MMR: measles, mumps, rubella vaccine
VAR: varicella (chickenpox) vaccine
PCV: pneumococcal conjugate vaccine
Combined 7 Series (4:3:1:FS:3:1:FS): DTaP, IPV, MMR, HIB, HBV, VAR, and PCV vaccine series
FLU: seasonal influenza vaccine
RTV: rotavirus vaccine
RSV: respiratory syncytial virus

Public Health Regions

Rural, multi-county regions

- I. WTR: West Tennessee Region
- II. SCR: South Central Region
- III. MCR: Mid-Cumberland Region
- IV. UCR: Upper Cumberland Region
- V. SER: Southeast Region
- VI. ETR: East Tennessee Region
- VII. NER: Northeast Region

Metropolitan, single county regions

- I. MSR: Memphis-Shelby County Region
- II. JMR: Madison County Region
- III. NDR: Nashville-Davidson County Region
- IV. CHR: Chattanooga-Hamilton County Region
- V. KKR: Knoxville-Knox County Region
- VI. SUL: Sullivan County Region

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SECTION I

Introduction

An annual Immunization Status Survey of 24-month-old Children in Tennessee is conducted by the Tennessee Department of Health's (TDH) Vaccine-Preventable Diseases and Immunization Program (VPDIP) to track progress toward at least 90% on-time immunization with each routinely recommended vaccine for before age two years.*

This survey uses the 2025 routine childhood vaccination schedule recommended by the United States Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP). The survey is composed of random samples drawn from birth certificates of infants born in each of the 13 health department regions, which are aggregated to give statewide and regional statistics on immunization coverage rates in Tennessee.

Safety and Efficacy of Immunizations

The United States has the safest and most effective vaccine supply in its history. No medical intervention, including vaccination, is free from risk, but the benefits of vaccination far outweigh the risks. Prior to licensure, rigorous clinical trials are carried out by manufacturers and reviewed by the Food and Drug Administration (FDA). Once licensed by the FDA, vaccines are reviewed by the expert panel of the ACIP and recommended only when the vaccine meets the criteria outlined in the Evidence to Recommendation (EtR) Framework.⁴

After licensure, vaccines continue to be monitored for adverse reactions. The most frequently reported adverse reactions are minor and include soreness at the injection site, a rash, or a mild fever that subsides within one to two days.⁵ While serious reactions are rare, systems like the Vaccine Adverse Event Reporting System (VAERS) ensure ongoing safety monitoring and rapid response to potential concerns.⁶ Health experts recommend vaccines as our best protection against serious diseases, lowering the risk of illness, complications, death, and outbreaks. Vaccines help the body build immunity against disease. Benefits of vaccination extend to others. Individuals who cannot develop immunity from vaccines, have medical conditions that do not allow them to be vaccinated, and

babies who are too young to be vaccinated rely on the immunity of those around them to protect them from serious infectious diseases.⁷ Because of the success of vaccines, many diseases that were historically commonplace have become rare or in some cases, eliminated from the United States.

Value of Immunizations

Timely routine vaccination of children protects community health, prevents outbreaks, and saves money and lives. The federal Vaccines for Children (VFC) Program, implemented in 1994, assures affordable access to all routine vaccines for children who are without private insurance coverage. In Tennessee, over 600 providers are enrolled as VFC providers. There is at least one VFC provider in each of Tennessee's 95 counties. CDC estimated that the routine vaccines given to U.S. children born between 1994 and 2023 **would prevent an average of 508 million childhood illnesses and prevent the premature death of 1,129,000 of these children over their lifetimes.**⁸ Additionally, the CDC calculated that vaccination of each U.S. birth cohort according to the 2023 immunization schedule would yield a net savings of nearly \$540 billion in direct medical costs and \$2.7 trillion in total costs to society.⁹ With roughly two percent of the U.S. population living in Tennessee, this suggests Tennessee has benefitted from the prevention of approximately 9.4 million cases of disease in the past decade, with **annual savings of \$10.8 billion in direct medical costs and \$27 billion in total costs to society.**

In Tennessee, unvaccinated and under-vaccinated children have comprised substantial proportions of reported vaccine-preventable infections such as measles, flu, and pertussis (whooping cough). Most children who die each year from seasonal influenza are unvaccinated.^{10,11} These diseases not only place Tennesseans at risk for significant morbidity and mortality but also create significant fiscal burden upon the State. Even small outbreaks place tremendous strain upon healthcare systems and divert attention from other critical public health initiatives.

* In accordance with ACIP recommendations, coverage needed for herd immunity, and Tennessee's previous challenges in achieving HP2020 goals, an internal goal of 90% on-time immunization rates has been set by VPDIP.

Vaccines Assessed

This survey assesses vaccine completion according to the 2025 ACIP recommendations for protection against fifteen serious illnesses before the age of 24 months: diphtheria, tetanus, pertussis (combined as DTaP), poliomyelitis (IPV), measles, mumps, rubella (combined as MMR), *Haemophilus influenzae* type B (HIB), hepatitis B (HBV), varicella (VAR), and

Streptococcus pneumoniae or “pneumococcus” (PCV). Combined, these are known as the Combined 7 or 4:3:1:FS:3:1:FS series.¹² Additionally, this survey analyzes the completion of hepatitis A (HAV), rotavirus (RTV), seasonal influenza (Flu), seasonal SARS-CoV-2 (COVID-19), and respiratory syncytial virus (RSV) vaccines.

Table 1. List of Diseases to Prevent through Routine Vaccination of Children Less than 24 Months of Age

Pathogen(s) (abbreviations)	Possible complications of disease
SARS-CoV-2 (COVID-19)	Multisystem inflammatory syndrome in children (MIS-C), post-COVID-19 conditions (PCC), hospitalization, respiratory failure, death
Diphtheria, Tetanus, Pertussis (DTaP)	<i>Diphtheria</i> : upper airway obstruction, pneumonia, respiratory failure, death
	<i>Tetanus</i> : spasms of respiratory and skeletal muscles, death
	<i>Pertussis</i> : severe, long-term cough, vomiting, respiratory distress, death in infants
Poliomyelitis (IPV)	Paralysis, death
Measles, Mumps, Rubella (MMR)	<i>Measles</i> : ear infections, pneumonia, cardiac and neurologic problems, encephalitis, death
	<i>Mumps</i> : decreased fertility, meningitis, arthritis, hearing impairment
	<i>Rubella</i> : arthritis, encephalitis, birth defects
Haemophilus influenzae type B (HIB)	Pneumonia, meningitis, neurologic problems, death
Hepatitis B (HBV)	Fulminant hepatitis, jaundice, liver cancer, cirrhosis, premature death
Varicella (VAR/Chickenpox)	Rash illness, severe disease in immunocompromised, birth defects, encephalitis, death
Pneumococcus (PCV)	Ear infections, pneumonia, meningitis, blood stream infections, death
Hepatitis A (HAV)	Fever, nausea, jaundice, death
Influenza (Flu)	Secondary pneumonia, exacerbation of chronic diseases, hospitalization, death
Rotavirus (RTV)	Dehydration, hospitalization, death
Respiratory Syncytial Virus (RSV)	Respiratory distress, respiratory failure, death

Vaccine Completion Criteria

Complete on-time immunization in this survey is defined as having received four doses of DTaP vaccine, three doses of IPV vaccine, one dose of MMR vaccine, three or four doses of HIB vaccine (depending on brand received or any child clinically considered complete based on the CDC “catch-up” schedule), three doses of HBV vaccine, one dose of VAR vaccine and four doses of PCV vaccine (or any child clinically considered complete based on the 2025 CDC “catch-up” schedule).

This survey accounts for the vaccine brand, if known, and classifies a child as complete only if the appropriate number of doses have been administered. If any documented HIB dose was given as the four-dose product, then only receipt of four doses was considered as a complete series. In the absence of documentation of vaccination brand, receipt of four doses of HIB is classified as series completion. Likewise, if any documented RTV dose was given as the three-dose product, then only receipt of three doses was considered as a complete series. In the absence of documentation of vaccination

brand, three doses of RTV are classified as series completion. This methodology change accounts for both the vaccine schedule and vaccine brand to ensure that only children who have received the vaccine on the correct schedule and with the correct brand are considered complete. As a result, point estimates for HIB and RTV coverage rates are lower than previous estimates, but also more accurate and more consistent with methods used by the CDC.

In 2019, additional analyses were included to account for the HIB and PCV catch-up schedules. Prior to 2019, counts of vaccinations were used to calculate series completion for both HIB and PCV. However, this method inaccurately captured completion for these vaccines due to the unique vaccination schedules that exist when a child receives their first dose after the recommended age, but prior to 24 months. By assessing completion based upon requirements for the age of first vaccination, HIB and PCV completeness more accurately mirrors ACIP forecasting and clinical decision-making.

Table 2. Catch-Up Guidance for PCV and HIB, Centers for Disease Control and Prevention, 2025¹⁰

Age at Dose 1	Age at Dose 2	Age at Dose 3	Recommendation
PCV			
<12 months old	<12 months old	<12 months old	Needs 4th dose 8 weeks later
<12 months old	Between 7-11 months old		Needs 3rd dose 8 weeks later
>12 months old			Needs 2nd dose 8 weeks later
24-25 months			No additional dose needed
HIB			
<12 months old	<12 months old	<12 months old	Needs 4th dose 8 weeks later
<12 months old	Between 12-14 months old		Needs 3rd dose 8 weeks later
<12 months old	>15 months old		No additional dose needed
Between 12-14 months			Needs 2nd dose 8 weeks later
>15 months old			No additional dose needed

Additional Vaccine Considerations

All vaccines included in this section were included in the 2025 routine childhood vaccination schedule recommended by the United States Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practices (ACIP).

Hepatitis A vaccine (HAV)

HAV is a two-dose series, starting on or after the first birthday. As the recommended dose spacing is six months, children who have only one dose by the second birthday are still on schedule. For this reason, this survey reports 24-month-old children as up-to-date with one dose of HAV. Tennessee experienced a multi-state epidemic of acute hepatitis A that began in 2017 and spanned more than two and a half years. Over the course of the outbreak, 3,149 Tennesseans were infected, 1,923 were hospitalized, and 28 died because of their illness.

Hepatitis B vaccine (HBV) birth dose

HBV birth dose is one dose of HBV vaccine, given between 24 hours and three days of life. In 2016, CDC revised its guidance to recommend routine administration of a hepatitis B birth dose within 24 hours of life (rather than before hospital discharge). This survey utilizes the maximum number of days past birth (3 days) to evaluate HBV birth dose. Birth dose hepatitis B is a key strategy to eliminate transmission of the hepatitis B virus from an infected mother to her infant. The Vaccine-Preventable Diseases and Immunization Program (VPDIP) manages the cases of more than one hundred infants who are exposed to the hepatitis B virus through their infected mothers each year. These infants are at high risk of chronic liver disease and early death, which can be avoided with appropriate vaccination.

Influenza vaccine (Flu)

Influenza vaccine (Flu) is offered annually to children aged six months and older; two doses should be given during a child's first influenza season. Because protection is conferred only after two doses for this population, this survey measures the proportion of children who have received two or more doses by their second birthday. Many children who die each year from influenza did not receive an annual influenza vaccination.

Haemophilus influenzae type B vaccine (HIB)

HIB is either a three or four-dose series, starting on or after the second month of life. Two HIB schedules exist, depending upon the vaccine used. The Full Series (FS) of the Merck® product requires three doses; the FS of the Sanofi Pasteur® product requires four doses. Any mixed-brand schedule requires four doses. Any child receiving one or more doses of the 4-dose HIB product must have

received four doses before the 15th month of life to be considered complete and on-time. This classification by HIB products administered reduces the degree of overestimation of on-time completion demonstrated by past reports. Since the introduction of the HIB vaccine in 1987, the annual incidence of invasive Hib disease in children aged younger than 5 years old decreased by 99%.

Rotavirus vaccine (RTV)

RTV is either a two or three-dose series, starting on or after the second month of life. As with HIB vaccine, two rotavirus vaccine products are available with different dosing schedules. Rotateq® (Merck), requires three doses; Rotarix® (GSK) requires two doses. Mixed brand schedules require three doses. RTV is unique among vaccines as the series must be initiated no later than 15 weeks of age and no doses should be given after eight months of age. Prior to the introduction of the vaccine in 2006, RTV was the leading cause of severe diarrhea among infants and young children. Each year, the vaccine prevents an estimated 40,000 to 50,000 hospitalizations among U.S. infants and young children.

SARS-CoV-2 or Coronavirus-associated Disease-2019 (COVID-19)

The COVID-19 vaccine is a two or three dose series recommended for children aged six months and older. For children aged 0–24 months, two vaccine products are available with different dosing schedules: Pfizer-BioNTech®, which requires three doses, and Moderna®, which requires two doses. Given the introduction of the COVID-19 vaccine and the need for annual boosters to maintain immunity, this survey measures the proportion of children who have completed the initial series by their second birthday, based on the recommended dosing schedule for their vaccine brand.

Respiratory Syncytial Virus (RSV)

RSV immunization (Nirsevimab®) is a single-dose monoclonal antibody recommended for infants aged 8 months or younger to protect against severe RSV disease during their first RSV season. Eligibility is based on infant age, timing of the RSV season, and maternal RSV vaccination status. Infants younger than 8 months are recommended to receive one dose if the birth mother did not receive the RSV vaccine at least 14 days prior to delivery or if maternal vaccination status is unknown. Certain high-risk children may be eligible to receive Nirsevimab® during their second RSV season; however, this is not routinely recommended and should be based on provider assessment. This survey evaluates receipt of

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RSV immunization among eligible infants during their first RSV season, consistent with current clinical recommendations.

Health People Framework

Healthy People 2030 Objectives

Healthy People 2030 (HP2030) objectives are established by the federal Department of Health and Human Services (HHS) to provide national targets for population health to be achieved before January 1, 2030. These objectives include vaccine coverage rates among children 2 years of age and are tracked nationally through the National Immunization Survey (NIS). TDH aims to reach each of these targets and maintain high rates of immunization coverage among children.

The following objectives for the percentage of children immunized by 2 years of age have been established by HP2030 and are relevant comparisons to the results of this survey:

- 90% complete DTaP vaccination with four or more doses
- 90.8% complete MMR vaccination with one or more doses
- ≤1.3% of children receive 0 doses of recommended vaccines

Emerging Focus Area(s)

Increasing Pertussis Burden in Tennessee

In 2025, over 600 cases of pertussis were reported in Tennessee, an increase from 389 cases in 2024, and represents the highest number of pertussis cases recorded in Tennessee in the past thirty years. This sharp increase reflects the overall national trend of rising pertussis activity in the United States and highlights the ongoing challenges of maintaining community immunity. Pertussis vaccination is the best available defense against pertussis infection and its complications, including hospitalization and death¹.

In Tennessee, pediatric cases continue to represent the largest proportion of cases, accounting for 29.0% of all cases in 2025. Among these pediatric cases, more than 65.0% were not protected by vaccination, either through maternal protection from a Tdap dose received during pregnancy or by receipt of any recommended DTaP doses between birth and 24 months of age. This age group not only accounts for the highest proportion of cases but also has the highest hospitalization rate in 2025, with more than 22.0% of cases among children 24 months of age and younger requiring hospitalization, including two deaths.

In 2025, Tennessee continued to see year-over-year increases in whooping cough (pertussis) cases and related hospitalizations. These increases are closely linked to declining vaccination coverage, including a significant drop in DTaP vaccination rates observed again in 2025. These trends highlight the need for increased efforts to promote Tdap during pregnancy and DTaP in the first six months of a child's life. Vaccination remains the most effective way to protect infants and other vulnerable populations from pertussis.

Methods

Survey Design

The annual Immunization Status Survey for 24-month-old children in Tennessee uses a retrospective cohort design to assess the up-to-date (UTD) immunization rates for children born in the state. The survey includes a representative random sample of 1,953 children, drawn from birth certificates of infants born during the first quarter of 2023. This sample consists of approximately 150 children from each of Tennessee's 13 health department regions, all of whom celebrated their second birthdays between January 1 and March 31, 2025.

Demographic information was obtained from electronic birth records, while immunization data were primarily from the Tennessee Immunization Information System (TennIIS). Immunization rates for the Combined 7 Series (4:3:1:FS:3:1:FS), which includes 4 doses of DTaP, 3 doses of Polio, 1 dose of MMR, 3 doses of Hib, 3 doses of Hepatitis B, 1 dose of Varicella, and 4 doses of PCV, were calculated based on the 2025 childhood immunization and catch-up schedules recommended by the Advisory Committee on Immunization Practices (ACIP) and the Centers for Disease Control and Prevention (CDC).

During the three-month data collection period, each immunization date was compared to the child's birth date to determine whether it was administered before or after the child turned 24 months of age, and whether it adhered to the ACIP vaccine schedule. A child was classified as UTD by 24 months if all Combined 7 Series (4:3:1:FS:3:1:FS) vaccines were administered before the child reached 24 months of age, or if the series was completed in accordance with the 2025 CDC's catch-up vaccination guidelines. Children were excluded from the UTD by 24 months of age classification if any of the Combined 7 Series (4:3:1:FS:3:1:FS) vaccines were administered after 24 months of age and did not align with the 2025 CDC on-time or s catch-up schedule recommendations.

A rate for UTD immunization by 24 months of age, as reported in TennIIS, was calculated to assess how accurately TennIIS data reflect UTD immunization rates by 24 months of age, without requiring parent or provider contact. UTD immunization rates were calculated for the entire cohort as well as for health department region-specific cohorts. Additionally, UTD rates were calculated for demographic subgroups.

Target Population and Sample Selection

A random sample of 1,953 children born between January 1 and March 31, 2023, was selected to represent all children born in Tennessee in 2023 (approximately 79,773 live births). The sample was stratified by health jurisdiction to generate regional estimates, with the sample size for each region determined by the number of births and the racial demographics within that region.

Data Collection

Passive Data Collection

Data pertaining to the survey sample were requested from electronic birth records supplied by the Tennessee Department of Health, Office of Vital Records and Statistics, and TennIIS.

Information from electronic birth records was used for sample selection and as a source of demographic data. The type of information obtained on each child included:

- Child's first, middle, and last name
- Child's sex, race, ethnicity, and date of birth
- Mother's residential county
- Mother's first and last name
- Father's first and last name
- Mother's level of education, marital status, and age at delivery
- Father's level of education and age at delivery

TennCare (Medicaid) enrollment status was determined by matching each child's name and date of birth with TennCare enrollment data. Children enrolled in TennCare for any duration during the first 24 months of life were classified as "enrolled in TennCare." If a child was ever enrolled in TennCare, the "Program Enrollment" variable was categorized as "TennCare." If a child was not enrolled in TennCare, the "Program Enrollment" variable was classified as "Not Enrolled."

The "Vaccination Source" variable was assigned based on where each vaccine was administered. If a child received all vaccines exclusively in private provider offices, they were classified as "Private Medical Provider Only." If all vaccines were administered exclusively in public clinics, the child was classified as "Health Department Only." If vaccines were received in both private provider offices and public clinics, the classification was "Both Private Medical Provider and Health Department." If the vaccination source could not be determined, it was recorded as "Unknown Vaccination Source."

IMMUNIZATION STATUS SURVEY – 2025

Active Data Collection

An electronic web-based data collection system, REDCap, was used to gather information for each child in the sample. The sampling frame, derived from birth records, was imported into REDCap to review immunization histories from TennIIS. TennIIS follows the childhood immunization schedule approved by the ACIP to determine complete vaccine histories.

Six data sections were completed: Demographics (Child), Demographics (Parents), TennCare Status, Survey Eligibility and Exemption Status, Providers and Immunization History, and Notes. Data collection was carried out by county and regional public health nurses.

An initial immunization history review was conducted by a VPDIP epidemiologist using TennIIS data to assess the UTD status of the sample. If a child was UTD at this stage, they were marked as "Complete, Based on Initial TennIIS Records" and no further follow-up was needed. If a child was not UTD, the data collection process was handed off to regional staff, with the relevant dates from TennIIS already entered in REDCap. Data collectors followed an established protocol:

Step 1: Search for Immunization Records

Data collectors first reviewed TennIIS records or health department records for any available immunization history. If the child's immunization record was incomplete, the data collectors proceeded to Steps 2 and 3.

Step 2: Contact Parent(s) and/or Guardian(s)

Using contact information from the birth certificate or any updated details found at the health department, provider's office, or in TennIIS, data collectors reached out to the child's parent/guardian. Parents were contacted via phone and/or letter and asked to provide the child's immunization history or direct data collectors to the appropriate source (e.g., doctor's office or clinic). In some cases, home visits were conducted. If parents reported that they had chosen not to vaccinate their child for any reason, the child was classified as "Refused Vaccination" and further categorized based on the reason for refusal. The refusal reasons were grouped into two categories: non-medical or medical.

Step 3: Contact Private Physician(s)

Data collectors reached out to the child's private physician(s) via phone or fax to request the child's immunization history.

Step 4: Data Accuracy Check

Throughout the three-month data collection period, data collectors used the REDCap system to follow up on all records. Completed records were reviewed by a VPDIP epidemiologist to ensure accuracy. Any unclear information was addressed before the data cleaning process.

Data Analysis

Up-to-date (UTD) immunization rates were calculated by examining each vaccine dose administered to the participants. A vaccine was classified as given prior to the child's second birthday if the difference between the vaccine dose date and the child's birth date was 24 months or less, regardless of whether the date was originally recorded in the child's TennIIS record.

For a child to be considered UTD by 24 months of age, all doses in the Combined 7 Series (4:3:1:FS:3:1:FS) must have been administered within 24 months of birth or meet the 2025 CDC catch-up conditions by 24 months of age.

Statewide immunization rates were calculated, along with rates for the six major metropolitan counties and seven rural regions. However, county-specific rates within the rural regions were not calculated due to the small sample size in each county.

Completion of the on-time immunization schedule, or UTD, in the 2025 survey of 24-month-old children in Tennessee was defined as receiving:

- **4 doses** of diphtheria, tetanus, and acellular pertussis (**DTaP**) vaccine
- **3 doses** of inactivated polio virus (**IPV**) vaccine
- **1 dose** of measles, mumps, and rubella (**MMR**) vaccine
- **3 or 4 doses** of Haemophilus influenzae type b (**HIB**) vaccine (depending on the brand received) or any dose deemed complete based on the 2025 CDC catch-up schedule
- **3 doses** of hepatitis B (**HBV**) vaccine
- **1 dose** of varicella (**VAR**) vaccine
- **3 or 4 doses** of pneumococcal conjugate (**PCV**) vaccine or any dose considered complete based on the 2025 CDC catch-up schedule

These doses collectively make up the **Combined 7 Series (4:3:1:FS:3:1:FS)**. This series is used for comparison to the CDC-NIS Child reporting and to ensure **historical consistency and comparability of immunization coverage data over time**. The series excludes hepatitis A (HAV), rotavirus (RTV), seasonal influenza (Flu), respiratory syncytial virus (RSV), and seasonal COVID-19 (COVID) vaccines, as these vaccines were incorporated into the routine schedule later and have variable dosing schedules that complicate longitudinal analysis.

However, this survey analyzes vaccination rates for **hepatitis A (HAV), rotavirus (RTV), seasonal influenza (Flu), seasonal COVID-19 (COVID), and respiratory syncytial virus (RSV)** vaccines, as monitoring their uptake remains vital for protecting children against preventable diseases and ensuring public health preparedness.

Since the sampling frame is stratified by health department region, not every child has an equal probability of being selected for the sample. To account for this, sampling weights were calculated based on the total number of births in each region and were applied when estimating rates.

Margins of error are provided for most rate estimates. The margin of error represents the 95% confidence interval (CI). For example, a statewide UTD by 24 months of age estimate of 76.4 ± 2.0 corresponds to a confidence interval of (74.4, 78.4).

The 95% confidence intervals are shown as grey bands on the graphs in this report to help readers visualize the statistical significance (or lack thereof) of differences in point estimates ($p < 0.05$).

Significance testing for differences in rates was performed using Statistical Analysis System (SAS), with a 2-sample t-test to compare differences in means.

Limitations

The following are key limitations of the study that should be considered when interpreting the findings:

A. Sampling Limitations

1. **Sampling Timeframe:** The study sample is drawn from children born in Tennessee between January and March 2023 and therefore does not account for potential variations in immunization rates among children born in other months of the year.

2. **Eligibility Errors:** Some children may have been erroneously included in the sample despite being ineligible. For example, children who died, were adopted, or were part of a military family may have been mistakenly classified as "unable-to-locate" without the data collectors being aware of their ineligibility. These errors could have affected the sample population.
3. **Small Sample Sizes at County Level:** Although the survey is designed to make valid statistical comparisons across the 13 health department regions, sample sizes within multi-county regions are too small for meaningful county-level comparisons or useful comparisons among subpopulations within a region.
4. **Inconsistent Regional Sampling Proportions:** In the seven multi-county TDH regions (Northeast [NER], East Tennessee [ETR], Southeast [SER], Upper Cumberland [UCR], South Central [SCR], Mid-Cumberland [MCR], West Tennessee [WTR]), children were selected in varying proportions from the counties that make up each region. There is no consistent pattern from year to year in how participants are chosen, so the results are aggregated for the entire region. Therefore, the survey results are not suitable for county-level estimates.

B. Response Rate and Data Quality

Response rates for each region are provided on the first and second pages of the regional reports. The response rate is calculated by subtracting the number of "Unable-to-Locate" (UTL) children from the number of eligible participants and dividing by the total number of eligible participants. Consideration in interpreting immunization rates for regions with low response rates should be taken, as children who are unable to be located may also have the lowest up-to-date (UTD) immunization rates. These children are excluded from the study, as their immunization histories cannot be verified as current. For further details, Table 3-A and Table 3-B (pg. 20) outline the response rate calculation for the state sample, which was also applied to each of the health department region samples.

SECTION II

Statewide Results

Figure 1-A: Location of Tennessee in U.S. Department of Health & Human Services Region 4 States



Figure 1-B: Final Cohort Size (N) Statewide, 2025

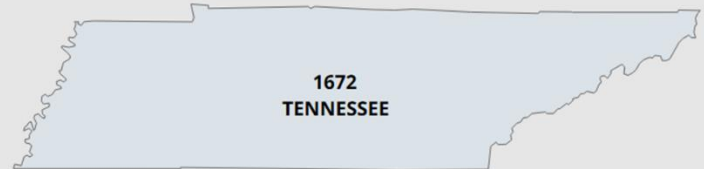
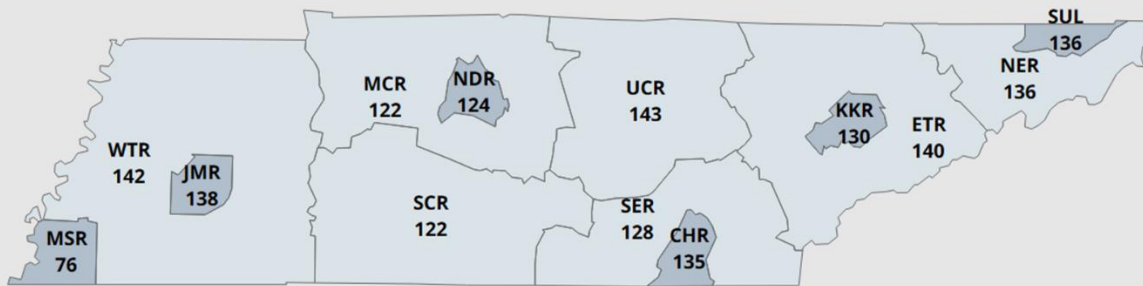


Figure 1-C: Final Cohort Size (N) by Tennessee Health Department Regions, 2025



2025 Sample Population

Ineligibility & Participation Refusal

Of the 1,953 Tennessee children initially sampled for the survey, 122 were deemed ineligible, and 51 had guardians who declined participation (Table 3-A). Children were considered ineligible if they had moved out of state, had a sealed birth record (e.g., due to adoption or foster care placement), or were deceased. After excluding these cases, a total of 1,780 eligible children remained in the survey.

Unable to Locate (UTL)

Of the 1,780 eligible children in the survey, 108 had incomplete records in the Tennessee Immunization Information System (TennIIS) and could not be located or confirmed as having moved out of state. As a result, 6.1% (108/1,780) of eligible children could not be reached for survey participation. Due to the lack of complete records, making it impossible to accurately assess their immunization status, these children were excluded from the survey.

Final Cohort Size & Response Rate

The final cohort size for the survey was 1,672 (Figure 1-B), representing approximately 85.6% (1,672/1,953) of the originally sampled children and 93.9% (1,672/1,780) of the eligible children. The overall response rate for the 2025 immunization status survey was 93.9%, lower than the 2024 response rate of 96.5% (1,718/1,781). As shown in

Figure 1-A, Tennessee is part of the U.S. Department of Health & Human Services Region 4, and the state had a final cohort size of 1,672 in 2025. Additionally, Figure 1-C highlights the distribution of the final cohort across Tennessee's health department regions, with Upper Cumberland Region (UCR) having the largest(143) and Memphis-Shelby County Region (MSR) having the smallest (76)."

Table 3-A: Survey Sampling, Tennessee, 2025

	2024	2025
Original sample (n)	1947	1953
Ineligible (n)	132 (6.8%)	122 (6.2%)
Refused Participation (n)	34 (1.7%)	51 (2.6%)
Eligible Population (n)	1781	1780
Unable to locate [†] (n)	63 (3.5%)	108 (6.1%)
Final Cohort (n)	1718	1672
Response Rate (%)[*]	96.5	93.9

(n) = Sample size or number of observations included in the analysis

(%) = Percentage, representing a proportion of the cohort, subset, or population

[†] Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.

^{*} Response Rate (%) is the number of survey responses from eligible children

Table 3-B: Sample Size & Response Rate by Region, Tennessee, 2025

Region	Original Sample (n)	Ineligible (n)	Refused Participation (n)	Eligible Population (n)	UTL		Final Cohort (n)	Response Rate %
					(n)	%		
MSR	150	11	3	136	60	44.1	76	55.9
WTR	150	4	0	146	4	2.7	142	97.3
JMR	149	5	2	142	4	2.8	138	97.2
SCR	149	7	11	131	9	6.9	122	93.1
MCR	150	10	9	140	9	6.4	122	87.1
NDR	151	15	1	135	11	8.1	124	91.9
UCR	150	6	1	143	0	0.0	143	100.0
SER	150	18	1	131	3	2.3	128	97.7
CHR	151	9	7	135	0	0.0	135	100.0
ETR	152	7	0	145	5	3.4	140	96.6
KKR	151	10	10	131	1	0.8	130	99.2
NER	150	11	2	137	1	0.7	136	99.3
SUL	150	9	4	137	1	0.7	136	99.3
STATE	1953	122	51	1780	108	6.1	1672	93.9

(n) = Sample size or number of observations included in the analysis

(%) = Percentage, representing a proportion of the cohort, subset, or population

Immunization Rates

The up-to-date (UTD) immunization rates as reported to TennNIS by 24 months, and by the end of data collection, were calculated using the 2025 ACIP/CDC Combined 7 Series (4:3:1:FS:3:1:FS) vaccination schedule and catch-up schedule. Individual vaccination rates were calculated using the same 2025 ACIP guidance. The estimate for the percent UTD for the combination series and individual vaccines are displayed in Table 4-A along with the accompanying margin of error. Rates that decreased are shown in red in Table 4-A. Statistically significant differences (p<0.05) between the 2024 and 2025 rates are **italicized and bolded** in Table 4-A.

Statewide, the UTD immunization rate as reported to TennNIS was 35.6% which was significantly lower than the 2024 rate (43.0%). The UTD immunization rate by the end of data collection was 76.4%, which was higher than the 2024 rate (74.4%).

Few vaccine-specific rates changed significantly from the previous year. DTaP, IPV, RTV, and COVID were vaccine series where a significant decrease was observed, and the Hib vaccine series observed a significant increase. The UTD immunization rates and rates by individual vaccine from 2017 to 2025 are shown in Figure 2.

Immunization Administration

Statewide, 38,440 vaccine doses were administered to the study cohort; 35,588 (92.6%) were administered by private providers, 1,507 (3.9%) were administered by public health providers, and 1,345 (3.5%) were administered by an unknown vaccination source.

Table 4-A: Immunization Rates by Individual Vaccine and Vaccine Series, Tennessee, 2025

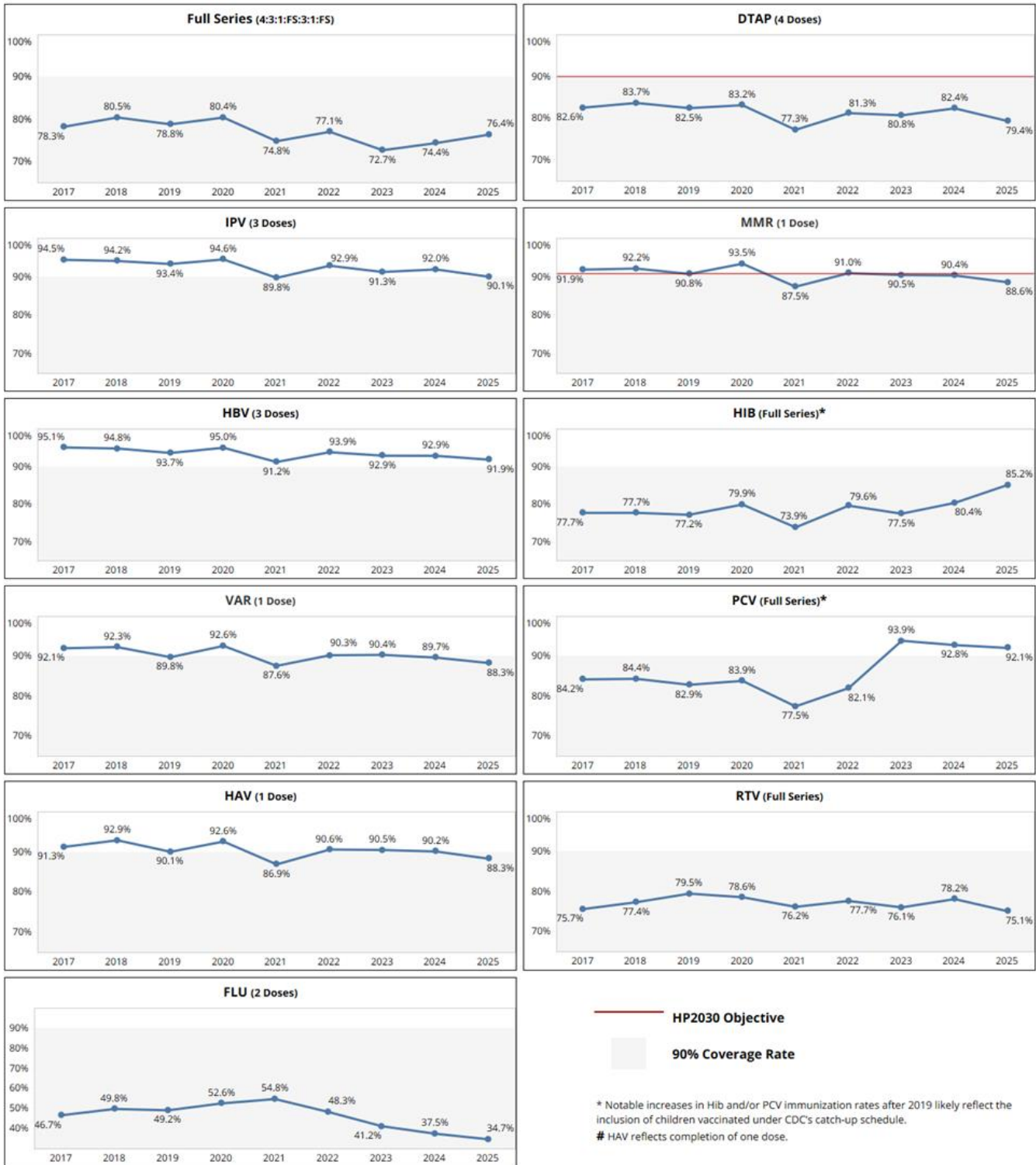
	2024 (n=1718)		2025 (n=1672)		Increase/ Decrease (2024 to 2025)
	(%)	CI	(%)	CI	
Up to Date (UTD):					
UTD immunization rate* (as reported to TennNIS)	43.0	± 2.4	35.6	± 2.3 ↓	-7.4
UTD immunization rate* (with data collection)	74.4	± 2.1	76.4	± 2.0 ↑	+2.0
ACIP Recommended Vaccine Series (By 24 Months of Age)					
DTaP (4 Doses)	82.4	± 1.8	79.4	± 1.9 ↓	-3.0
IPV (3 Doses)	92.0	± 1.3	90.1	± 1.4 ↓	-1.9
MMR (1 Dose)	90.4	± 1.4	88.6	± 1.5 ↓	-1.8
HBV (3 Doses)	92.9	± 1.2	91.9	± 1.3 ↓	-1.0
HBV, Birth Dose	78.1	± 2.0	76.0	± 2.0 ↓	-1.0
Hib (Full Series)	80.9	± 1.9	85.2	± 1.7 ↑	+4.3
VAR (1 Dose)	89.7	± 1.4	88.3	± 1.5 ↓	-1.4
PCV (Full Series)	92.8	± 1.0	92.1	± 1.3 ↓	-0.7
Full Series (4:3:1:FS:3:1:FS)	74.4	± 2.1	76.4	± 2.0 ↑	+2.0
Additional Vaccines of Interest (By 24 Months of Age)					
HAV (1 Doses)	90.2	± 1.4	88.3	± 1.5 ↓	-1.9
RTV (Full Series)	78.2	± 2.0	75.1	± 2.1 ↑	-3.1
FLU (2 Doses)	37.5	± 2.3	34.7	± 2.3 ↓	-2.8
RSV (1 Dose)‡	-	± -	1.1	± 0.5 ↑	+1.1
COVID (Full Series)	3.2	± 0.8	0.8	± 0.4 ↓	-2.4
Children with no Vaccinations (By 24 Months of Age)	3.0		4.4	↑	1.4

(%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 * Includes children up-to-date by ACIP-recommended catch-up schedule
 ‡ Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
 Red font indicated a rate decrease since 2024
Italicized and bolded font indicates a significant difference with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 2 presents Tennessee’s eight-year trend for each individual vaccine series. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents the VPIDP target of a 90% coverage rate.

Figure 2: Immunization Rates by Individual Vaccine and Vaccine Series, Tennessee 2017-2025

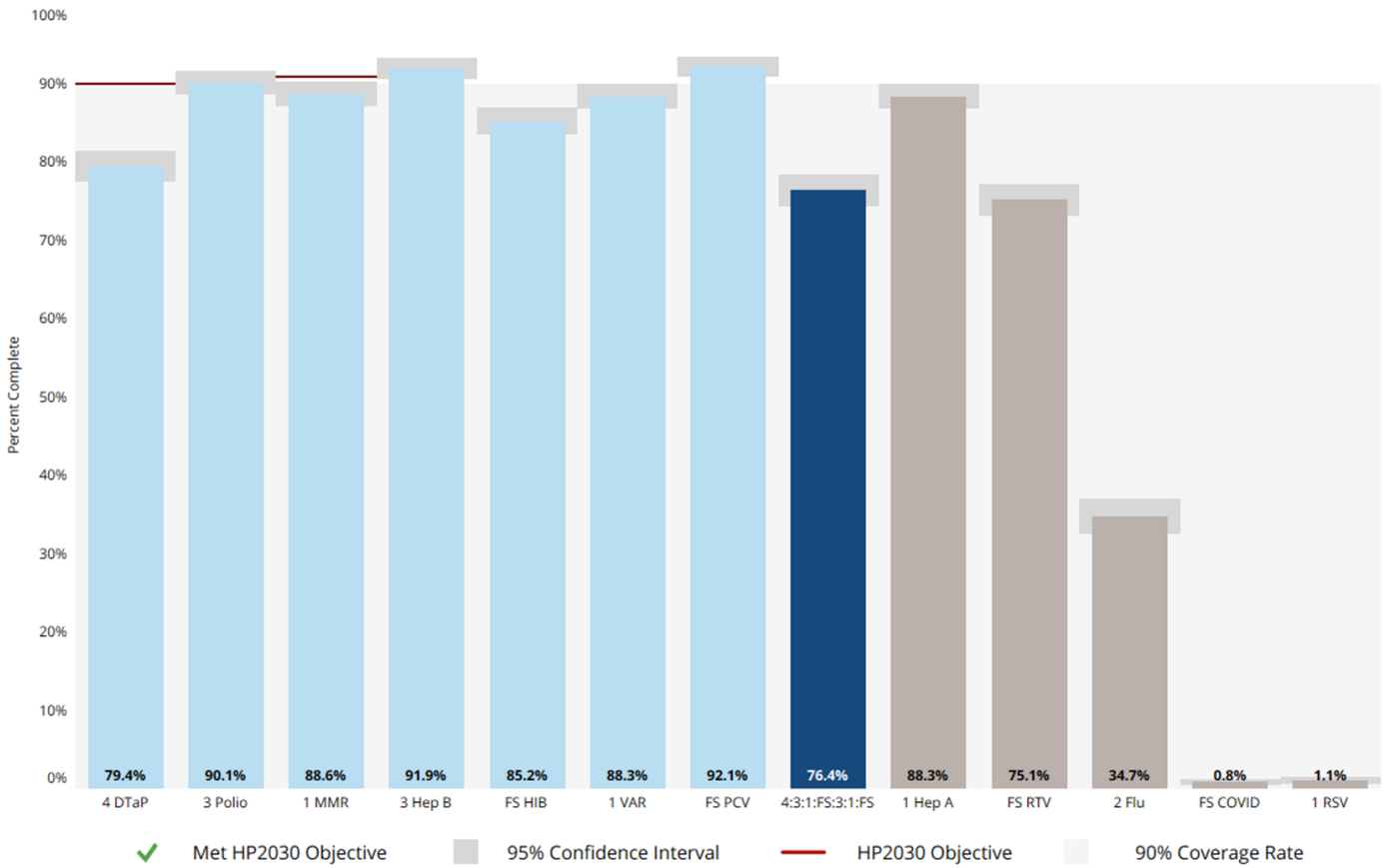


Progress Towards Healthy People Objectives

In 2025, Tennessee did not meet the three HP2030 vaccination objectives. Since 2020, Tennessee has not achieved the HP2030 objective of 90% on-time completion for the DTaP vaccine. While Tennessee consistently met the HP2030 objective of 90.8% completion for the MMR vaccine in previous years, it fell short in 2021, 2023, 2024, and again in 2025. The state did not reach the target of limiting the percentage of children receiving zero doses of recommended vaccines by age two to 1.3%, recording a rate of 4.4% instead. This marks the third time Tennessee has failed to meet any Healthy People objectives since it began using these benchmarks for comparison.

The overall statewide coverage estimates for the recommended Combined 7 Series (4:3:1:FS:3:1:FS) are shown in Figure 3. The light blue bars represent the individual vaccines that make up the Combined 7 Series (4:3:1:FS:3:1:FS), the navy bar is the Combined 7 Series (4:3:1:FS:3:1:FS), and the dark grey bars represent the additional vaccine recommended by the ACIP. The red lines represent HP2030 objectives for each individual vaccine assessed, and the grey bands represent the 95% Confidence Intervals (CI). The lighter grey background represents the VPDIP goal of a 90% coverage rate for each individual vaccine.

Figure 3. Percent of 24-Month-Old Children With UTD Immunization Status by Antigen, Tennessee, 2025



Vaccine Refusals

Among the final records analyzed (n=1,672), after excluding ineligible children, parents who declined survey participation, and children who could not be located, 106 cases (6.3%) of documented vaccine refusals were reported (Table 4-B). Of these, 104 parents cited non-medical reasons for vaccine refusal, while two cited medical reasons. Regionally, vaccine refusal rates varied from 2.2%, having three reported refusals, (JMR) to 13.9% (SCR) of the sampled populations (Table 4-B). Notably, 38 of the 106 children whose parents refused vaccines were partially immunized, receiving between 1 and 24 total doses.

Medical reasons for vaccine refusal typically occur when a child has a medical condition that a provider has determined might be exacerbated or impacted by vaccines, therefore, vaccine administration could be unsafe for the child. Parents and/or guardians who cite non-medical reasons for vaccine refusal typically do so due to reported conflicts with their religious tenets or practices, personal beliefs, or philosophical reasons (i.e., safety concerns, natural immunity, low risk, etc.).

In 2025, vaccine refusals increased from 4.6% to 6.2% (106/1,672) (Figure 4-B). The percentage of children who were unable to receive one or more vaccinations due to medical reasons remained consistently low (<1.0%), while refusals due to non-medical reasons continued to increase. In 2025, 98.1% (n=104) of all refusals were attributed to non-medical reasons.

A year-over-year comparison of up-to-date (UTD) children and those whose guardians refused vaccines is presented in Figure 4-A. Figure 4-B provides a breakdown of 2025 refusals by type, while Table 4-B details regional variations in refusal rates.

Tennessee TCA 1200-14-01-29 describes minimum immunization requirements for attending childcare, pre-school, and public school. The state’s immunization requirements follow the current schedule published by the Centers for Disease Control and Prevention (CDC) and are endorsed by the American Academy of Pediatrics (AAP) and American Academy of Family Physicians (AAFP). All 50 states have legislation requiring specified vaccines for students, including for attendance at childcare centers.

Table 4-B: Vaccine Refusal by Region, Tennessee, 2025

Region	Survey Sample (n)	Refused Vaccination		Non-Medical		Medical	
		(n)	%	(n)	%	(n)	%
MSR	76	2	2.6	2	2.6	-	-
WTR	142	8	5.6	8	5.6	-	-
JMR	138	3	2.2	2	1.4	1	0.7
SCR	122	17	13.9	17	13.9	-	-
MCR	122	4	3.3	4	3.3	-	-
NDR	124	4	3.2	4	3.2	-	-
UCR	143	14	9.8	14	9.8	-	-
SER	128	12	9.4	11	8.6	1	0.8
CHR	135	9	6.7	9	6.7	-	-
ETR	140	11	7.9	11	7.9	-	-
KKR	130	5	3.8	5	3.8	-	-
NER	136	8	5.9	8	5.9	-	-
SUL	136	9	6.6	9	6.6	-	-
STATE	1672	106	6.3	104	4.3	2	0.1

(n) = Sample size or number of observations included in the analysis

(%) = Percentage, representing a proportion of the cohort, subset, or population

* Due to rounding, some percentages may not add up precisely to their exact totals or expected equivalents

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Figure 4-A: Eight-Year Comparison of UTD Children vs Refusals, Tennessee, 2025

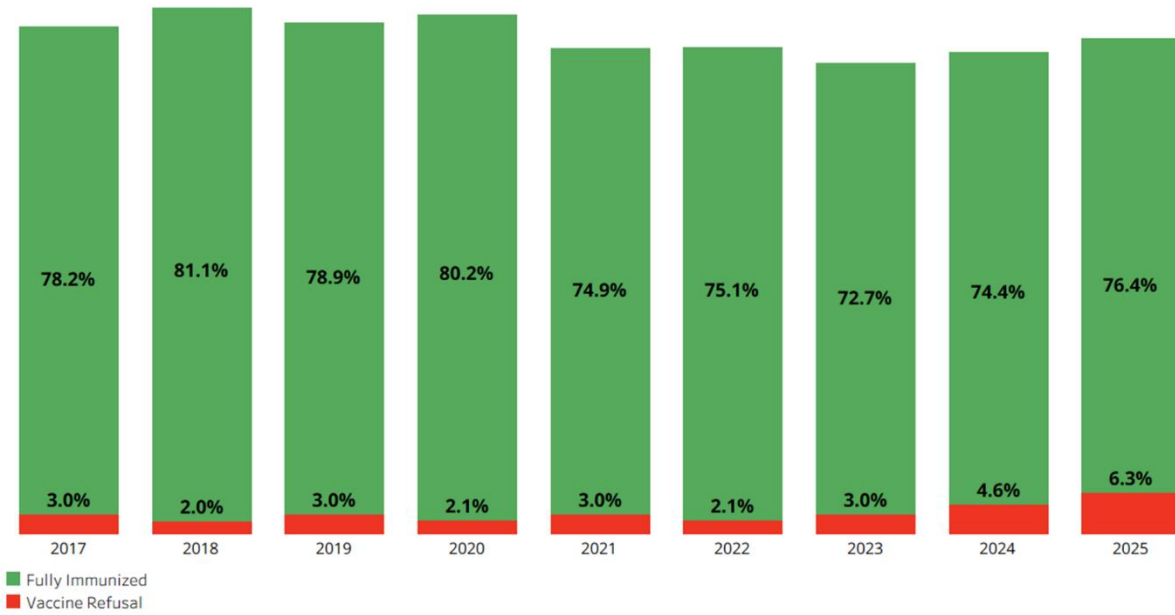
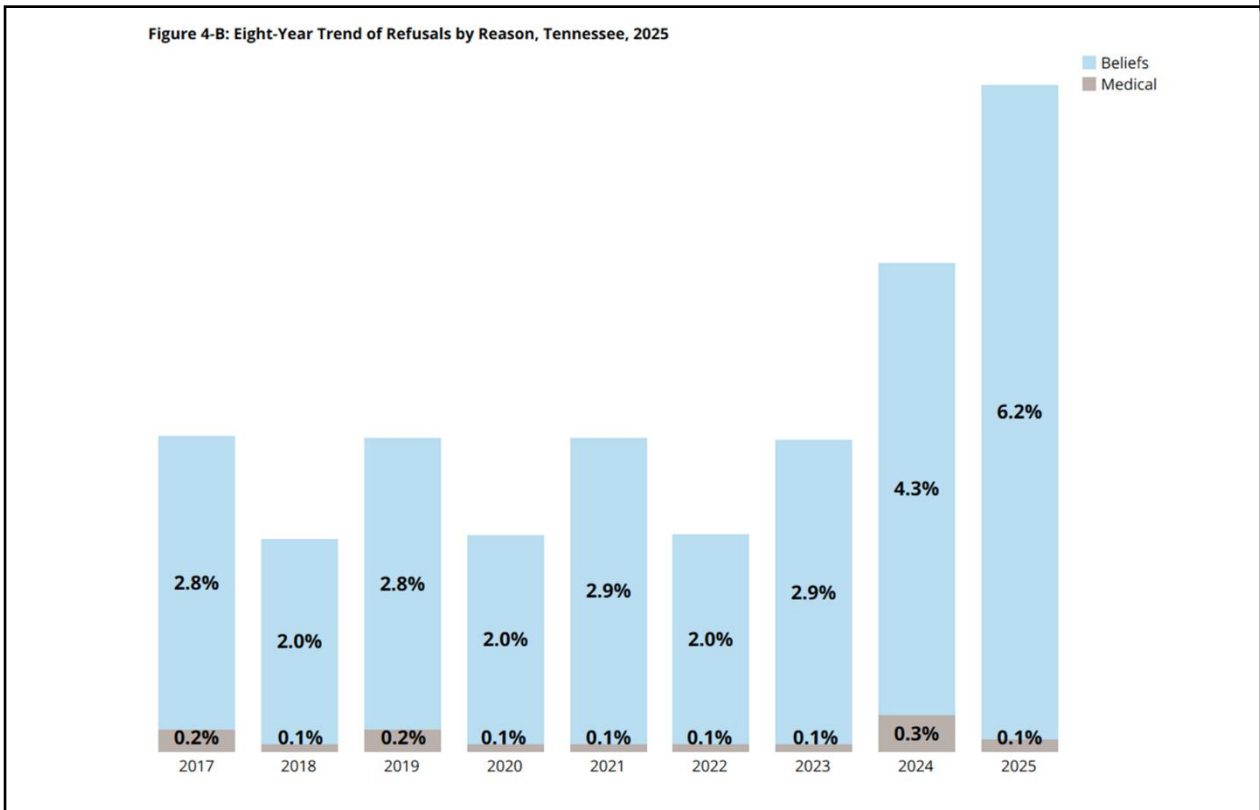


Figure 4-B: Eight-Year Trend of Refusals by Reason, Tennessee, 2025



Demographics

The demographic breakdown of the survey cohort, alongside the UTD immunization rates by demographic groups are displayed in Table 4-C. Significant differences (p<0.05) in UTD by 24-months rates between demographic subgroups from the previous year are **italicized and bolded**. NOTE: Brackets are used to indicate significantly different results between subgroups.

Groups with significant differences (p-value < 0.05) in UTD by 24-month rates were:

- Race
- Ethnicity
- Siblings
- Vaccination Source
- Mother Education
- Father Education

Table 4-C: Survey Demographics and Immunization Rates, Tennessee, 2025

Group	Subgroup	Sample (n)	Sample (%)	UTD (%)	UTD (CI)	Group	Subgroup	Sample (n)	Sample (%)	UTD (%)	UTD (CI)
Race	Black	237	14.2	65.8	± 6.1	Mother Age	≤24	497	29.7	76.5	± 3.7
	White	1236	73.9	77.2	± 2.3		25-34	978	0.6	76.6	± 2.7
	Other	199	11.9	83.9 ± 5.1			≥35	197	0.1	75.1	± 6.1
Ethnicity	Hispanic	218	13.0	82.1	± 5.1	Father Age	≤24	283	0.2	75.3	± 5.1
	Non-Hispanic	1454	87.0	75.5	± 2.2		25-34	863	0.5	77.3	± 2.8
Sex	Male	810	48.4	75.9	± 3.0		≥35	355	0.2	77.7	± 4.3
	Female	862	51.6	76.8	± 2.8		Unknown	171	0.1	70.8	± 6.9
Siblings	0	691	41.3	82.2 ± 2.9		Mother Education	< High School Diploma/ GED	206	0.1	71.8	± 6.2
	1	540	32.3	76.1	± 3.6		High School Diploma/ GED	478	0.3	72.0	± 4.0
	2+	441	26.4	67.6	± 4.4		> High School Diploma/ GED	983	0.6	79.5	± 2.5
Vaccination Source	Private Medical Provider	1409	84.3	82.0 ± 2.0		Father Education	< High School Diploma/ GED	186	0.1	78.5	± 6.0
	Health Department	24	1.4	58.3	± 21.3		High School Diploma/ GED	530	0.3	73.0	± 3.8
	Both	148	8.9	69.6	± 7.5		> High School Diploma/ GED	760	0.5	80.0 ± 2.9	
	Missing	91	5.4	4.4	± 4.3		Unknown	196	0.1	69.4	± 6.5
Program Enrollment	TennCare	1075	64.3	74.5	± 2.6	Marriage Status	Married	949	0.6	77.7	± 2.7
	Not Enrolled	597	35.71	79.7	± 3.2		Unmarried	722	0.4	74.7	± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 * Includes children up-to-date by ACIP-recommended catch-up schedule
Italicized and bolded font indicates a significant difference with 2024 rate
 Brackets [] indicate a significant difference between subgroups

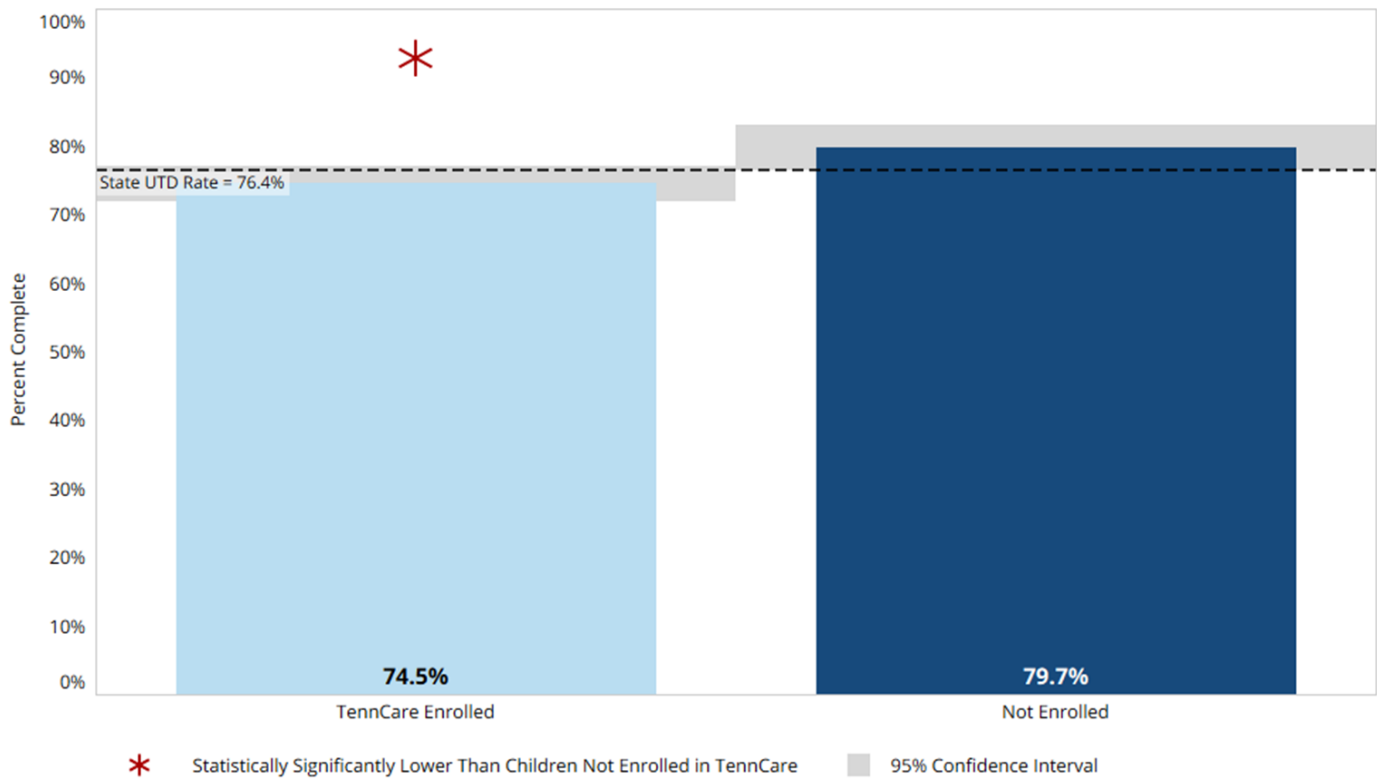
Risk Factor Analysis

Many risk factors can compound to affect a child’s likelihood to attain UTD vaccination status. These risk factors include safety net program enrollment, immunization source, number of siblings, age at first vaccination, race, and many other factors that are not evaluated in this survey. It is important to note that in this section, no one risk factor can completely explain why a child may or may not be UTD.

Program Enrollment

Of the 1,672 children included in this survey, 1,075 (64.3%) were enrolled in TennCare and 596 (35.6%) were not enrolled. In 2025, children enrolled in TennCare (74.5%) were significantly less likely to be UTD compared to their non-enrolled peers (79.7%) ($p < 0.05$). Detailed data regarding UTD status by program enrollment are presented in Figure 5.

Figure 5: Comparison of UTD Children by Program Enrollment, Tennessee, 2025

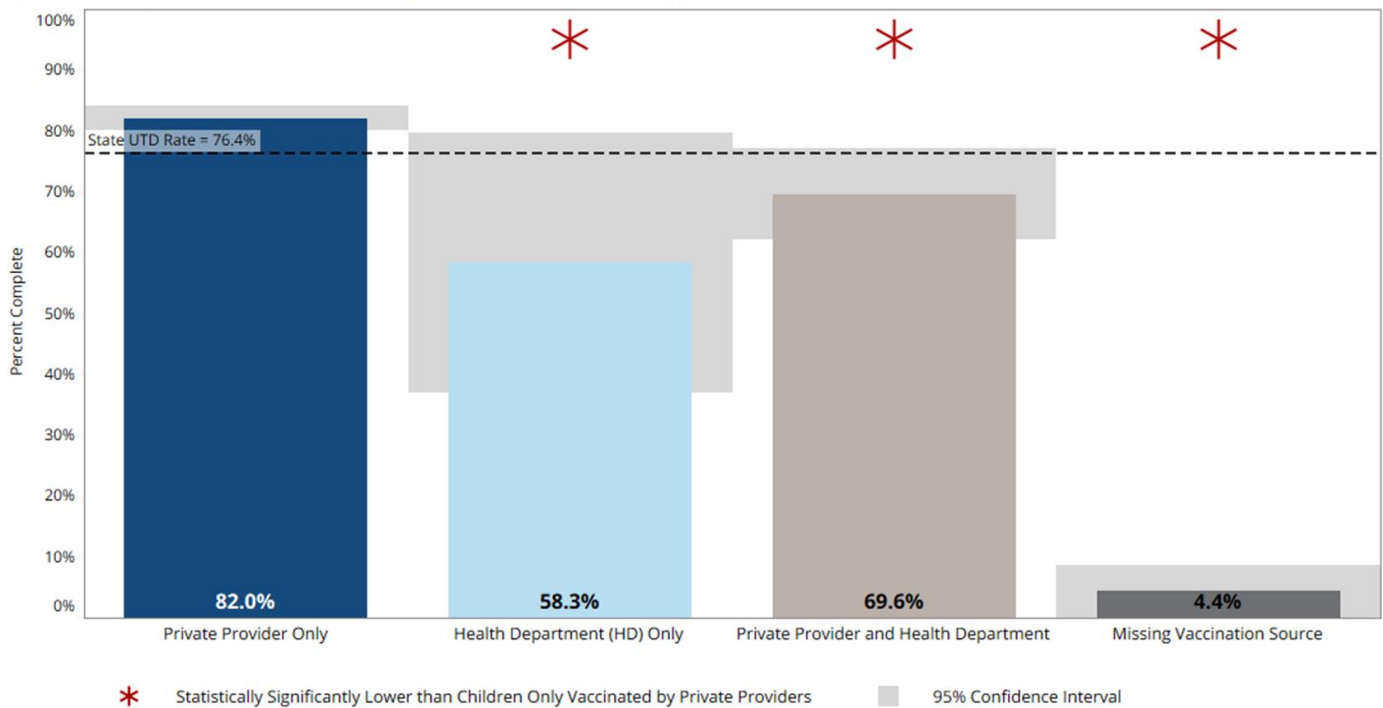


Immunization Source

Of the children sampled, 1,409 (84.3%) were immunized exclusively by a private medical provider, 24 (1.4%) received vaccinations only from a health department, and 148 (8.9%) were immunized by both a private provider and a health department. Additionally, 91 children (5.4%) had records missing an immunization source. As the Hepatitis B birth dose is administered within the first 36 hours of life, most often in a hospital setting by a private medical provider, this vaccination’s source is omitted from the analysis to avoid misrepresenting vaccination source analysis.

Children vaccinated exclusively by a health department (58.3%), by a combination of both (69.6%), or with a missing immunization source (4.4%) were significantly less likely ($p < 0.05$) to be UTD compared to children exclusively by a private medical provider (82.0%). Detailed data are presented in Table 4-C and Figure 6.

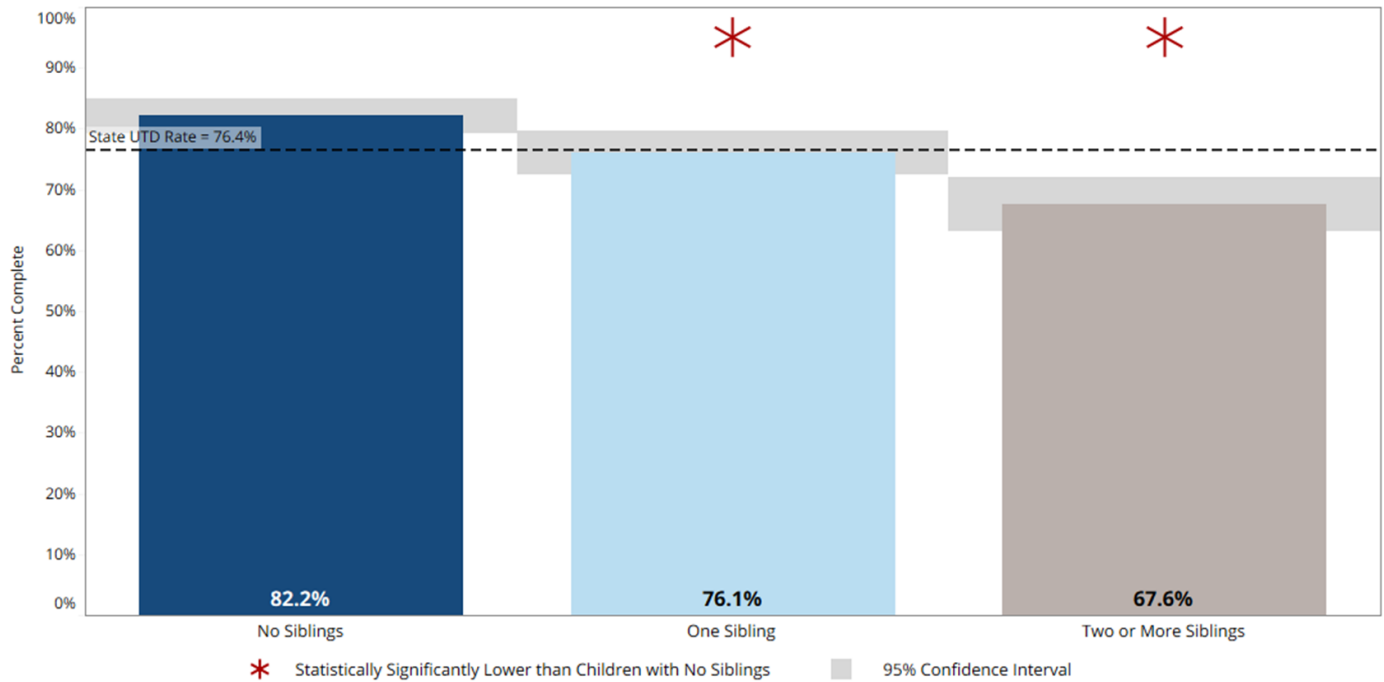
Figure 6: Comparison of Children UTD by Immunization Provider Type, Tennessee, 2025



Association of Siblings and Immunization Completion

Of the 1,672 children included in the survey, 691 (41.3%) had no siblings, 540 (32.3%) had one sibling, and 441 (26.4%) had two or more siblings. Children who had no siblings were significantly ($p < 0.05$) more likely to be UTD compared to children with one sibling or children with two or more siblings. Specifically, 82.2% of children with no siblings were UTD, whereas only 76.1% of children with one sibling and 67.6% of children with two or more siblings were UTD (Figure 7).

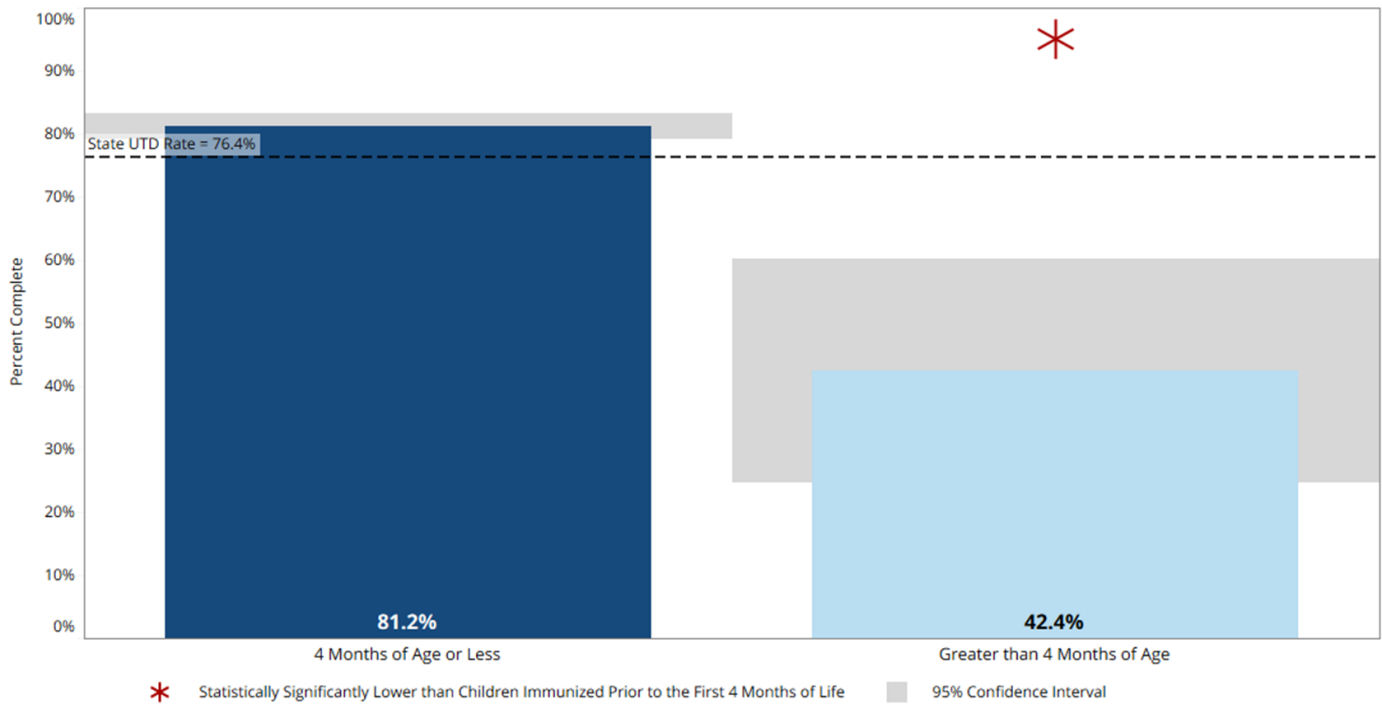
Figure 7. Comparison of UTD Children with Zero, One, or Two or More Siblings, Tennessee, 2025



Association of Age at First Immunization and Immunization Completion

Of the children surveyed, 1,555 (93.0%) began receiving immunizations before 4 months of age. Of these children, 81.2% were UTD by 24 months of age. In contrast, only 42.4% of the 33 children (2.0%) who received their first immunizations after 4 months of age were UTD by 24 months of age. This finding suggests that children who do not begin immunizations before 4 months of age are at a higher risk of remaining under-vaccinated by 2 years of age, as there is a significant difference between the two groups ($p < 0.05$) (Figure 8).

Figure 8. Comparison of UTD by Age at First Immunization, Tennessee, 2025



IMMUNIZATION STATUS SURVEY – 2025

Statewide Results and Healthy People Comparison

The Healthy People initiative is designed to guide national health promotion and disease prevention efforts to improve the health of the nation. Released by the United States Department of Health and Human Services (HHS) every decade since 1980, Healthy People identifies science-based objectives with targets to monitor progress and focus action.

In 2020, new Healthy People objectives (HP2030), including three immunization-related objectives, were developed. Results of the state attainment of HP2030 objectives can be seen in Table 6. In Table 6, HP2030 attainment is denoted by green fill while 90% coverage rate attainment is denoted by **bold text**.

Vaccine	TN 2025 (24 months)	HP2030 Objectives (24 months)
Diphtheria, Tetanus, Pertussis (DTaP)	79.4%	90.0%
Poliomyelitis (Polio)	90.1%	-
Measles, Mumps, Rubella (MMR)	88.6%	90.8%
Hepatitis B (HBV)	91.9%	-
Hepatitis B, birth dose	76.0%	-
Haemophilus influenzae, type B (HIB)	85.2%	-
Varicella (VAR)	88.3%	-
Pneumococcus (PCV)	92.1%	-
Full Series	76.4%	-
Hepatitis A (HAV)*	88.3%	-
Rotavirus (RTV)	75.1%	-
Influenza (Flu)	34.7%	-
Respiratory Syncytial Virus (RSV)	1.1%	-
Coronavirus (COVID-19)	0.8%	-
Children with no vaccinations	4.4%	<1.3%

Indicates that the value meets or exceeds the HP2030 objective
Bold text indicates values that meet or exceed the 90% coverage rate goal for Tennessee
 * Tennessee defines a child as UTD for Hepatitis A if they have received one dose by 24 months of age

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Racial Comparison

The 2025 survey population included 229 non-Hispanic Black children and 1,192 non-Hispanic White children. Due to small sample sizes, children of other non-Hispanic races (n = 71) and those of Hispanic ethnicity (n = 218) were excluded from this analysis, resulting in a final cohort of 1,421 children for racial comparisons. **Non-Hispanic Black children were less likely to be fully immunized for most ACIP-recommended vaccines, with significantly lower coverage rates for DTaP, Hib, the Combined 7 Series (4:3:1:FS:3:1FS), RTV, and influenza compared to their non-Hispanic White peers.**

Completion of the childhood Combined 7 Series (4:3:1:FS:3:1:FS) has been consistently lower for non-Hispanic black children than non-Hispanic white children. The UTD rate was 11.2% lower among non-Hispanic black children (65.9%) when compared to non-Hispanic white children (77.1%). Additionally, in 2025, only 24.9% of non-Hispanic black children received at least two doses of influenza vaccine compared to 33.5% of non-Hispanic white children.

Figure 9: Statewide Percentage of Children with Age-Appropriate Immunization Rates, by Vaccine and Race, Tennessee, 2025

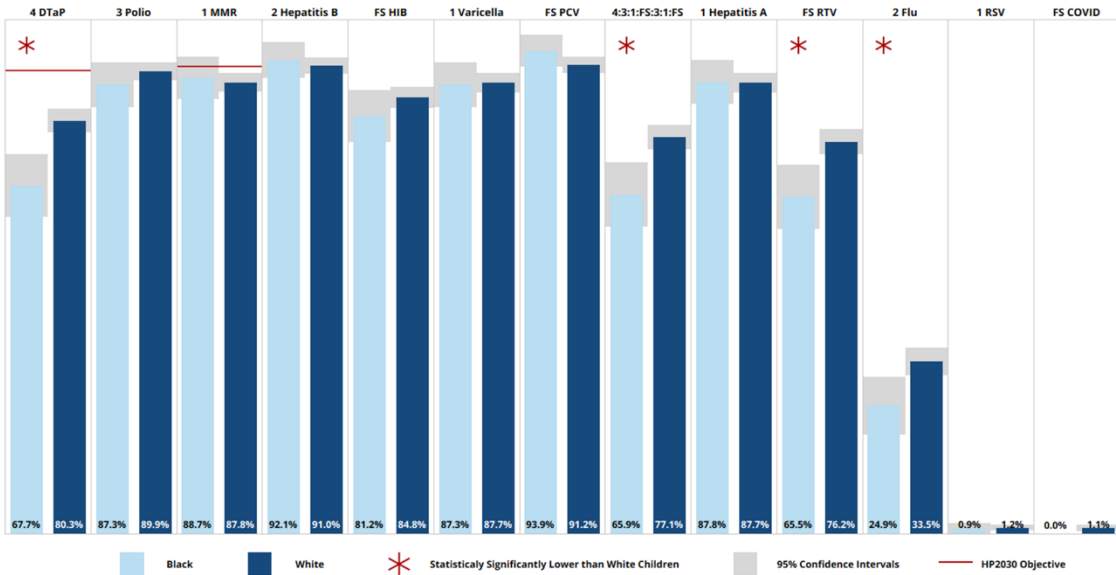
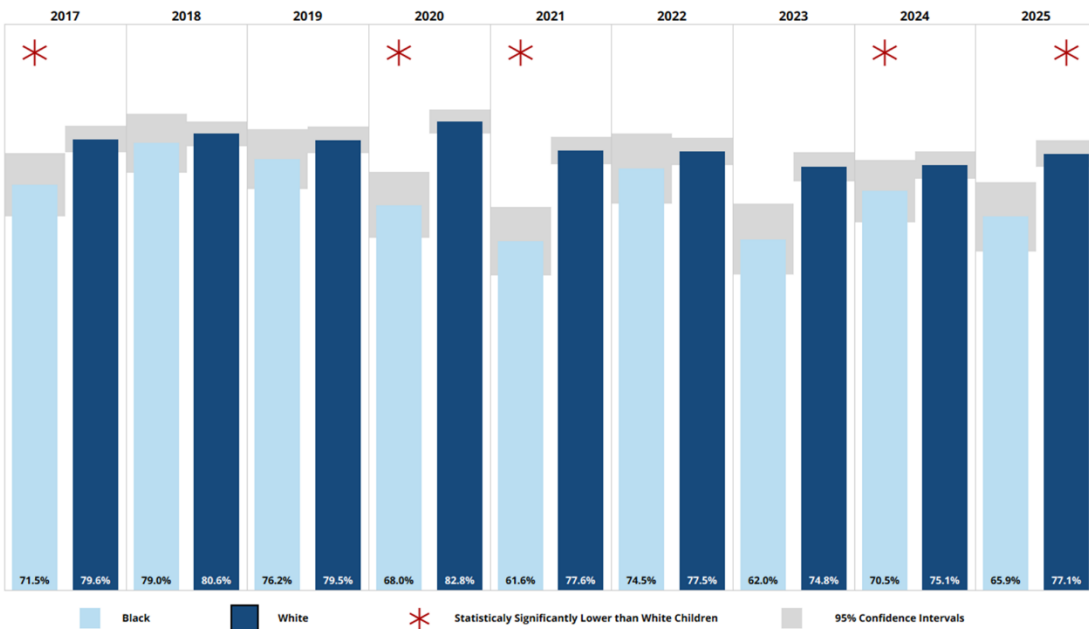


Figure 10: Comparison of UTD Children by Race, Tennessee, 2017-2025



Seasonal Influenza Vaccination

Impact on Pediatric Morbidity and Mortality

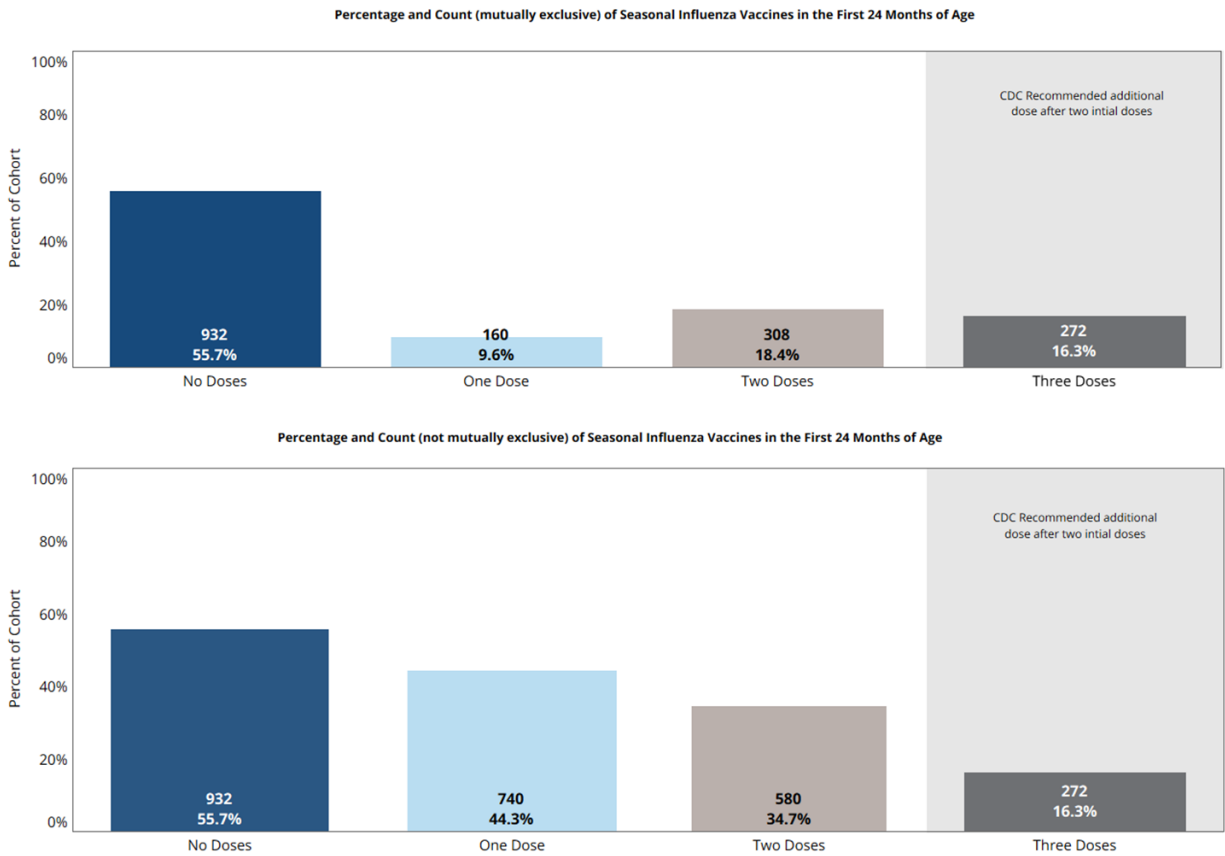
Children younger than 2 years old are at high risk of developing serious flu-related complications. These complications include pneumonia, dehydration, exacerbation of chronic illnesses (such as asthma), brain dysfunction (encephalopathy), and death. During the 2024-2025 flu season, 280 children were reported as dying from influenza within the United States, the highest number of pediatric deaths reported since the 2009-2010 H1N1 pandemic. Of these flu-related deaths, 89% were not fully vaccinated and the highest mortality rate occurred among black children.

The annual seasonal influenza vaccine helps save lives and reduce severe illness. Despite its benefits, influenza vaccine remains one of the least administered of the recommended immunizations in Tennessee. Only 740 (44.3%) of all children surveyed in 2025 had at least one dose of seasonal

influenza vaccine, 580 (34.7%) had two doses, and 272 (16.3%) received the recommended three doses of influenza vaccine prior to the second birthday. Missed influenza vaccinations increase the risk of morbidity and mortality among Tennesseans of all ages.

Figure 11 shows the number of flu vaccines received per child. The flu vaccine is given annually to children aged six months and older; two doses should be given during a child’s first influenza season to confer protection. This survey measures the proportion of children who have received two or more doses by their second birthday. However, an additional dose after the initial two dose series of flu vaccine is recommended for children annually until age seven to be fully covered. Children in Tennessee are under-vaccinated for influenza. Most children who die each year from influenza did not receive an annual influenza vaccination.

Figure 11: Percentage and Count of Seasonal Influenza Vaccines in the First 24 Months of Age, Tennessee, 2025

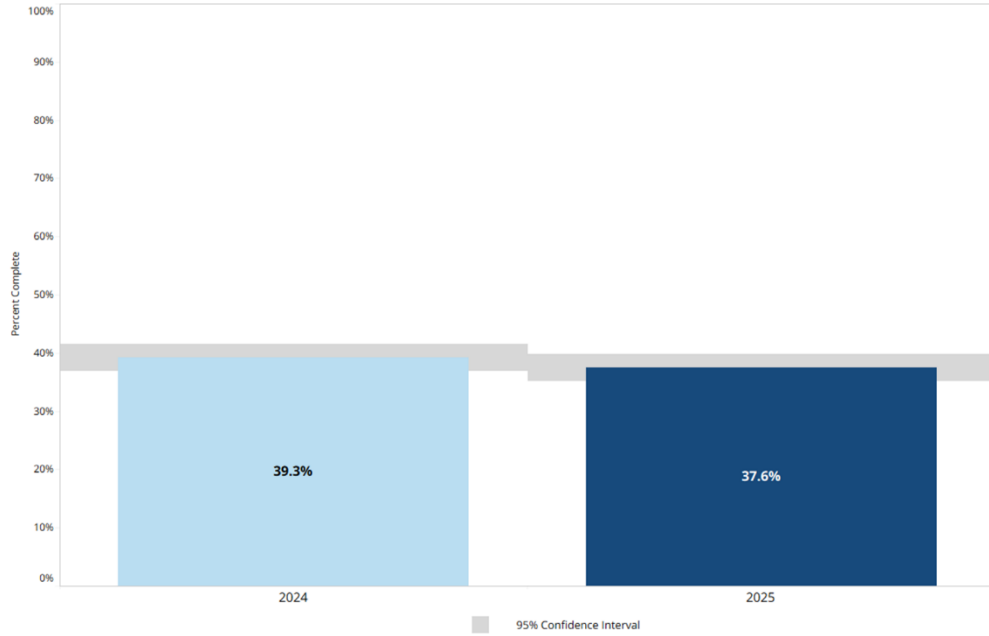


Seasonal Influenza Vaccination

Seasonal Influenza Vaccine in First Year of Life

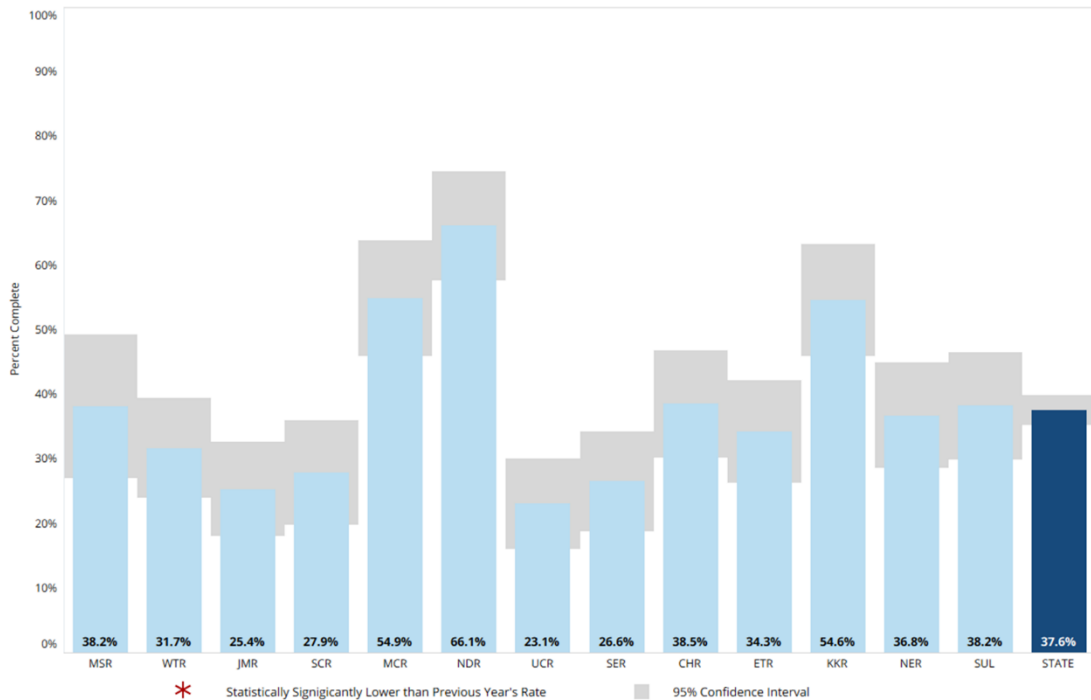
Of the 1,672 children surveyed, 37.6% received their first flu vaccine by age 1 year. In 2025, the proportion of children who received their first dose during this period was not significantly different from 2024 (39.3%) (p<0.05).

Figure 12. Statewide Percentage of Children with ≥1 Seasonal Influenza Vaccine Dose by Age 12 Months, Tennessee, 2025



Flu data stratified by region is depicted in Figure 13. No health department region had significantly fewer children receive their first dose of influenza vaccine prior to one year of age compared to 2024.

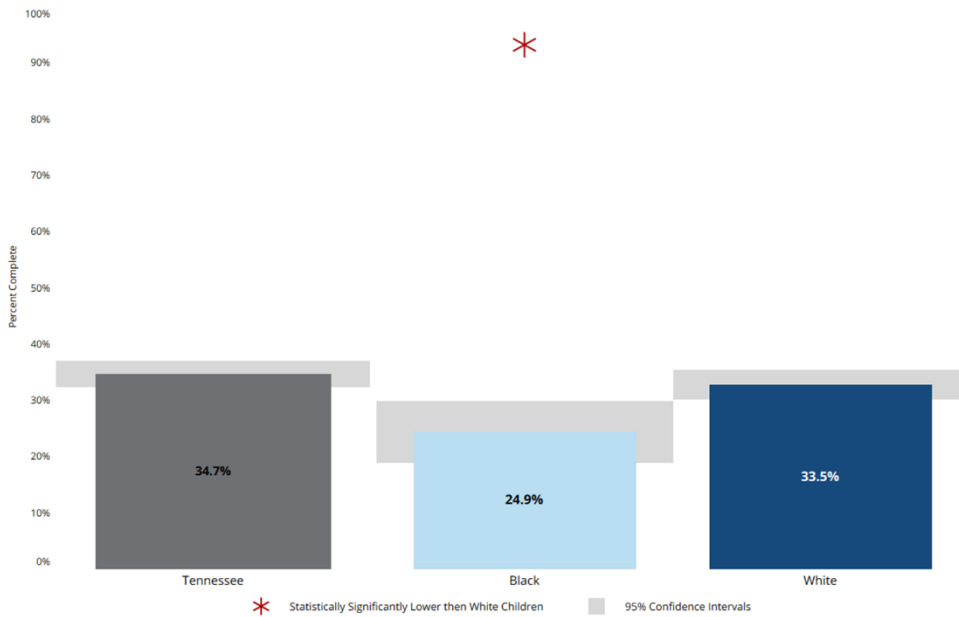
Figure 13. Percentage of Children Who Received First Dose of Influenza Vaccine in First Year of Life, by Health Department Region, Tennessee, 2025



Seasonal Influenza Vaccine & Racial Comparison

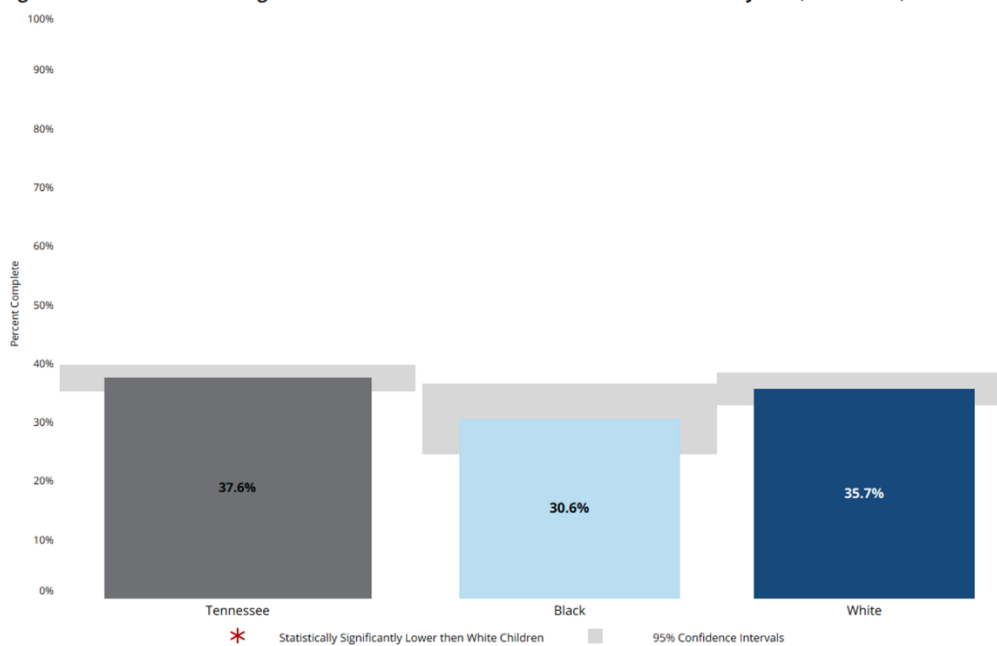
Influenza remains one of the vaccines with the lowest completion rate and the most significant racial difference. This difference has been documented annually since the first assessment of influenza coverage rates in 2007. In 2025, 24.9% of non-Hispanic Black children received at least two doses of influenza vaccine compared to 33.5% of non-Hispanic White children (Figure 14). The causes are likely multifactorial and account for an 8.6% difference in completion rates between non-Hispanic Black and non-Hispanic White children.

Figure 14. Statewide Percentage of Children with Two-Doses of Seasonal Influenza Vaccine, by Race, Tennessee, 2025



Among the 1,672 children surveyed, 37.6% received their first dose between 6 months and 1 year of age. Non-Hispanic White children were more likely to receive their first dose before their first birthday compared to Non-Hispanic Black children (35.7% vs. 30.6%) (Figure 15).

Figure 15. Statewide Percentage of Children with ≥1 Seasonal Influenza Vaccine Dose by Race, Tennessee, 2025

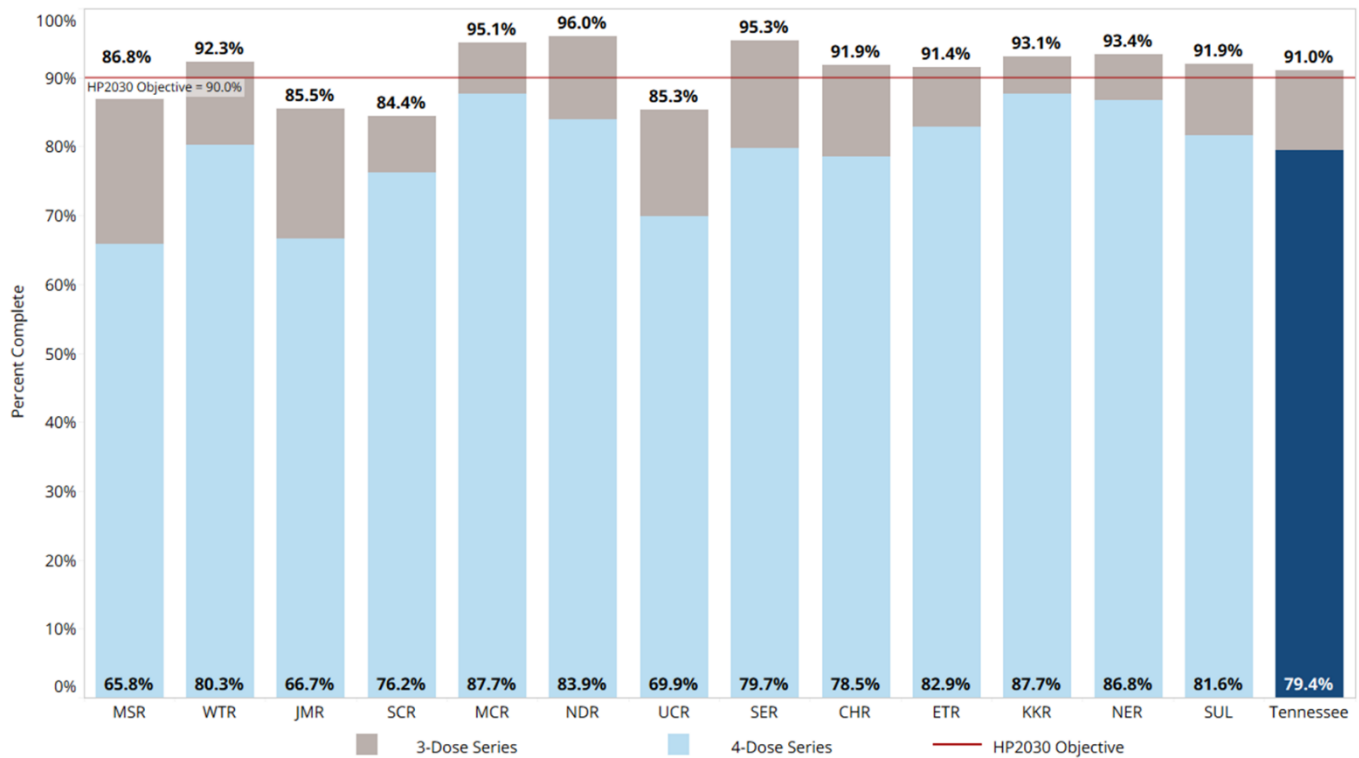


Opportunities for Improvement

Fourth DTaP

Figure 16 illustrates regional variations in the percentage of children immunized with three and four doses of the DTaP vaccine. Statewide, 79.4% of children in Tennessee completed the full DTaP series, while 91.0% received at least three doses. The gap between the percentage of children receiving three versus four doses ranged from 5.4% to 20.5% across regions. To ensure adequate protection against diphtheria, tetanus, and pertussis, a fourth dose is recommended between 15–18 months of age.

Figure 16. Percentage of Children with Three Doses vs Four Doses of Diphtheria, Tetanus, Pertussis (DTaP) by Health Department Region, TN, 2025



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CDC Catch-up vs On-Time schedule

In 2019, TDH implemented an analysis for the CDC “catch-up” vaccine schedule to account for children whose vaccinations had been delayed but were still complete before 24 months. Specifically, a change in logic to determine series completion was made to account for children who began Hib or PCV vaccination outside of the ACIP-recommended age but prior to 24 months. This alternative vaccination timing is often referred to as a “catch-up” schedule. In 2023, additional updates to improve the evaluation of children on catch-up schedules were implemented.

In 2025, 436 (26.1%) of the 1,672 children surveyed were vaccinated according to a catch-up schedule. Of 370 (22.1%) children vaccinated with the Hib catch-up schedule, 125 (33.8%) were considered complete for Hib vaccine (Figure 17). Of 359 (21.5%) children vaccinated with PCV after the ACIP recommended age, 229 (63.8%) were considered complete for PCV vaccine (Figure 18).

Figure 17. Percentage of Children with Complete Hib Series, by CDC Schedule, by Health Department Region, Tennessee, 2025

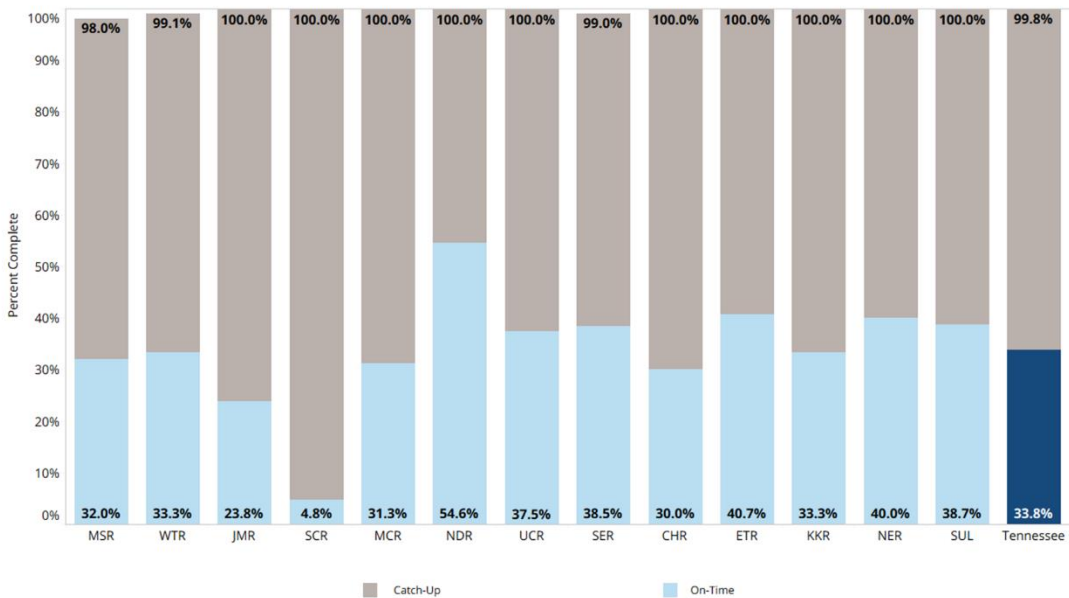
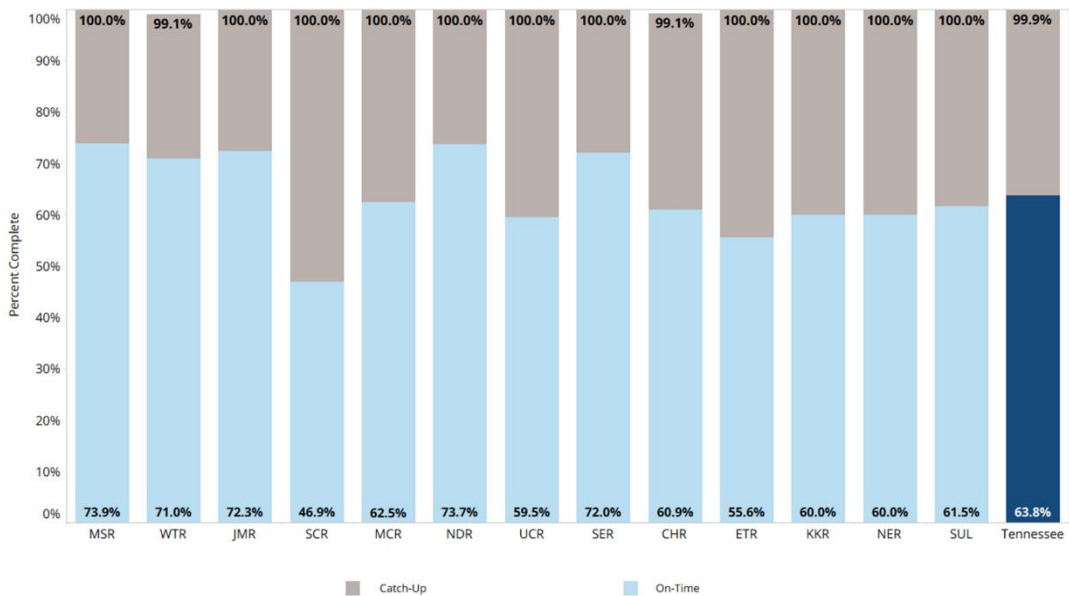


Figure 18. Percentage of Children with Complete PCV Series, by CDC Schedule, by Health Department Region, Tennessee, 2025



Regional Immunization Rates

Statewide, the UTD immunization coverage rate by 24 months was 76.4%. This rate varied per region, ranging from 63.2% to 85.3%. The five regions with the highest UTD immunization rates by 24 months are shown in green, while the five regions with the lowest UTD immunization rates by 24 months are shown in red (Figure 19 and Table 7-A).

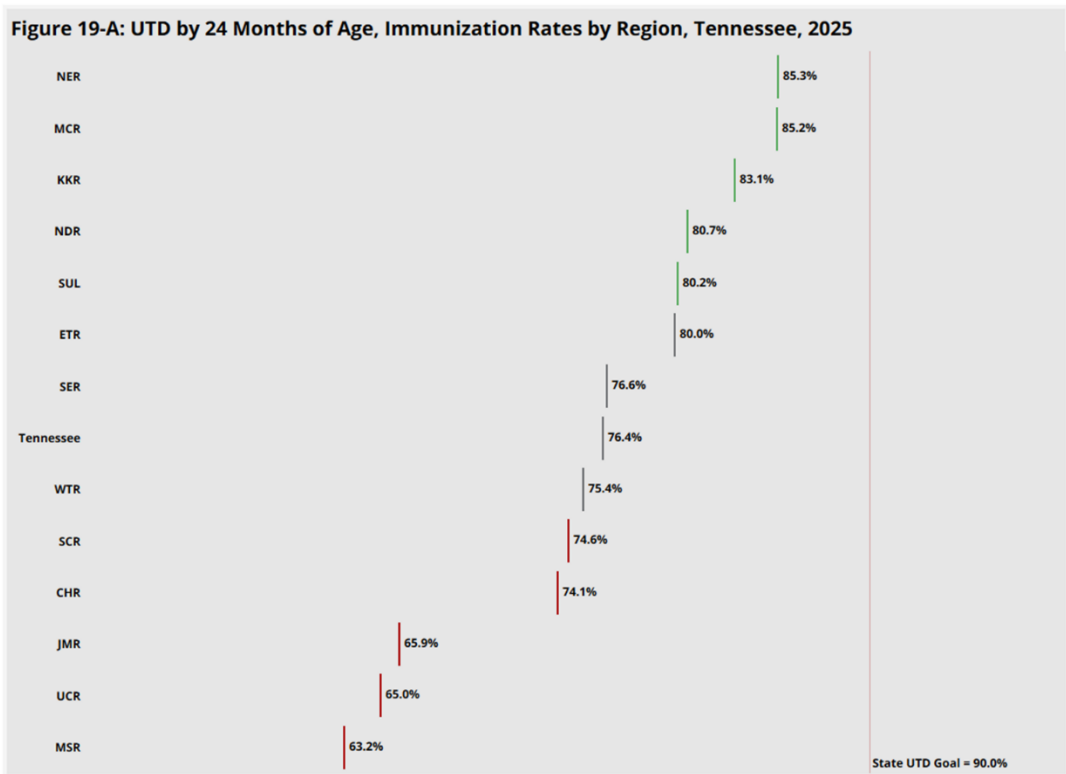
Response rates for each region are listed on the second page of all regional reports (Section III). When interpreting immunization rates, caution is necessary for regions with low response rates, as children classified as UTL who may be less likely to be UTD, are excluded from the analysis.

The regional reports in Section III highlight the difference between coverage rates reported to TennIIS alone and those determined to be UTD at 24 months of age after manual investigation. This discrepancy suggests that many providers do not report all administered vaccines to TennIIS, which is expected in a voluntary reporting system. Physicians are encouraged to fully document immunization events in TennIIS to enhance the accuracy and utility of the statewide immunization registry. Improving reporting practices would strengthen the ability of TennIIS to inform both providers and public health officials about immunization coverage and trends across the state.

Table 7-A: UTD Immunization Rates by Region, Tennessee, 2025

Region	Survey Sample Size (n)	UTD TennIIS Alone		UTD by End of Survey	
		(%)	(CI)	(%)	(CI)
MSR (Memphis-Shelby County Region)	76	23.7	± 9.8	63.2	± 11.1
WTR (West Tennessee Region)	142	31.7	± 7.7	75.4	± 7.2
JMR (Jackson-Madison County Region)	138	54.3	± 8.4	65.9	± 8.0
SCR (South Central Region)	122	50.0	± 9.0	74.6	± 7.8
MCR (Mid-Cumberland Region)	122	48.4	± 9.0	85.2	± 6.4
NDR (Nashville-Davidson County Region)	124	63.7	± 8.6	80.6	± 7.1
UCR (Upper Cumberland Region)	143	28.0	± 7.4	65.0	± 7.9
SER (Southeast Region)	128	46.9	± 8.8	76.6	± 7.4
CHR (Chattanooga-Hamilton County Region)	135	45.9	± 8.5	74.1	± 7.5
ETR (East Tennessee Region)	140	28.6	± 7.6	80.0	± 6.7
KKR (Knoxville-Knox County Region)	130	15.4	± 6.3	83.1	± 6.5
NER (Northeast Region)	136	18.4	± 6.6	85.3	± 6.0
SUL (Sullivan County Region)	136	8.8	± 4.8	80.1	± 6.8
Tennessee	1672	35.6	± 2.3	76.4	± 2.0

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 The five regions with the highest UTD immunization rates by 24 months are shown in green
 The five regions with the lowest UTD immunization rates by 24 months are shown in red



UTD Coverage Rates: A Growing Concern

Over the past several years, the overall UTD immunization rate in the state has fluctuated without showing a consistent upward trend. In 2025, the state’s UTD immunization rate rose slightly from 74.4% to 76.4%, suggesting modest progress. However, this overall change masks a more complex and concerning trend.

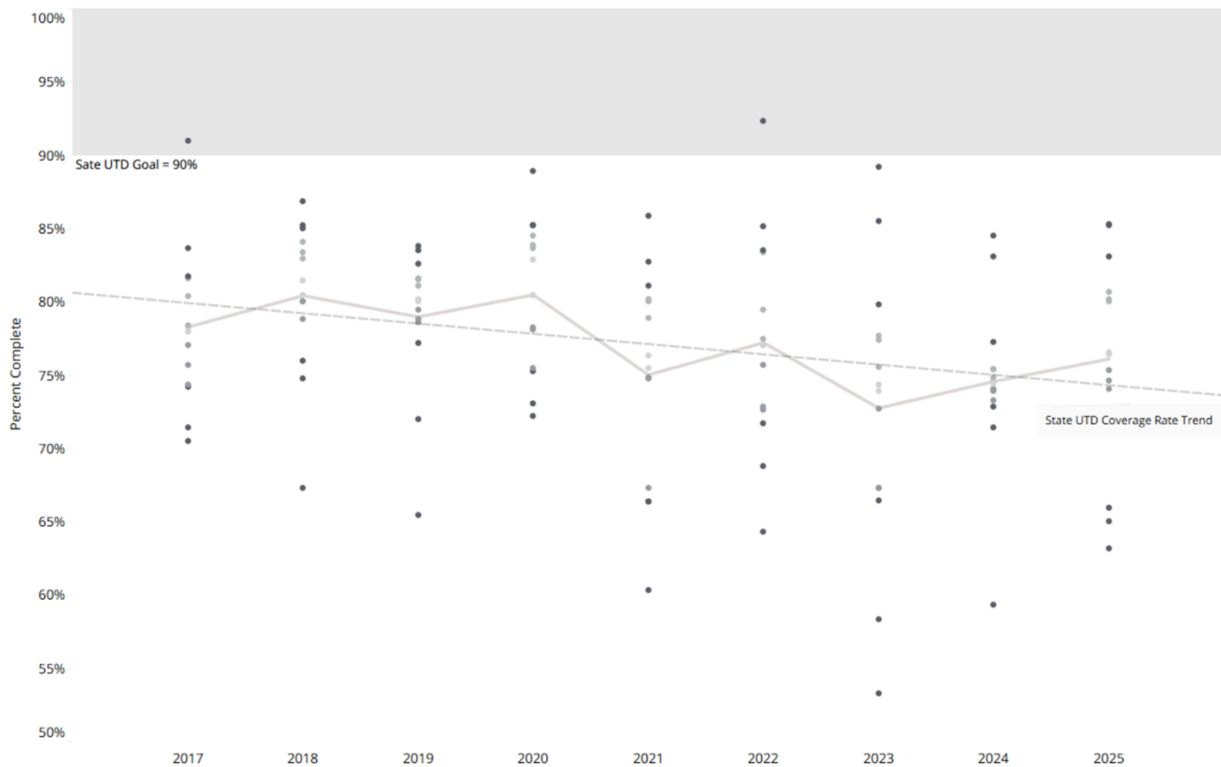
The higher-performing regions, which have traditionally maintained coverage rates above 85%, are now experiencing significant declines. In some regions, coverage rates dropped by 10% or more in 2025. Meanwhile, the lower-performing regions, which have historically reported coverage rates below 80%, are making small improvements of 1-3% each year. While this improvement is encouraging, it is not enough to counteract the sharp decline in top-performing regions.

As a result, the gap between the highest- and lowest-performing regions is narrowing, not due to overall improvement, but because high-coverage regions are declining faster than low-coverage regions are gaining ground. If this pattern continues, the statewide UTD rate will shift from modest annual increases to an overall decline, as losses in top-performing regions surpass the limited gains in lower-ranked areas.

These trends highlight the uneven impact of recent efforts to improve vaccine coverage; while some regions have made progress, others continue to decline. To prevent further statewide decline of immunization rates, a dual approach is essential: strengthening vaccine uptake in historically low-coverage areas while stabilizing and sustaining rates in high-performing regions. Targeted interventions are needed to ensure children who have fallen behind catch up on vaccinations and to reduce the risk of outbreaks of highly infectious, vaccine-preventable diseases.

Figure 19-B illustrates the distribution of regional UTD immunization rates over the past several years. Each dot represents a region's UTD rate, while the solid line indicates the state’s average UTD rate over time. Outliers that exert a strong positive or negative influence on the overall average are represented with darker shading, while regions demonstrating stable, mid-range coverage rates are depicted in lighter colors. The dotted line represents the projected state trend based on current immunization patterns across regions. The gray band highlights VPDIP’s goal of achieving a 90% coverage rate, with an emphasis on reaching 95% for herd immunity and ultimately striving for 100% immunization coverage to protect children at their most vulnerable.

Figure 19-B: Convergence of UTD Rates Over Time by Year, Tennessee, 2025



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Immunization Success Measures by Region

This study is conducted at the state level and allows for uniform data analysis covering all 13 health regions in Tennessee. Individual vaccine measures can indicate an individual health region’s success in achieving high UTD rates by 24 months of age among their childhood population.

Please refer to Table 8 for a list of these success measures and the first, second, and third-placing health regions as applicable to each measure.

The top portion of the table addresses the regions with the highest immunization coverage rates and response rates as well as one-year increases. The lower portion of the table addresses the vaccine specific coverage rates by 24 months of age and only includes 2025 results.

Region Immunization Champions are those ranking in the top three for any of the categories.

Table 8: Health Department Region Immunization Champions, 2025

Category	Region with Highest Rate	Region with 2nd Highest Rate	Region with 3rd Highest Rate	State
Highest Response Rate	CHR/UCR (100.0%)	SUL/NER (99.3%)	KKR (99.2%)	93.9%
Highest UTD immunization rate* (based on TennIS alone)	NDR (63.7%)	JMR (54.3%)	SCR (50.0%)	35.6%
Highest UTD immunization rate* (by end of data collection)	NER/MCR (85.3%)	KKR (83.1%)	NDR (80.7%)	76.4%
Greatest Increase in UTD by 24 months of age from 2024 to 2025	MCR (12.5%)	NER (11.4%)	KKR (7.7%)	2.0%
Highest Coverage DTaP (4 Doses)	MCR/KKR (87.7%)	NER (86.8%)	NDR (83.9%)	79.4%
Highest Coverage IPV (3 Doses)	SER (96.1%)	NDR (93.6%)	MCR (93.4%)	90.1%
Highest Coverage MMR (1 Dose)	NDR (94.4%)	MCR (92.6%)	SER (92.2%)	88.6%
Highest Coverage HBV (3 Doses)	NDR (96.0%)	SER (95.3%)	MCR (95.1%)	91.9%
Highest Coverage HBV, Birth Dose	NDR (86.3%)	KKR (84.6%)	MCR (80.3%)	76.0%
Highest Coverage Hib (Full Series)	NDR (91.9%)	NER (91.2%)	MCR (91.0%)	85.2%
Highest Coverage VAR (1 Dose)	NDR (94.4%)	MCR (92.6%)	SER (92.2%)	88.3
Highest Coverage PCV (Full Series)	NDR (96.0%)	SER (94.5%)	NER (94.1%)	92.1%
Highest Coverage Full Series (431:FS:314:FS)	NER/MCR (85.3%)	KKR (83.1%)	NDR (80.7%)	76.4%
Highest Coverage HAV (1 Dose)	NDR (95.2%)	WTR (92.3%)	MCR (91.8%)	88.3%
Highest Coverage RTV (Full Series)	NER (83.8%)	MCR (82.80%)	CHR (79.3%)	75.1
Highest Coverage FLU (2 Doses)	NDR (64.5%)	MCR (51.6%)	KKR (47.7%)	34.7%
Highest Coverage RSV (1 Dose)	NDR (4.8%)	MCR (1.6%)	KKR (1.5%)	1.1%
Highest Coverage COVID (Full Series)	NDR (8.1%)	KKR (1.5%)	MCR (0.8%)	0.8%

Summary of Key Findings

Below is the summary of coverage rates relative to Health People (HP) 2030 and Tennessee’s Vaccine-Preventable Diseases and Immunization Program objectives:

Individual Vaccine or Vaccine Series	Immunization Rate (By 24 Months of Age)		HP2030 Objectives (24 months)
Full Series (4:3:1:FS:3:1:4)	76.4%		-
Each vaccine in 4:3:1:FS:3:1:4 (DTaP, IPV, MMR, Hib, HBV, VAR, PCV)	4 doses of DTaP (79.4%)		90.0% rate for DTaP 90.8% rate for MMR
	3 doses of IPV (90.1%)		
	1 dose of MMR (88.6%)		
	Full series of HIB (85.2%)		
	3 doses of HBV (91.9%)		
	1 dose of Varicella (88.3%)		
	Full series of PCV (92.1%)		
Hepatitis A vaccine	1 dose HAV (88.3%)		-
Influenza vaccine	<u>2 Doses</u> 34.7%	<u>3 Doses</u> 16.3%	-
Rotavirus vaccine	75.1%		-
RSV vaccine	1.1%		-
COVID-19 vaccine	0.8%		-
Hepatitis B vaccine birth dose	76.0%		-
DTaP (3 doses vs 4 doses)	<u>3 Doses</u> 91.0%	<u>4 Doses</u> 79.4%	-
HIB vaccine series (On-Time vs Catch-Up)*	<u>On-Time</u> 99.8%	<u>Catch-Up</u> 33.8%	-
PCV vaccine series (On-Time vs Catch-Up)*	<u>On-Time</u> 99.9%	<u>Catch-Up</u> 63.8%	-
Percentage of Children with no Vaccines	4.4%		1.3%
Indicates value is below HP2030 objective			
Bold text indicates values that meet or exceed the 90% coverage rate goal for Tennessee			
*Completion status based on vaccination schedule			

Key Points:

- Tennessee did not meet the three Healthy People 2030 objectives in 2025, marking the third time in state history that none of these objectives have been achieved since their adoption as measurement tools.
- Hepatitis B vaccination coverage has remained above the recommended 90% threshold, consistent with the previous decade. This sustained high coverage is likely due to hospital staff initiating the vaccine series within 24 hours of birth.
- Tennessee has not achieved 90% coverage for the Combined 7 Series (4:3:1:FS:3:1:FS) at any point in the past decade, including in 2025.
- Racial disparities persist in immunization coverage; black children were significantly less likely than white children to be fully immunized according to 2025 ACIP recommendations.
- In 2025, 6.3% of surveyed parents reported refusing some or all immunizations for their children, an increase from 4.6% in 2024.
- In 2025, 4.4% of Tennessee children received zero doses of recommended vaccines, falling short of the Healthy People 2030 objective, which aims to reduce this percentage to 1.3% by age two.

Discussion

In 2025, most 24-month-old children in Tennessee received their recommended vaccines on-time according to the ACIP recommended immunization schedule. Immunization coverage for the Combined 7 Series (4:3:1:FS:3:1:FS) vaccines increased slightly to 76.4% as compared to 74.4% in 2024. These findings suggest that the majority of Tennessee parents choose vaccines for their children. Vaccines remain the best way to protect their children from serious infectious diseases.

Tennessee did not meet any of the Healthy People 2030 Goals nor any TN objectives for coverage rates for individual vaccines. Additionally, the proportion of children whose parents reported vaccine refusals increased from 4.6% to 6.3% and the proportion of children who have received zero doses of vaccines by 24 months of age increased from 3.0% to 4.4%. Vaccine coverage for the completion of the Combined 7 Series (4:3:1:FS:3:1:FS) places Tennessee in the bottom third nationally, ranking 35th of the 50 states. Compared to other Southeastern states in HHS Region 4, Tennessee ranks 5th out of 8 states.^{1,2}

There are continued gaps in immunization coverage by race. Black/African American children were statistically less likely to have completed DTaP, RTV, Flu, and the Combined 7 Series than white children. These gaps are similarly noted in national surveys of the same age group.¹⁴ Public health and healthcare providers across Tennessee should develop strategies to engage harder-to-reach populations. Increased vaccine access might be achieved by increasing enrollment in the Vaccines for Children Program and by providing accurate information about immunizations to patients, parents, and communities.

Finally, this report suggests that recent efforts to improve vaccine coverage are successful, although in certain areas of the state, there is a concerning decline. In 2025, the state's up-to-date (UTD) immunization rate saw a slight increase, rising from 74.4% to 76.4%. However, this overall change masks a more nuanced trend. Some regions with the lowest immunization rates in 2025 experienced smaller improvements of 1-3%. In contrast, some regions with the highest coverage rates saw a significant drop of 10% or more. To prevent further decline of immunization rates, a dual approach is essential: strengthening vaccine uptake in historically low-coverage areas while stabilizing and sustaining rates in high-performing regions. Focused interventions are needed to ensure that children who have fallen behind catch up on recommended immunizations to reduce the risk of outbreaks of highly infectious, vaccine-preventable diseases.

To improve immunization rates among 24-month-old children in Tennessee, healthcare providers should:

1. Be a Trusted Messenger

- Healthcare providers should be empowered to provide accurate and trustworthy information about immunizations for patients, families, and communities.
- Healthcare providers should review vaccination records at every medical visit, regardless of the reason, and discuss and offer necessary immunizations.
- Healthcare providers should utilize tools such as motivational interviewing, the presumptive approach, and empathetic listening to address vaccine hesitancy and misinformation in one-on-one conversations.

2. Ensure Vaccine Access for all Tennessee Children

- Healthcare providers should ensure that they carry all ACIP recommended vaccines so that all patients can receive desired vaccinations in their medical home at any visit without the need for referral to an outside provider or pharmacy.
- TDH enrolls providers in the Vaccines for Children (VFC) Program, providing free vaccines to uninsured, publicly insured, and underinsured children through a statewide network of private healthcare providers, federally-qualified health centers (FQHCs), and local health departments. Healthcare providers should enroll in the VFC program if they serve patients who would be eligible for these free vaccines to ensure that patients can receive recommended vaccines in their medical home.

3. Support and Utilize Consolidated Vaccination Records

- TDH maintains the Tennessee Immunization Information System (TennIIS), an online registry available to all healthcare providers, which helps track immunizations and improves vaccination rates across the state.
- All vaccinating providers should enroll in the TennIIS and report all immunizations administered to ensure a complete vaccination record is available for every patient.
- Healthcare providers should utilize available tools in TennIIS to improve immunization coverage rates:

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- **Forecasting:** TennIIS generates individual forecasts for immunizations based on a patient's vaccination history. Providers should utilize TennIIS to assess each patient's vaccination status based on the ACIP schedule, identifying and addressing gaps, particularly for DTaP and Flu vaccines.
- **Reminders:** TennIIS can generate reminders via phone, text, or other methods to alert parents about upcoming or missed immunization appointments.
- **Practice-Level Reports:** Providers can generate immunization coverage reports for their patients and use these to identify opportunities for improvement.

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Section III

Health Region Results

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Memphis-Shelby County Region (MSR)

Figure 20-A: Location of Memphis-Shelby County Region (MSR)

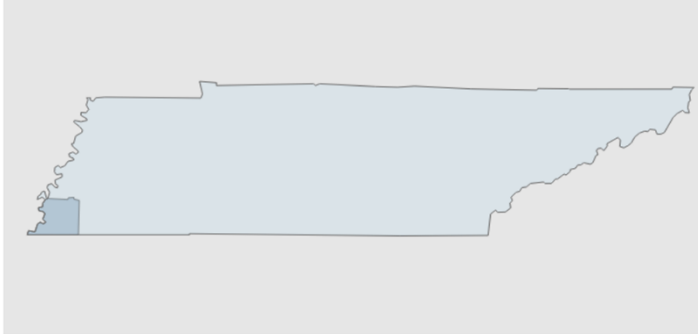
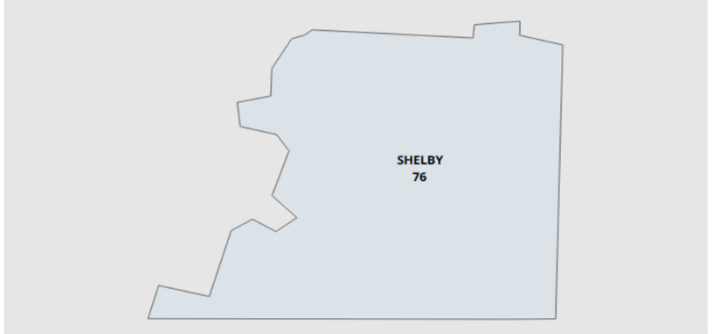


Figure 20-B: Sampling per County, MSR, 2025



Final Cohort Determination

The initial 2025 MSR sample included 150 children born between January and March of 2023 (Table 9-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 76. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a smaller cohort which resulted in a lower response rate.

Immunization Rates

In MSR, the up-to-date (UTD) immunization rate by 24 months of age was 63.2%, which was lower than the 2024 rate (74.6%), but lower than the state average (76.4%) (Table 9-B). The UTD immunization rate as reported to TennIS was 23.7%, significantly lower than the 2024 rate (37.7%) and lower than the state rate (35.6%).

The vaccine-specific rates reveal one significant difference, and several decreases compared to the previous year and the state overall (Table 9-B). In this table, figures in red indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences (p<0.05) over the same period.

Immunization Administration

Of the 1,707 vaccine doses administered to the MSR children, 1,564 (91.6%) were administered by private providers, 85 (4.8%) were administered by public health providers and 61 (3.6%) were administered by an unknown source.

Table 9-A: 24-Month-Old Survey Sampling, MSR, 2025

	2024	2025	State 2025
Original sample (n)	149	150	1953
Ineligible (n)	2 (1.7%)	11 (7.3%)	122 (6.2%)
Refused Participation (n)	3 (0.8%)	3 (2.0%)	51 (2.6%)
Eligible sample (n)	144	136	1780
Unable to locate† (n)	22 (15.3%)	60 (44.1%)	108 (6.1%)
Final sample (n)	122	76	1672
Response Rate (%)*	84.7	55.9	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 † Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
 * Response Rate (%) is the number of survey responses from eligible children

Table 9-B: Immunization Rates by Series and Vaccine, MSR, 2025

	2024 (n=122) (%)	2025 (n=76) (%)	State 2025 (n=1672) (%)
Up-to-Date (UTD):			
UTD immunization rate* (as reported to TennIS)	37.7 ± 7.3	23.7 ± 9.8 ↓	35.6 ± 2.3
UTD immunization rate* (with data collection)	74.6 ± 7.8	63.2 ± 11.1 ↓	76.4 ± 2.0
ACIP Recommended Vaccine Series (By 24 Months of Age)			
DTaP (4 Doses)	83.6 ± 8.7	65.8 ± 10.9 ↓	79.4 ± 1.9
IPV (3 Doses)	93.4 ± 5.5	84.2 ± 8.4 ↓	90.1 ± 1.4
MMR (1 Dose)	93.4 ± 5.7	88.2 ± 7.4 ↓	88.6 ± 1.5
HBV (3 Doses)	94.3 ± 4.2	90.8 ± 6.7 ↓	91.9 ± 1.3
HBV (Birth Dose)	68.9 ± 8.3	61.8 ± 11.2 ↓	76.0 ± 2.0
Hib (Full Series)	83.6 ± 6.7	76.3 ± 9.8 ↓	85.2 ± 1.7
VAR (1 Dose)	93.4 ± 4.5	86.8 ± 7.8 ↓	88.3 ± 1.5
PCV (Full Series)	95.1 ± 3.9	92.1 ± 6.2 ↓	92.1 ± 1.3
Full Series (4:3:1:FS:3:1:FS)	74.6 ± 7.8	63.2 ± 11.1 ↓	76.4 ± 2.0
Additional Vaccines of Interest (By 24 Months of Age)			
HAV (1 Dose)	93.4 ± 4.5	88.2 ± 7.4 ↓	88.3 ± 1.5
RTV (Full Series)	77.9 ± 7.5	72.4 ± 10.3 ↓	75.1 ± 2.1
FLU (2 Doses)	33.6 ± 8.5	35.5 ± 11.0 ↑	34.7 ± 2.3
RSV (1 Dose)‡	- ± -	1.3 ± 2.6 ↑	1.1 ± 0.5
COVID-19 (Full Series)	1.6 ± 2.3	0.0 ± 0.0 ↓	0.8 ± 0.4

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 † Includes children up-to-date by ACIP-recommended catch-up schedule
 ‡ Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
 Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference (p < 0.05) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 20-C illustrates the MSR trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents VPDIP's target of a 90% coverage rate.

Figure 20-C: Immunization Rates (%) by Series and Vaccine Antigen, MSR, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Findings

The demographic breakdown of the MSR cohort alongside the UTD immunization rates by demographic groups are shown in Table 9-C and 9-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for MSR.

Table 9-C: Risk Factors and Immunization Rates, MSR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates	
		MSR [†] n (%)	State [‡] n (%)	MSR (%) CI	STATE (%) CI
Race**	Black	45 59.2	237 14.2	55.6 ± 15.1	65.8 ± 6.1
	White	19 25.0	1236 73.9	68.4 ± 23.0	77.2 ± 2.3
	Other	12 15.8	199 11.9	83.3 ± 24.7	83.9 ± 5.1
Ethnicity**	Hispanic	12 15.8	218 13.0	83.3 ± 24.7	82.1 ± 5.1
	Non-Hispanic	64 84.2	1454 87.0	59.4 ± 12.4	75.5 ± 2.2
Sex[†]	Male	46 60.5	810 48.4	63.0 ± 14.5	75.9 ± 3.0
	Female	30 39.5	862 51.6	63.3 ± 18.3	76.8 ± 2.8
Siblings[†]	0	47 61.8	691 41.3	63.6 ± 21.8	82.2 ± 2.9
	1	40 52.6	540 32.3	70.0 ± 17.4	76.1 ± 3.6
	2+	35 46.1	441 26.4	54.2 ± 21.5	67.6 ± 4.4
Vaccination Source	Private Medical Provider	59 77.6	1409 84.3	67.8 ± 12.3	82.0 ± 2.0
	Health Department	- -	24 1.4	sample size is too small to generate estimates	58.3 ± 21.3
	Both	13 17.1	148 8.9	61.5 ± 30.6	69.6 ± 7.5
	Unknown Source	4 5.3	91 5.4	sample size is too small to generate estimates	4.4 ± 4.3
Program Enrollment	TennCare	55 72.4	1075 64.3	60.0 ± 13.4	74.5 ± 2.6
	Not Enrolled	21 27.6	597 35.7	71.4 ± 21.1	79.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 † Percentages may not add up to 100% due to missing participant information
 ‡ Information was collected from birth certificate at time of delivery
 * Does not distinguish between Hispanic whites and non-Hispanic whites

Table 9-D: Parent Demographics and Immunization Rates, MSR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates	
		MSR [†] n (%)	State [‡] n (%)	MSR (%) CI	STATE (%) CI
Mother Age[†]	≤24	15 19.7	497 29.7	53.3 ± 28.6	76.5 ± 3.7
	25-34	54 71.1	978 58.5	63.0 ± 13.3	76.6 ± 2.7
	≥35	7 9.2	197 11.8	sample size is too small to generate estimates	75.1 ± 6.1
Father Age[†]	≤24	10 13.2	283 16.9	sample size is too small to generate estimates	75.3 ± 5.1
	25-34	39 51.3	863 51.6	69.2 ± 15.2	77.3 ± 2.8
	≥35	17 22.4	355 21.2	47.1 ± 26.5	77.7 ± 4.3
	Unknown	10 13.2	171 10.2	sample size is too small to generate estimates	70.8 ± 6.9
Mother Education[†]	< High School Diploma/ GED	12 15.8	206 12.3	58.3 ± 32.7	71.8 ± 6.2
	High School Diploma/ GED	19 25.0	478 28.6	68.4 ± 23.0	72.0 ± 4.0
	> High School Diploma/ GED	44 57.9	983 58.8	61.4 ± 15.0	79.5 ± 2.5
Father Education[†]	< High School Diploma/ GED	10 13.2	186 11.1	sample size is too small to generate estimates	78.5 ± 6.0
	High School Diploma/ GED	19 25.0	530 31.7	63.2 ± 23.9	73.0 ± 3.8
	> High School Diploma/ GED	36 47.4	760 45.5	61.1 ± 16.7	80.0 ± 2.9
	Unknown	11 14.5	196 11.7	54.5 ± 35.1	69.4 ± 6.5
Marriage Status[†]	Married	28 36.8	949 56.8	64.3 ± 18.9	77.7 ± 2.7
	Unmarried	48 63.2	722 43.2	62.5 ± 14.2	74.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 † Percentages may not add up to 100% due to missing participant information
 ‡ Information was collected from birth certificate at time of delivery
 * Does not distinguish between Hispanic whites and non-Hispanic whites

West Tennessee Region

Figure 21-A: Location of West Tennessee Region (WTR)

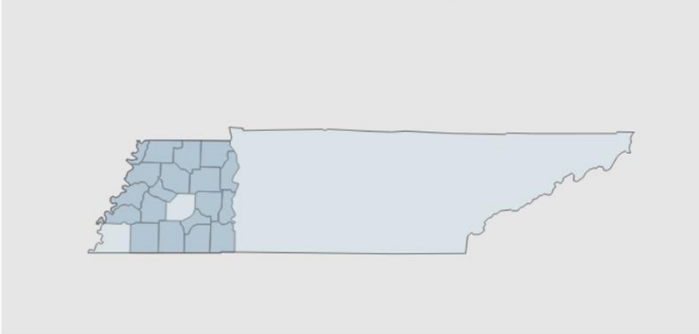
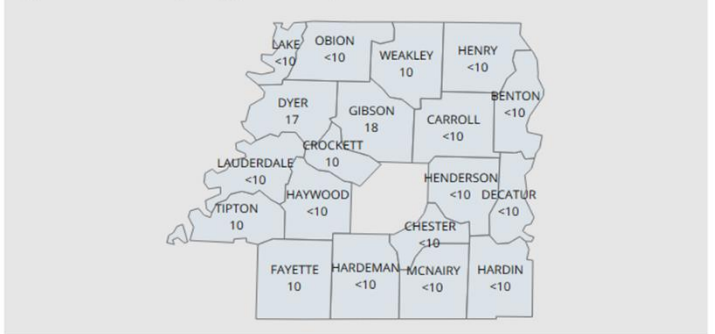


Figure 21-B: Sampling per County, WTR, 2025



Final Cohort Determination

The initial 2025 WTR sample included 150 children born between January and March of 2023 (Table 10-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 142. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a larger cohort and achieved a higher response rate.

Immunization Rates

In WTR, the up-to-date (UTD) immunization rate by 24 months of age was 75.4%, which was higher than the 2024 rate (74.8%), and the state average (76.4%) (Table 10-B). The UTD immunization rate as reported to TennIIS was 31.7%, lower than the 2024 rate (42.2%) and lower than the state rate (35.6%).

The vaccine-specific rates reveal one significant difference, and several decreases compared to the previous year and the state overall (Table 10-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences ($p < 0.05$) over the same period.

Immunization Administration

Of the 3,295 vaccine doses administered to the WTR children, 2,893 (87.8%) were administered by private providers, 226 (6.9%) were administered by public health providers and 176 (5.3%) were administered by an unknown source.

Table 10-A: 24-Month-Old Survey Sampling, WTR, 2025

	2024	2025	State 2025
Original sample (n)	151	150	1953
Ineligible (n)	9 (6.0%)	4 (2.7%)	122 (6.2%)
Refused Participation (n)	2 (1.3%)	0 (0.0%)	51 (2.6%)
Eligible sample (n)	140	146	1780
Unable to locate [†] (n)	5 (3.6%)	4 (2.7%)	108 (6.1%)
Final sample (n)	135	142	1672
Response Rate (%)[*]	96.4	97.3	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
[†] Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
^{*} Response Rate (%) is the number of survey responses from eligible children

Table 10-B: Immunization Rates by Series and Vaccine, WTR, 2025

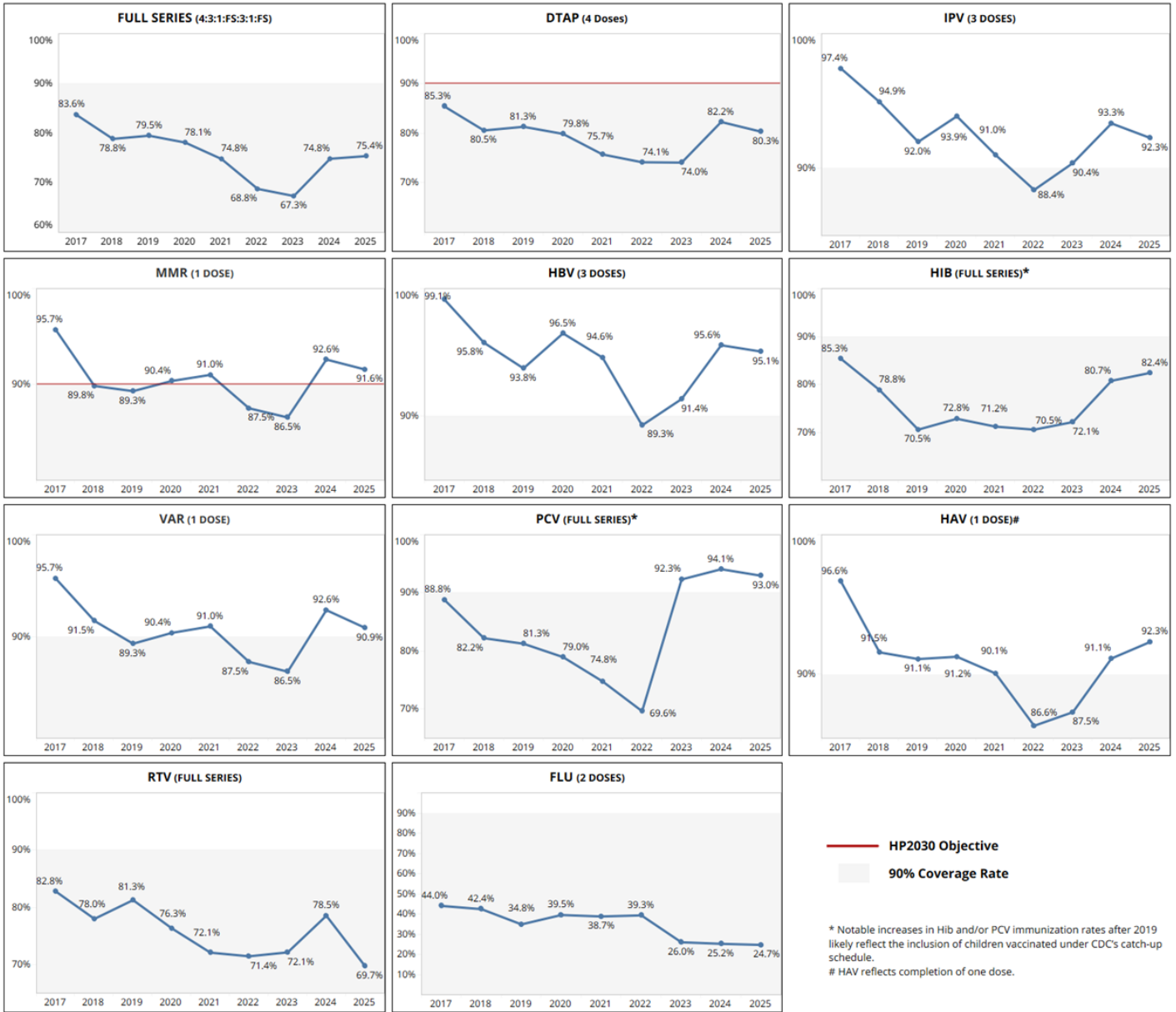
	2024 (n=135)		2025 (n=142)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up to Date (UTD):						
UTD immunization rate [*] (as reported to TennIIS)	42.2 ± 8.4		31.7 ± 7.7 ↓		35.6 ± 2.3	
UTD immunization rate [*] (with data collection)	74.8 ± 7.4		75.4 ± 7.2 ↑		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	82.2 ± 6.5		80.3 ± 6.6 ↓		79.4 ± 1.9	
IPV (3 Doses)	93.3 ± 4.3		92.3 ± 4.5 ↓		90.1 ± 1.4	
MMR (1 Dose)	92.6 ± 4.5		91.5 ± 4.6 ↓		88.6 ± 1.5	
HBV (3 Doses)	95.6 ± 3.5		95.1 ± 3.6 ↓		91.9 ± 1.3	
HBV, Birth Dose	80.0 ± 6.8		77.5 ± 7.0 ↓		76.0 ± 2.0	
Hib (Full Series)	80.7 ± 6.8		82.4 ± 6.3 ↑		85.2 ± 1.7	
VAR (1 Dose)	92.6 ± 4.5		90.8 ± 4.8 ↓		88.3 ± 1.5	
PCV (Full Series)	94.1 ± 4.0		93.0 ± 4.3 ↓		92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	74.8 ± 7.4		75.4 ± 7.2 ↑		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	91.1 ± 4.9		92.3 ± 4.5 ↑		88.3 ± 1.5	
RTV (Full Series)	78.5 ± 7.0		69.7 ± 7.6 ↓		75.1 ± 2.1	
FLU (2 Doses)	25.2 ± 7.4		24.6 ± 7.2 ↓		34.7 ± 2.3	
RSV (1 Dose) [*]	- ± -		1.4 ± 2.0 ↑		1.1 ± 0.5	
COVID-19 (Full Series) [‡]	5.2 ± 3.8		0.0 ± 0.0 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
^{*} Includes children up-to-date by ACIP-recommended catch-up schedule
[‡] Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference ($p < 0.05$) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 21-C illustrates the WTR trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill VPDIP's target of a 90% coverage rate.

Figure 21-C: Immunization Rates (%) by Series and Vaccine Antigen, WTR, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

Table 10-C and Table 10-D present the demographic breakdown of the WTR cohort along with UTD immunization rates by demographic group.

Due to small sample sizes and inherent data limitations, significant differences in UTD rates among certain demographic subgroups in 2025 are not reported for WTR.

Table 10-C: Risk Factors and Immunization Rates, WTR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates	
		WTR [†] n (%)	State [‡] n (%)	WTR (%) CI	STATE (%) CI
Race**	Black	25 17.6	237 14.2	68.0 ± 19.7	65.8 ± 6.1
	White	107 75.4	1236 73.9	75.7 ± 8.3	77.2 ± 2.3
	Other	10 7.0	199 11.9	sample size is too small to generate estimates	
Ethnicity*	Hispanic	7 4.9	218 13.0	sample size is too small to generate estimates	
	Non-Hispanic	135 95.1	1454 87.0	75.6 ± 7.3	75.5 ± 2.2
Sex*	Male	61 43.0	810 48.4	73.8 ± 11.4	75.9 ± 3.0
	Female	81 57.0	862 51.6	76.5 ± 9.4	76.8 ± 2.8
Siblings[†]	0	63 44.4	691 41.3	81.0 ± 10.0	82.2 ± 2.9
	1	36 25.4	540 32.3	69.4 ± 15.8	76.1 ± 3.6
	2+	43 30.3	441 26.4	72.1 ± 14.0	67.6 ± 4.4
Vaccination Source	Private Medical Provider	117 82.4	1409 84.3	78.6 ± 7.5	82.0 ± 2.0
	Health Department	4 2.8	24 1.4	sample size is too small to generate estimates	
	Both	17 12.0	148 8.9	70.6 ± 24.1	69.6 ± 7.5
	Unknown Source	4 2.8	91 5.4	sample size is too small to generate estimates	
Program Enrollment	TennCare Only	96 67.6	1075 64.3	76.0 ± 8.7	74.5 ± 2.6
	Not Enrolled	46 32.4	597 35.7	73.9 ± 13.2	79.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or
 (CI) = Confidence Interval, showing the range where the true value is likely to be
[†] Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Table 10-D: Parent Demographics and Immunization Rates, WTR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates	
		WTR [†] n (%)	State [‡] n (%)	WTR (%) CI	STATE (%) CI
Mother Age[†]	≤24	45 33.3	497 29.7	73.3 ± 13.4	76.5 ± 3.7
	25-34	85 63.0	978 58.5	75.3 ± 9.1	76.6 ± 2.7
	≥35	8 5.9	197 11.8	sample size is too small to generate estimates	
Father Age[†]	≤24	35 25.9	283 16.9	71.4 ± 15.7	75.3 ± 5.1
	25-34	66 48.9	863 51.6	74.2 ± 10.8	77.3 ± 2.8
	≥35	21 15.6	355 21.2	81.0 ± 18.3	77.7 ± 4.3
	Unknown	20 14.8	171 10.2	80.0 ± 19.2	70.8 ± 6.9
Mother Education*	< High School Diploma/ GED	14 10.4	206 12.3	71.4 ± 27.1	71.8 ± 6.2
	High School Diploma/ GED	47 34.8	478 28.6	74.5 ± 12.9	72.0 ± 4.0
	> High School Diploma/ GED	81 60.0	983 58.8	76.5 ± 9.4	79.5 ± 2.5
Father Education*	< High School Diploma/ GED	14 10.4	186 11.1	92.9 ± 15.4	78.5 ± 6.0
	High School Diploma/ GED	53 39.3	530 31.7	67.9 ± 13.0	73.0 ± 3.8
	> High School Diploma/ GED	51 37.8	760 45.5	76.5 ± 12.0	80.0 ± 2.9
	Unknown	24 17.8	196 11.7	79.2 ± 17.5	69.4 ± 6.5
Marriage Status*	Married	69 51.1	949 56.8	76.8 ± 10.2	77.7 ± 2.7
	Unmarried	73 54.1	722 43.2	74.0 ± 10.3	74.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or
 (CI) = Confidence Interval, showing the range where the true value is likely to be
[†] Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Madison County Region

Figure 22-A: Location of Madison County Region (JMR)

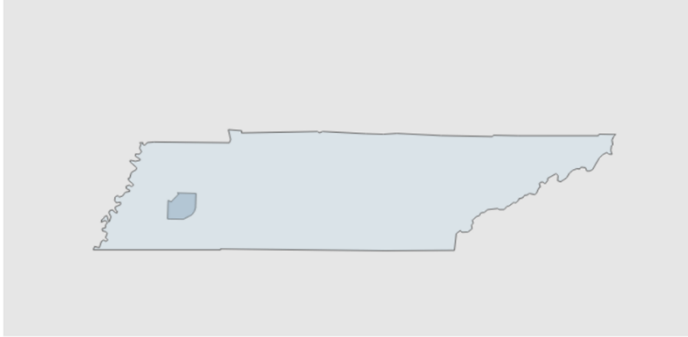


Figure 22-B: Sampling per County, JMR, 2025



Final Cohort Determination

The initial 2025 JMR sample included 149 children born between January and March of 2023 (Table 11-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 138. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a larger cohort and resulted in a higher response rate.

Immunization Rates

In JMR, the up-to-date (UTD) immunization rate by 24 months of age was 65.9%, which was lower than the 2024 rate (71.4%), and the state average (76.4%) (Table 11-B). The UTD immunization rate as reported to TennIS was 54.3%, lower than the 2024 rate (59.4%) but higher than the state rate (35.6%).

The vaccine-specific rates reveal no significant differences, and several decreases compared to the previous year and the state overall (Table 11-B). In this table, figures in red indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences (p<0.05) over the same period.

Immunization Administration

Of the 3,108 vaccine doses administered to the JMR children, 2,594 (83.5%) were administered by private providers, 198 (6.4%) were administered by public health providers and 316 (10.2%) were administered by an unknown source.

Table 11-A: 24-Month-Old Survey Sampling, JMR, 2025

	2024	2025	State 2025
Original sample (n)	147	149	1953
Ineligible (n)	8 (4.1%)	5 (3.4%)	122 (6.2%)
Refused Participation (n)	2 (5.0%)	2 (1.3%)	51 (2.6%)
Eligible sample (n)	137	142	1780
Unable to locate† (n)	4 (0.0%)	4 (2.8%)	108 (6.1%)
Final sample (n)	133	138	1672
Response Rate (%)*	97.1	97.2	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 † Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
 * Response Rate (%) is the number of survey responses from eligible children

Table 11-B: Immunization Rates by Series and Vaccine, JMR, 2025

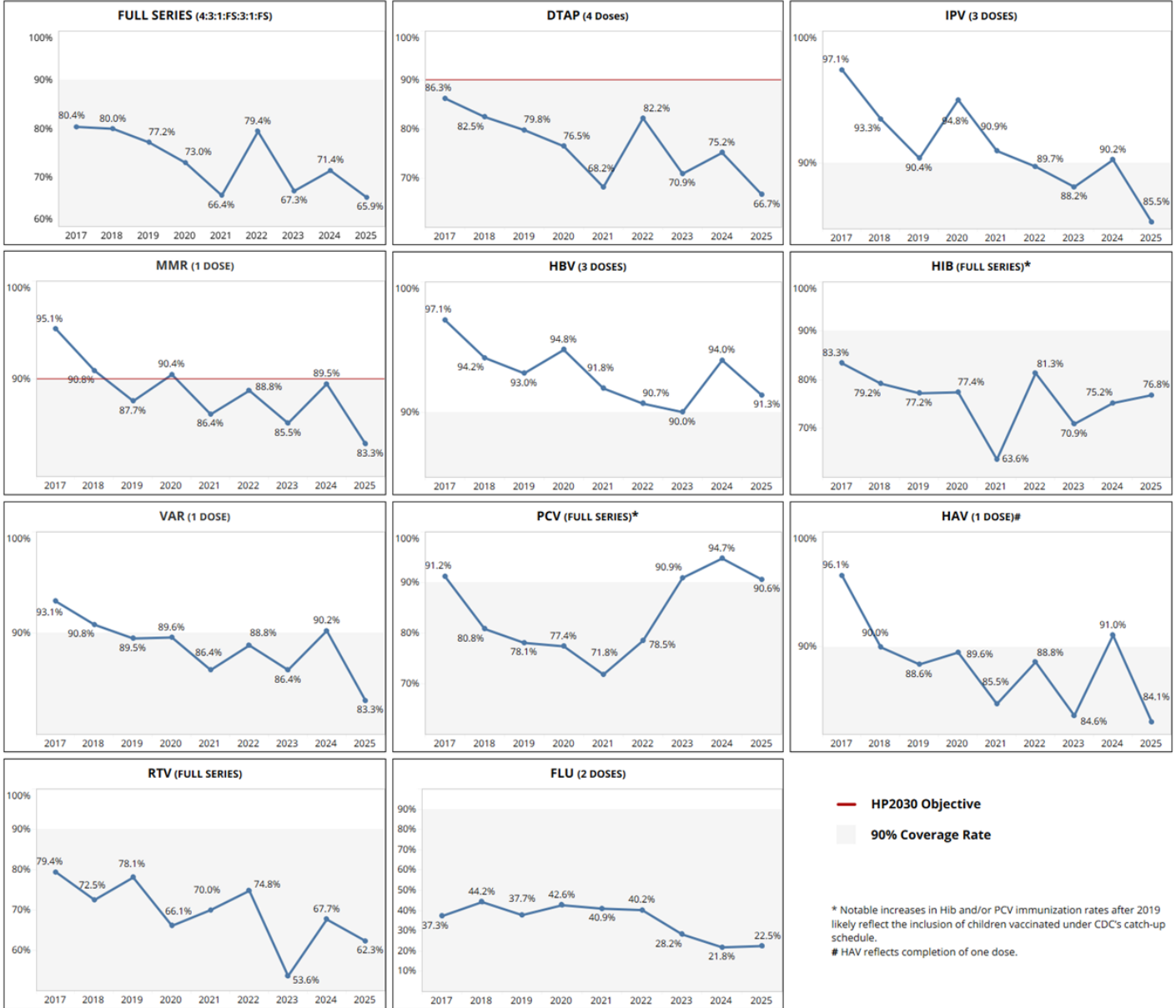
	2024 (n=133)		2025 (n=138)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up to Date (UTD):						
UTD immunization rate* (as reported to TennIS)	59.4 ± 8.5		54.3 ± 8.4 ↓		35.6 ± 2.3	
UTD immunization rate* (with data collection)	71.4 ± 7.8		65.9 ± 8.0 ↓		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	75.2 ± 7.4		66.7 ± 8.0 ↓		79.4 ± 1.9	
IPV (3 Doses)	90.2 ± 5.1		85.5 ± 5.9 ↓		90.1 ± 1.4	
MMR (1 Dose)	89.5 ± 5.3		83.3 ± 6.3 ↓		88.6 ± 1.5	
HBV (3 Doses)	94.0 ± 4.1		91.3 ± 4.8 ↓		91.9 ± 1.3	
HBV, Birth Dose	74.4 ± 7.5		75.4 ± 7.3 ↑		76.0 ± 2.0	
Hib (Full Series)	75.2 ± 7.4		76.8 ± 7.1 ↑		85.2 ± 1.7	
VAR (1 Dose)	90.2 ± 5.1		83.3 ± 6.3 ↓		88.3 ± 1.5	
PCV (Full Series)	94.7 ± 3.9		90.6 ± 4.9 ↓		92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	71.4 ± 7.8		65.9 ± 8.0 ↓		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	91.0 ± 4.9		84.1 ± 6.2 ↓		88.3 ± 1.5	
RTV (Full Series)	67.7 ± 8.1		62.3 ± 8.2 ↓		75.1 ± 2.1	
FLU (2 Doses)	21.8 ± 7.1		22.5 ± 7.1 ↑		34.7 ± 2.3	
RSV (1 Dose)*	- ± -		0.0 ± 0.0 -		1.1 ± 0.5	
COVID-19 (Full Series)	1.5 ± 2.1		0.0 ± 0.0 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 * Includes children up-to-date by ACIP-recommended catch-up schedule
 † Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
 Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference (p < 0.05) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 22-C illustrates the 2025 trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents the VPDIP's target of a 90% coverage rate.

Figure 22-C: Immunization Rates (%) by Series and Vaccine Antigen, JMR, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

The demographic breakdown of the JMR cohort alongside the UTD immunization rates by demographic groups are shown in Table 11-C and 11-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for JMR.

Table 11-C: Risk Factors and Immunization Rates, JMR, 2025

Group	Subgroup	Demographic Breakdown				UTD Immunization Rates			
		JMR [†]		State [‡]		JMR		STATE	
		n	(%)	n	(%)	(%)	CI	(%)	CI
Race**	Black	59	42.8	237	14.2	59.3 ± 12.9		65.8 ± 6.1	
	White	64	46.4	1236	73.9	73.4 ± 11.1		77.2 ± 2.3	
	Other	15	10.9	199	11.9	60.0 ± 28.1		83.9 ± 5.1	
Ethnicity**	Hispanic	15	10.9	218	13.0	66.7 ± 27.0		82.1 ± 5.1	
	Non-Hispanic	123	89.1	1454	87.0	65.9 ± 8.5		75.5 ± 2.2	
Sex*	Male	64	46.4	810	48.4	60.9 ± 12.3		75.9 ± 3.0	
	Female	74	53.6	862	51.6	70.3 ± 10.7		76.8 ± 2.8	
Siblings*	0	51	37.0	691	41.3	68.6 ± 13.2		82.2 ± 2.9	
	1	42	30.4	540	32.3	61.9 ± 15.3		76.1 ± 3.6	
	2+	45	32.6	441	26.4	66.7 ± 14.3		67.6 ± 4.4	
Vaccination Source	Private Medical Provider	109	79.0	1409	84.3	69.7 ± 8.8		82.0 ± 2.0	
	Health Department	4	2.9	24	1.4	sample size is too small to generate estimates		58.3 ± 21.3	
	Both	19	13.8	148	8.9	57.9 ± 24.4		69.6 ± 7.5	
	Unknown Source	6	4.3	91	5.4	sample size is too small to generate estimates		4.4 ± 4.3	
Program Enrollment	TennCare	103	74.6	1075	64.3	62.1 ± 9.5		74.5 ± 2.6	
	Not Enrolled	35	25.4	597	35.7	77.1 ± 14.6		79.7 ± 3.2	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 † Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 ‡ Does not distinguish between Hispanic whites and non-Hispanic whites

Table 11-D: Parent Demographics and Immunization Rates, JMR, 2025

Group	Subgroup	Demographic Breakdown				UTD Immunization Rates			
		JMR [†]		State [‡]		JMR		STATE	
		n	(%)	n	(%)	(%)	CI	(%)	CI
Mother Age*	≤24	41	29.7	497	29.7	53.7 ± 15.9		76.5 ± 3.7	
	25-34	82	59.4	978	58.5	72.0 ± 9.9		76.6 ± 2.7	
	≥35	15	10.9	197	11.8	66.7 ± 27.0		75.1 ± 6.1	
Father Age*	≤24	19	13.8	283	16.9	68.1 ± 23.0		75.3 ± 5.1	
	25-34	62	44.9	863	51.6	61.5 ± 12.2		77.3 ± 2.8	
	≥35	23	16.7	355	21.2	82.6 ± 16.8		77.7 ± 4.3	
	Unknown	34	24.6	171	10.2	55.9 ± 17.6		70.8 ± 6.9	
Mother Education*	< High School Diploma/ GED	18	13.0	206	12.3	38.9 ± 24.9		71.8 ± 6.2	
	High School Diploma/ GED	52	37.7	478	28.6	59.6 ± 13.8		72.0 ± 4.0	
	> High School Diploma/ GED	68	49.3	983	58.8	77.9 ± 10.1		79.5 ± 2.5	
Father Education*	< High School Diploma/ GED	11	8.0	186	11.1	72.7 ± 31.4		78.5 ± 6.0	
	High School Diploma/ GED	39	28.3	530	31.7	61.5 ± 16.0		73.0 ± 3.8	
	> High School Diploma/ GED	48	34.8	760	45.5	77.1 ± 12.3		80.0 ± 2.9	
	Unknown	40	29.0	196	11.7	55.0 ± 16.1		69.4 ± 6.5	
Marriage Status*	Married	50	36.2	949	56.8	76.0 ± 12.3		77.7 ± 2.7	
	Unmarried	88	63.8	722	43.2	60.2 ± 10.4		74.7 ± 3.2	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 † Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 ‡ Does not distinguish between Hispanic whites and non-Hispanic whites

South Central Region

Figure 23-A: Location of South Central Region (SCR)

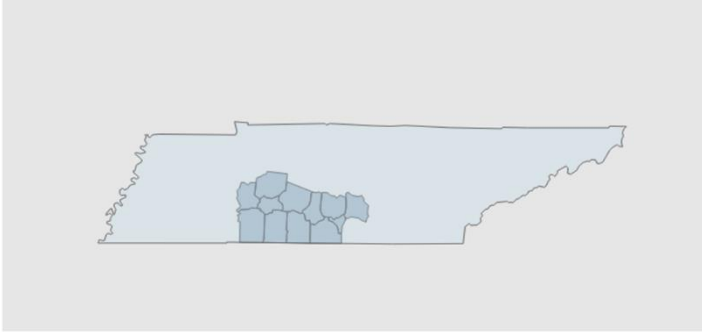
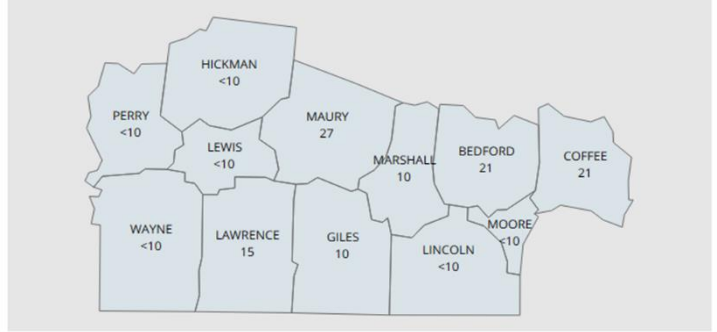


Figure 23-B: Sampling per County, SCR, 2025



Final Cohort Determination

The initial 2025 SCR sample included 149 children born between January and March of 2023 (Table 12-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 125. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a smaller cohort but resulted in a higher response rate.

Immunization Rates

In SCR, the up-to-date (UTD) immunization rate by 24 months of age was 74.6%, which was higher than the 2024 rate (74.0%) but lower than the state average (76.4%) (Table 12-B). The UTD immunization rate as reported to TennIIS was 50.0%, lower than the 2024 rate (56.7%) but higher than the state rate (35.6%).

The vaccine-specific rates reveal no significant difference, and several decreases compared to the previous year and the state overall (Table 12-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, **while italicized and bolded** figures highlight statistically significant differences (p<0.05) over the same period.

Immunization Administration

Of the 2,947 vaccine doses administered to the SCR children, 2,724 (92.4%) were administered by private providers, 58 (2.0%) were administered by public health providers and 165 (5.6%) were administered by an unknown source.

Table 12-A: 24-Month-Old Survey Sampling, SCR, 2025

	2024	2025	State 2025
Original sample (n)	149	149	1953
Ineligible (n)	7 (4.7%)	7 (4.7%)	122 (6.2%)
Refused Participation (n)	4 (3.7%)	11 (7.4%)	51 (2.6%)
Eligible sample (n)	138	131	1780
Unable to locate [†] (n)	11 (8.0%)	6 (4.6%)	108 (6.1%)
Final sample (n)	127	125	1672
Response Rate (%)[*]	92.0	95.4	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
[†] Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
^{*} Response Rate (%) is the number of survey responses from eligible children

Table 12-B: Immunization Rates by Series and Vaccine, SCR, 2025

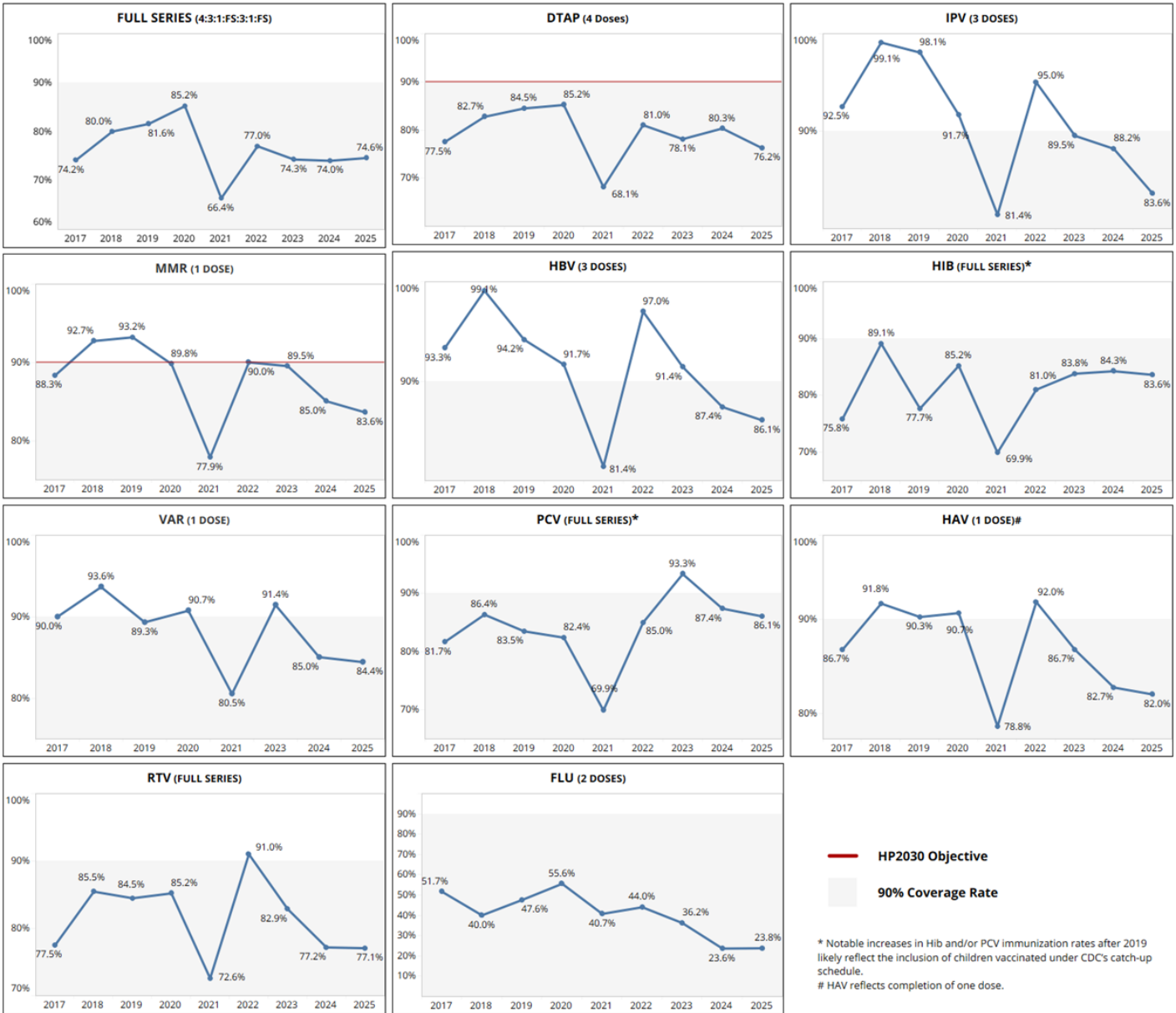
	2024 (n=127)		2025 (n=125)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up to Date (UTD):						
UTD immunization rate[*] (as reported to TennIIS)	56.7 ± 8.7		50.0 ± 9.0 ↓		35.6 ± 2.3	
UTD immunization rate[*] (with data collection)	74.0 ± 7.7		74.6 ± 7.8 ↑		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	80.3 ± 7.0		76.2 ± 7.7 ↓		79.4 ± 1.9	
IPV (3 Doses)	88.2 ± 5.7		83.6 ± 6.7 ↓		90.1 ± 1.4	
MMR (1 Dose)	85.0 ± 6.3		83.6 ± 6.7 ↓		88.6 ± 1.5	
HBV (3 Doses)	87.4 ± 5.9		86.1 ± 6.2 ↓		91.9 ± 1.3	
HBV, Birth Dose	78.0 ± 7.3		68.0 ± 8.4 ↓		76.0 ± 2.0	
Hib (Full Series)	84.3 ± 6.4		83.6 ± 6.7 ↓		85.2 ± 1.7	
VAR (1 Dose)	85.0 ± 6.3		84.4 ± 6.5 ↓		88.3 ± 1.5	
PCV (Full Series)	87.4 ± 5.9		86.1 ± 6.2 ↓		92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	74.0 ± 7.7		74.6 ± 7.8 ↑		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	82.7 ± 6.7		82.0 ± 6.9 ↓		88.3 ± 1.5	
RTV (Full Series)	77.2 ± 7.4		77.0 ± 7.6 ↓		75.1 ± 2.1	
FLU (2 Doses)	23.6 ± 7.5		23.8 ± 7.7 ↑		34.7 ± 2.3	
RSV (1 Dose) [‡]	- ± -		0.0 ± 0.0 -		1.1 ± 0.5	
COVID-19 (Full Series)	1.6 ± 2.2		0.0 ± 0.0 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
[†] Includes children up-to-date by ACIP-recommended catch-up schedule
[‡] Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference (p < 0.05) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 23-C illustrates the SCR trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents the VPDIP's target of a 90% coverage rate.

Figure 23-C: Immunization Rates (%) by Series and Vaccine Antigen, SCR, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

The demographic breakdown of the SCR cohort alongside the UTD immunization rates by demographic groups are shown in Table 12-C and 12-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for SCR.

Table 12-C: Risk Factors and Immunization Rates, SCR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates	
		SCR [¶] n (%)	State [¶] n (%)	SCR (%) CI	STATE (%) CI
Race**	Black	9 7.2	237 14.2	sample size is too small to generate estimates	
	White	98 78.4	1236 73.9	74.5 ± 8.8	65.8 ± 6.1
	Other	15 12.0	199 11.9	80.0 ± 22.9	77.2 ± 2.3
Ethnicity**	Hispanic	16 12.8	218 13.0	75.0 ± 23.8	83.9 ± 5.1
	Non-Hispanic	106 84.8	1454 87.0	74.5 ± 8.4	82.1 ± 5.1
Sex*	Male	52 41.6	810 48.4	73.1 ± 12.5	75.9 ± 3.0
	Female	70 56.0	862 51.6	75.7 ± 10.3	76.8 ± 2.8
Siblings*	0	46 36.8	691 41.3	82.6 ± 11.4	82.2 ± 2.9
	1	39 31.2	540 32.3	84.6 ± 11.8	76.1 ± 3.6
	2+	31 24.8	441 26.4	54.1 ± 16.8	67.6 ± 4.4
Vaccination Source	Private Medical Provider	85 68.0	1409 84.3	89.4 ± 6.7	82.0 ± 2.0
	Health Department	8 6.4	24 1.4	sample size is too small to generate estimates	
	Both	14 11.2	148 8.9	85.7 ± 21.0	58.3 ± 21.3
	Unknown Source	15 12.0	91 5.4	0.0 ± 0.0	69.6 ± 7.5
Program Enrollment	TennCare Only	72 57.6	1075 64.3	73.6 ± 10.4	4.4 ± 4.3
	Not Enrolled	50 40.0	597 35.7	76.0 ± 12.3	74.5 ± 2.6

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ¶ Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Table 12-D: Parent Demographics and Immunization Rates, SCR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates	
		SCR [¶] n (%)	State [¶] n (%)	SCR (%) CI	STATE (%) CI
Mother Age*	≤24	33 26.4	497 29.7	78.8 ± 14.7	76.5 ± 3.7
	25-34	80 64.0	978 58.5	73.9 ± 9.9	76.6 ± 2.7
	≥35	9 7.2	197 11.8	sample size is too small to generate estimates	
Father Age*	≤24	18 14.4	283 16.9	77.8 ± 12.7	75.1 ± 6.1
	25-34	70 56.0	863 51.6	75.7 ± 10.3	75.3 ± 5.1
	≥35	25 20.0	355 21.2	72.0 ± 18.9	77.3 ± 2.8
	Unknown	9 7.2	171 10.2	sample size is too small to generate estimates	
Mother Education*	< High School Diploma/ GED	14 11.2	206 12.3	57.1 ± 29.7	71.8 ± 6.2
	High School Diploma/ GED	40 32.0	478 28.6	75.0 ± 14.0	72.0 ± 4.0
	> High School Diploma/ GED	68 54.4	983 58.8	77.9 ± 10.1	79.5 ± 2.5
Father Education*	< High School Diploma/ GED	18 14.4	186 11.1	55.6 ± 25.4	78.5 ± 6.0
	High School Diploma/ GED	47 37.6	530 31.7	83.0 ± 11.2	73.0 ± 3.8
	> High School Diploma/ GED	48 38.4	760 45.5	75.0 ± 12.7	80.0 ± 2.9
	Unknown	9 7.2	196 11.7	sample size is too small to generate estimates	
Marriage Status*	Married	79 63.2	949 56.8	73.4 ± 10.0	69.4 ± 6.5
	Unmarried	43 34.4	722 43.2	76.7 ± 13.2	74.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ¶ Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Mid Cumberland Region

Figure 24-A: Location of Mid-Cumberland Region (MCR)

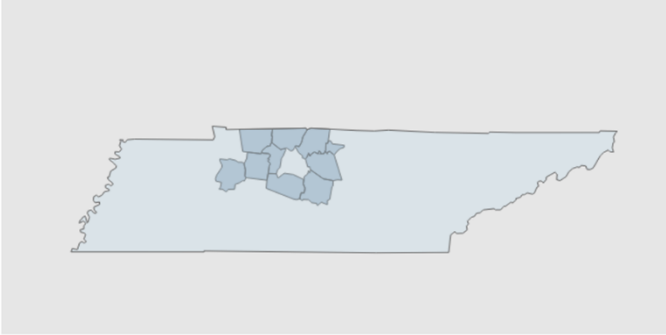
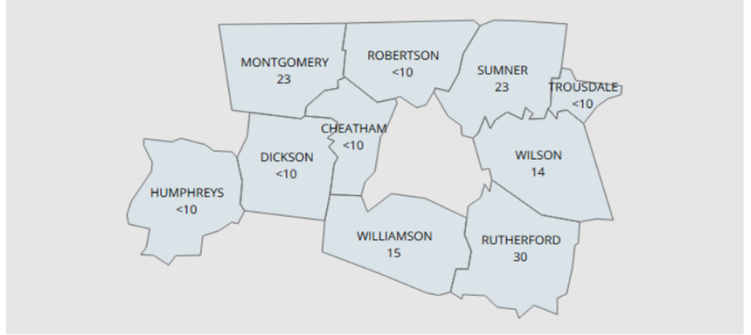


Figure 24-B: Sampling per County, MCR, 2025



Final Cohort Determination

The initial 2025 MCR sample included 150 children born between January and March of 2023 (Table 13-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 122. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a smaller cohort and had a lower response rate.

Immunization Rates

In MCR, the up-to-date (UTD) immunization rate by 24 months of age was 85.2%, which was significantly higher than the 2024 rate (72.8%), and higher than the state average (76.4%) (Table 13-B). The UTD immunization rate as reported to TennIS was 48.4%, higher than the 2024 rate (45.6%) and higher than the state rate (35.6%).

The vaccine-specific rates reveal three significant differences, and several decreases compared to the previous year and the state overall (Table 13-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences (p<0.05) over the same period.

Immunization Administration

Of the 2,947 vaccine doses administered to the MCR children, 2,724 (92.4%) were administered by private providers, 58 (2.0%) were administered by public health providers and 165 (5.6%) were administered by an unknown source.

Table 13-A: 24-Month-Old Survey Sampling, MCR, 2025

	2024	2025	State 2025
Original sample (n)	149	150	1953
Ineligible (n)	15 (10.1%)	10 (6.7%)	122 (6.2%)
Refused Participation (n)	0 (0.0%)	9 (6.0%)	51 (2.6%)
Eligible sample (n)	134	131	1780
Unable to locate [†] (n)	9 (6.7%)	9 (6.9%)	108 (6.1%)
Final sample (n)	125	122	1672
Response Rate (%)[*]	93.3	93.1	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
[†] Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
^{*} Response Rate (%) is the number of survey responses from eligible children

Table 13-B: Immunization Rates by Series and Vaccine, MCR, 2025

	2024 (n=125)		2025 (n=122)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up to Date (UTD):						
UTD immunization rate[*] (as reported to TennIS)	45.6 ± 8.9		48.4 ± 9.0 ↑		35.6 ± 2.3	
UTD immunization rate[*] (with data collection)	72.8 ± 7.9		85.2 ± 6.4 ↑		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	88.8 ± 5.6		87.7 ± 5.9 ↑		79.4 ± 1.9	
IPV (3 Doses)	96.0 ± 3.5		93.4 ± 4.5 ↓		90.1 ± 1.4	
MMR (1 Dose)	96.0 ± 3.5		92.6 ± 4.7 ↓		88.6 ± 1.5	
HBV (3 Doses)	95.2 ± 3.8		95.1 ± 3.9 ↓		91.9 ± 1.3	
HBV, Birth Dose	71.2 ± 8.1		80.3 ± 7.2 ↑		76.0 ± 2.0	
Hib (Full Series)	81.6 ± 6.9		91.0 ± 5.2 ↑		85.2 ± 1.7	
VAR (1 Dose)	92.0 ± 4.8		92.6 ± 4.7 ↑		88.3 ± 1.5	
PCV (Full Series)	95.7 ± 3.8		92.6 ± 4.7 ↓		92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	72.8 ± 7.9		85.2 ± 6.4 ↑		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	95.2 ± 3.8		91.8 ± 4.9 ↓		88.3 ± 1.5	
RTV (Full Series)	80.8 ± 7.0		82.8 ± 6.8 ↑		75.1 ± 2.1	
FLU (2 Doses)	52.0 ± 8.9		51.6 ± 9.0 ↓		34.7 ± 2.3	
RSV (1 Dose) [‡]	- ± -		1.6 ± 2.3 ↑		1.1 ± 0.5	
COVID-19 (Full Series)	6.4 ± 4.4		0.8 ± 1.6 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
^{*} Includes children up-to-date by ACIP-recommended catch-up schedule
[‡] Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference (p < 0.05) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 24-C illustrates the MCR trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill VPDIP's target of a 90% coverage rate.

Figure 24-C: Immunization Rates (%) by Series and Vaccine Antigen, MCR, 2017-2025



Demographic Information

The demographic breakdown of the MCR cohort alongside the UTD immunization rates by demographic groups are shown in Table 13-C and 13-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for MCR.

Table 13-C: Risk Factors and Immunization Rates, MCR, 2025

Group	Subgroup	Demographic		UTD Immunization Rates			
		MCR ^Y		State ^Y		MCR	
		n	(%)	n	(%)	(%)	CI
Race**							
	Black	14	11.5	237	14.2	78.6 ± 24.6	65.8 ± 6.1
	White	90	73.8	1236	73.9	86.7 ± 7.2	77.2 ± 2.3
	Other	18	14.8	199	11.9	83.3 ± 19.1	83.9 ± 5.1
Ethnicity**							
	Hispanic	20	16.4	218	13.0	85.0 ± 17.1	82.1 ± 5.1
	Non-Hispanic	102	83.6	1454	87.0	85.3 ± 7.0	75.5 ± 2.2
Sex*							
	Male	48	39.3	810	48.4	93.8 ± 7.1	75.9 ± 3.0
	Female	74	60.7	862	51.6	79.7 ± 9.4	76.8 ± 2.8
Siblings*							
	0	54	44.3	691	41.3	90.7 ± 9.0	82.2 ± 2.9
	1	39	32.0	540	32.3	82.1 ± 12.6	76.1 ± 3.6
	2+	29	23.8	441	26.4	79.3 ± 15.7	67.6 ± 4.4
Vaccination Source							
	Private Medical Provider	106	86.9	1409	84.3	88.7 ± 6.1	82.0 ± 2.0
	Health Department	-	-	24	1.4	sample size is too small to generate estimates	58.3 ± 21.3
	Both	12	9.8	148	8.9	75.0 ± 28.7	69.6 ± 7.5
	Unknown Source	4	3.3	91	5.4	sample size is too small to generate estimates	4.4 ± 4.3
Program Enrollment							
	TennCare Only	62	50.8	1075	64.3	82.3 ± 9.8	74.5 ± 2.6
	Not Enrolled	60	49.2	597	35.7	88.3 ± 8.4	79.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
^Y Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 † Does not distinguish between Hispanic whites and non-Hispanic whites

Table 13-D: Parent Demographics and Immunization Rates, MCR, 2025

Group	Subgroup	Demographic		UTD Immunization Rates			
		MCR ^X		State ^X		MCR	
		n	(%)	n	(%)	(%)	CI
Mother Age*							
	≤24	34	27.9	497	29.7	76.5 ± 15.0	76.5 ± 3.7
	25-34	74	60.7	978	58.5	87.8 ± 7.6	76.6 ± 2.7
	≥35	14	11.5	197	11.8	92.9 ± 15.4	75.1 ± 6.1
Father Age*							
	≤24	18	14.8	283	16.9	77.8 ± 21.3	75.3 ± 5.1
	25-34	69	56.6	863	51.6	87.0 ± 8.1	77.3 ± 2.8
	≥35	27	22.1	355	21.2	92.6 ± 10.6	77.7 ± 4.3
	Unknown	8	6.6	171	10.2	sample size is too small to generate estimates	70.8 ± 6.9
Mother Education*							
	< High School Diploma/ GED	9	7.4	206	12.3	sample size is too small to generate estimates	71.8 ± 6.2
	High School Diploma/ GED	29	23.8	478	28.6	86.2 ± 13.3	72.0 ± 4.0
	> High School Diploma/ GED	84	68.9	983	58.8	84.5 ± 7.9	79.5 ± 2.5
Father Education*							
	< High School Diploma/ GED	6	4.9	186	11.1	sample size is too small to generate estimates	78.5 ± 6.0
	High School Diploma/ GED	37	30.3	530	31.7	89.2 ± 10.5	73.0 ± 3.8
	> High School Diploma/ GED	71	58.2	760	45.5	84.5 ± 8.6	80.0 ± 2.9
	Unknown	8	6.6	196	11.7	sample size is too small to generate estimates	69.4 ± 6.5
Marriage Status*							
	Married	81	66.4	949	56.8	85.2 ± 7.9	77.7 ± 2.7
	Unmarried	41	33.6	722	43.2	85.4 ± 11.3	74.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
^Y Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 † Does not distinguish between Hispanic whites and non-Hispanic whites

Nashville-Davidson County Region

Figure 25-A: Location of Nashville-Davidson County Region (NDR)

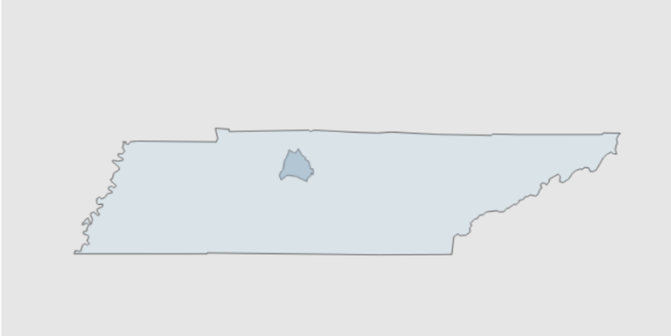


Figure 25-B: Sampling per County, NDR, 2025



Final Cohort Determination

The initial 2025 NDR sample included 151 children born between January and March of 2023 (14-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 124. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a smaller cohort which resulted in a lower response rate.

Immunization Rates

In NDR, the up-to-date (UTD) immunization rate by 24 months of age was 80.6%, which was lower than the 2024 rate (77.3%), but higher than the state average (76.4%) (Table 14-B). The UTD immunization rate as reported to TennNIS was 63.7%, higher than the 2024 rate (59.1%) and the state rate (35.6%).

The vaccine-specific rates reveal three significant differences, and several decreases compared to the previous year and the state overall (Table 14-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences ($p < 0.05$) over the same period.

Immunization Administration

Of the 3,154 vaccine doses administered to the NDR children, 2,964 (94.0%) were administered by private providers, 83 (2.6%) were administered by public health providers and 107 (3.4%) were administered by an unknown source.

Table 14-A: 24-Month-Old Survey Sampling, NDR, 2025

	2024	2025	State 2025
Original sample (n)	150	151	1953
Ineligible (n)	13 (8.7%)	15 (9.9%)	122 (6.2%)
Refused Participation (n)	1 (7.7%)	1 (0.7%)	51 (2.6%)
Eligible sample (n)	136	135	1780
Unable to locate [†] (n)	4 (2.9%)	11 (8.1%)	108 (6.1%)
Final sample (n)	132	124	1672
Response Rate (%)	97.1	91.9	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
[†] Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
 * Response Rate (%) is the number of survey responses from eligible children

Table 14-B: Immunization Rates by Series and Vaccine, NDR, 2024

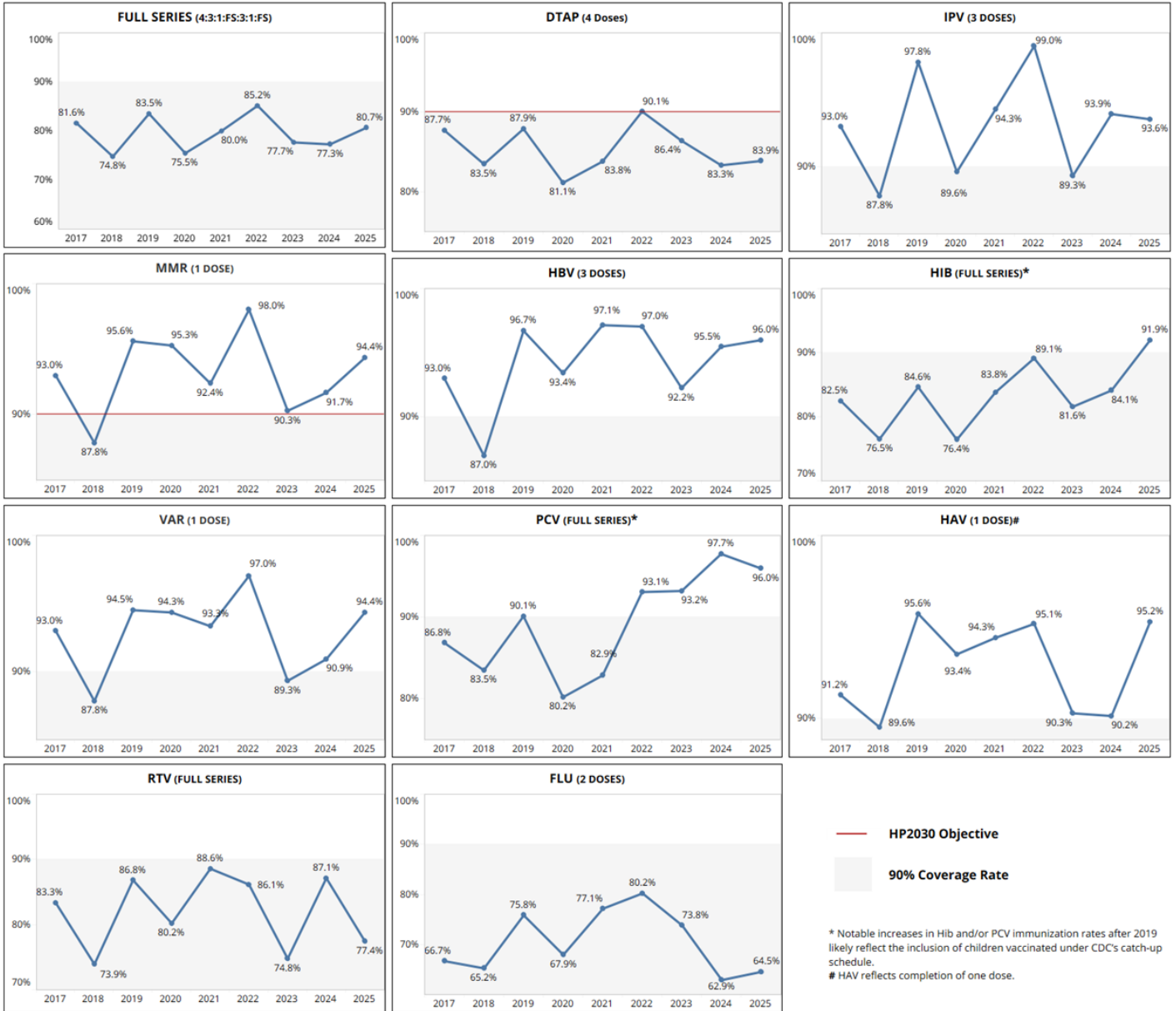
	2024 (n=132)		2025 (n=124)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up to Date (UTD):						
UTD immunization rate* (as reported to TennNIS)	59.1 ± 8.5		63.7 ± 8.6	↑	35.6 ± 2.3	
UTD immunization rate* (with data collection)	77.3 ± 7.2		80.6 ± 7.1	↑	76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	83.3 ± 6.4		83.9 ± 6.6	↑	79.4 ± 1.9	
IPV (3 Doses)	93.9 ± 4.1		93.5 ± 4.4	↓	90.1 ± 1.4	
MMR (1 Dose)	91.7 ± 4.8		94.4 ± 4.1	↑	88.6 ± 1.5	
HBV (3 Doses)	95.5 ± 3.6		96.0 ± 3.5	↑	91.9 ± 1.3	
HBV, Birth Dose	82.6 ± 6.6		86.3 ± 6.1	↑	76.0 ± 2.0	
Hib (Full Series)	84.1 ± 7.6		91.9 ± 4.9	↑	85.2 ± 1.7	
VAR (1 Dose)	90.9 ± 5.0		94.4 ± 4.1	↑	88.3 ± 1.5	
PCV (Full Series)	97.7 ± 2.6		96.0 ± 3.5	↑	92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	77.3 ± 7.2		80.6 ± 7.1	↑	76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	90.2 ± 5.2		95.2 ± 3.8	↑	88.3 ± 1.5	
RTV (Full Series)	87.1 ± 5.8		77.4 ± 7.5	↓	75.1 ± 2.1	
FLU (2 Doses)	62.9 ± 8.4		64.5 ± 8.5	↑	34.7 ± 2.3	
RSV (1 Dose) [‡]	- ± -		4.8 ± 3.8	↑	1.1 ± 0.5	
COVID-19 (Full Series)	6.8 ± 4.4		8.1 ± 4.9	↑	0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
[‡] Includes children up-to-date by ACIP-recommended catch-up schedule
 † Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference (p < 0.05) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 25-C illustrates the NDR trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents VPDIP's target of a 90% coverage rate.

Figure 25-C: Immunization Rates (%) by Series and Vaccine Antigen, NDR, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

The demographic breakdown of the NDR cohort alongside the UTD immunization rates by demographic groups are shown in Table 14-C and 14-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for NDR.

Table 14-C: Risk Factors and Immunization Rates, NDR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates			
		NDR [¥] n (%)	State [¥] n (%)	NDR (%) CI		STATE (%) CI	
Race**							
	Black	26 21.0	237 14.2	80.8 ± 16.2		65.8 ± 6.1	
	White	65 52.4	1236 73.9	76.9 ± 10.5		77.2 ± 2.3	
	Other	33 26.6	199 11.9	87.9 ± 11.8		83.9 ± 5.1	
Ethnicity**							
	Hispanic	39 31.5	218 13.0	76.9 ± 13.8		82.1 ± 5.1	
	Non-Hispanic	85 68.5	1454 87.0	82.4 ± 8.3		75.5 ± 2.2	
Sex*							
	Male	57 46.0	810 48.4	82.5 ± 10.2		75.9 ± 3.0	
	Female	67 54.0	862 51.6	79.1 ± 10.0		76.8 ± 2.8	
Siblings*							
	0	54 43.5	691 41.3	81.5 ± 10.7		82.2 ± 2.9	
	1	36 29.0	540 32.3	77.8 ± 14.3		76.1 ± 3.6	
	2+	34 27.4	441 26.4	82.4 ± 13.5		67.6 ± 4.4	
Vaccination Source							
	Private Medical Provider	110 88.7	1409 84.3	83.6 ± 7.0		82.0 ± 2.0	
	Health Department	- -	24 1.4	sample size is too small to generate estimates			
	Both	12 9.7	148 8.9	66.7 ± 31.3		69.6 ± 7.5	
	Unknown Source	- -	91 5.4	sample size is too small to generate estimates			
Program Enrollment							
	TennCare Only	72 58.1	1075 64.3	77.8 ± 9.8		74.5 ± 2.6	
	Not Enrolled	52 41.9	597 35.7	84.6 ± 10.1		79.7 ± 3.2	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
[¥] Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Table 14-D: Parent Demographics and Immunization Rates, NDR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates			
		NDR [¥] n (%)	State [¥] n (%)	NDR (%) CI		STATE (%) CI	
Mother Age*							
	≤24	26 21.0	497 29.7	73.1 ± 18.3		76.5 ± 3.7	
	25-34	66 53.2	978 58.5	81.8 ± 9.6		76.6 ± 2.7	
	≥35	32 25.8	197 11.8	84.4 ± 13.3		75.1 ± 6.1	
Father Age*							
	≤24	13 10.5	283 16.9	61.5 ± 30.6		75.3 ± 5.1	
	25-34	54 43.5	863 51.6	77.8 ± 11.5		77.3 ± 2.8	
	≥35	43 34.7	355 21.2	88.4 ± 10.0		77.7 ± 4.3	
	Unknown	14 11.3	171 10.2	85.7 ± 21.0		70.8 ± 6.9	
Mother Education*							
	< High School Diploma/ GED	26 21.0	206 12.3	80.8 ± 16.2		71.8 ± 6.2	
	High School Diploma/ GED	25 20.2	478 28.6	84.0 ± 15.4		72.0 ± 4.0	
	> High School Diploma/ GED	73 58.9	983 58.8	79.5 ± 9.5		79.5 ± 2.5	
Father Education*							
	< High School Diploma/ GED	21 16.9	186 11.1	81.0 ± 18.3		78.5 ± 6.0	
	High School Diploma/ GED	23 18.5	530 31.7	82.6 ± 16.8		73.0 ± 3.8	
	> High School Diploma/ GED	66 53.2	760 45.5	78.8 ± 10.1		80.0 ± 2.9	
	Unknown	14 11.3	196 11.7	85.7 ± 21.0		69.4 ± 6.5	
Marriage Status*							
	Married	72 58.1	949 56.8	86.1 ± 8.2		77.7 ± 2.7	
	Unmarried	52 41.9	722 43.2	73.1 ± 12.5		74.7 ± 3.2	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
[¥] Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Upper-Cumberland Region

Figure 26-A: Location of Upper-Cumberland Region (UCR)

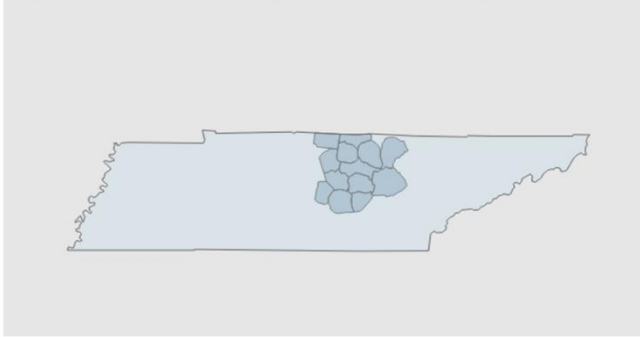
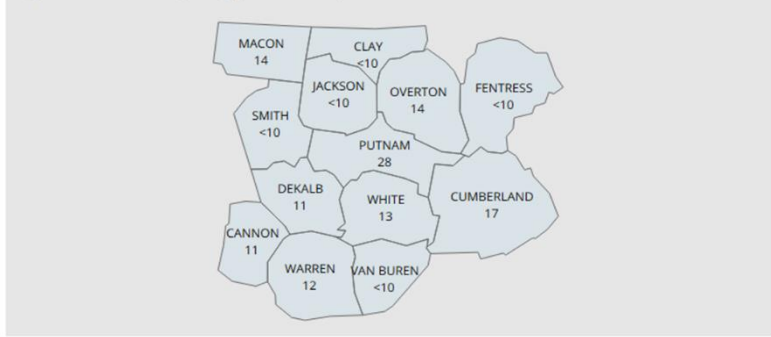


Figure 26-B: Sampling per County, UCR, 2025



Final Cohort Determination

The initial 2025 UCR sample included 150 children born between January and March of 2023 (Table 15-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 143. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a smaller cohort but achieved a higher response rate.

Immunization Rates

In UCR, the up-to-date (UTD) immunization rate by 24 months of age was 65.0%, which was higher than the 2024 rate (59.3%) but lower than the state average (76.4%) (Table 15-B). The UTD immunization rate as reported to TennNIS was 28.0%, lower than the 2024 rate (35.9%) and the state rate (35.6%).

The vaccine-specific rates reveal two significant differences, and several decreases compared to the previous year and the state overall (Table 15-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences ($p < 0.05$) over the same period.

Immunization Administration

Of the 3,050 vaccine doses administered to the UCR children, 2,734 (89.6%) were administered by private providers, 165 (5.4%) were administered by public health providers and 151 (5.0%) were administered by an unknown source.

Table 15-A: 24-Month-Old Survey Sampling, UCR, 2025

	2024	2024	State 2025
Original sample (n)	151	150	1953
Ineligible (n)	3 (2.0%)	6 (4.0%)	122 (6.2%)
Refused Participation (n)	2 (1.3%)	1 (0.7%)	51 (2.6%)
Eligible sample (n)	146	143	1780
Unable to locate [†] (n)	1 (0.7%)	0 (0.0%)	108 (6.1%)
Final sample (n)	145	143	1672
Response Rate (%)[*]	99.3	100.0	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
[†] Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
^{*} Response Rate (%) is the number of survey responses from eligible children

Table 15-B: Immunization Rates by Series and Vaccine, UCR, 2025

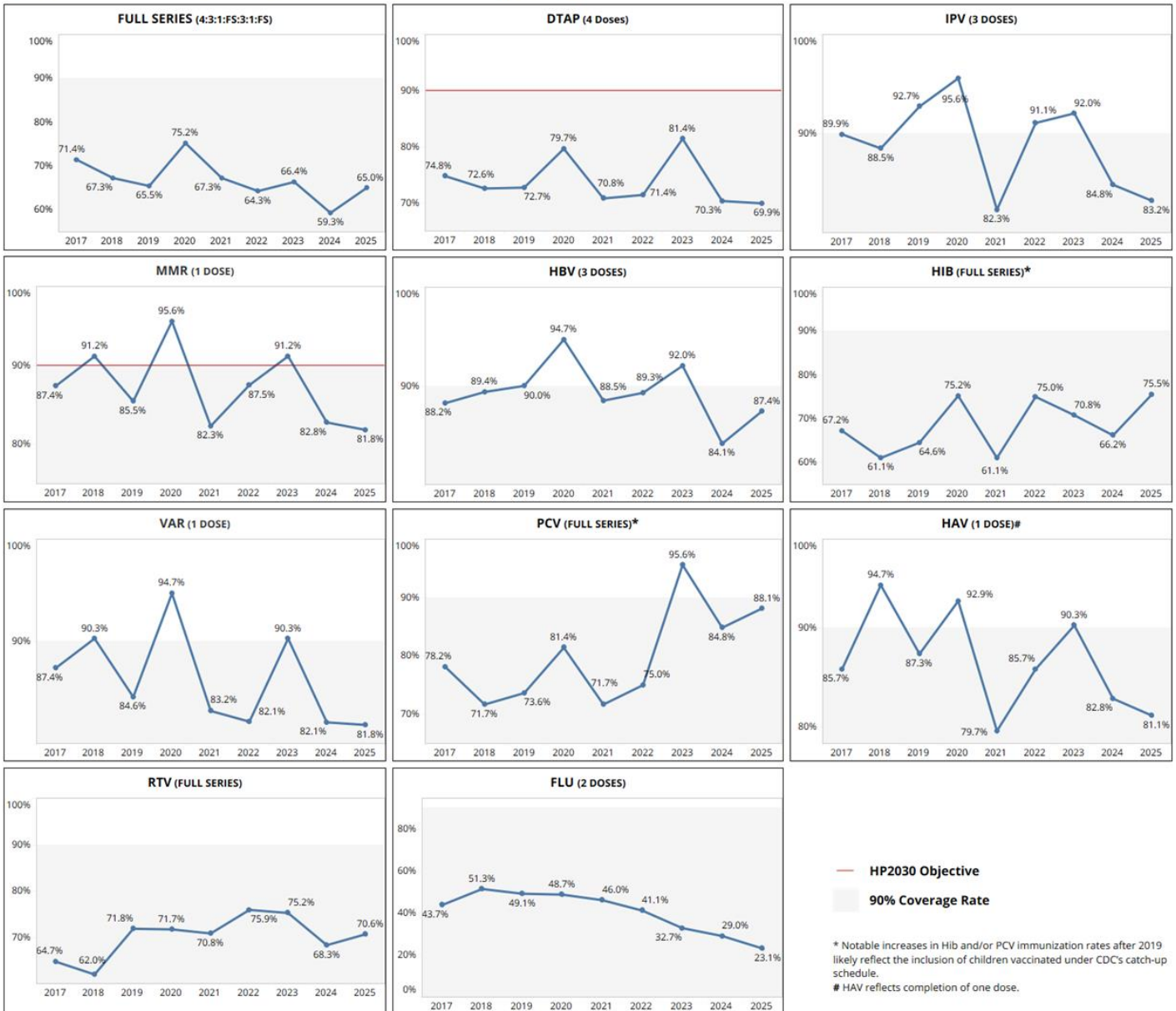
	2024 (n=145)		2025 (n=143)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up to Date (UTD):						
UTD immunization rate[*] (as reported to TennNIS)	35.9 ± 7.9		28.0 ± 7.4 ↓		35.6 ± 2.3	
UTD immunization rate[*] (with data collection)	59.3 ± 8.1		65.0 ± 7.9 ↑		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	70.3 ± 7.5		69.9 ± 7.6 ↓		79.4 ± 1.9	
IPV (3 Doses)	84.8 ± 5.9		83.2 ± 6.2 ↓		90.1 ± 1.4	
MMR (1 Dose)	82.8 ± 6.2		81.8 ± 6.4 ↓		88.6 ± 1.5	
HBV (3 Doses)	84.1 ± 6.0		87.4 ± 5.5 ↑		91.9 ± 1.3	
HBV, Birth Dose	84.1 ± 6.0		73.4 ± 7.3 ↓		76.0 ± 2.0	
Hib (Full Series)	66.2 ± 7.8		75.5 ± 7.1 ↑		85.2 ± 1.7	
VAR (1 Dose)	82.1 ± 6.3		81.8 ± 6.4 ↓		88.3 ± 1.5	
PCV (Full Series)	84.8 ± 5.9		88.1 ± 5.4 ↑		92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	59.3 ± 8.1		65.0 ± 7.9 ↑		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	82.8 ± 6.2		81.1 ± 6.5 ↓		88.3 ± 1.5	
RTV (Full Series)	68.3 ± 7.7		70.6 ± 7.6 ↑		75.1 ± 2.1	
FLU (2 Doses)	29.0 ± 7.5		23.1 ± 7.0 ↓		34.7 ± 2.3	
RSV (1 Dose) [‡]	- ± -		0.7 ± 1.4 ↑		1.1 ± 0.5	
COVID-19 (Full Series)	1.4 ± 1.9		0.0 ± 0.0 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence interval, showing the range where the true value is likely to be
^{*} Includes children up-to-date by ACIP-recommended catch-up schedule
[‡] Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference ($p < 0.05$) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 26-C illustrates the UCR trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents the VPDIPs target of a 90% coverage rate.

Figure 26-C: Immunization Rates (%) by Series and Vaccine Antigen, UCR, 2017-2025



Demographic Information

The demographic breakdown of the UCR cohort alongside the UTD immunization rates by demographic groups are shown in Table 15-C and 15-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for UCR.

Table 15-C: Risk Factors and Immunization Rates, UCR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates					
		UCR [¥]		State [¥]		UCR		STATE	
		n	(%)	n	(%)	(%)	CI	(%)	CI
Race**	Black	2	1.4	237	14.2	sample size is too small to generate estimates		65.8	± 6.1
	White	133	93.0	1236	73.9	63.9 ± 8.3		77.2	± 2.3
	Other	8	5.6	199	11.9	sample size is too small to generate estimates		83.9	± 5.1
Ethnicity**	Hispanic	17	11.9	218	13.0	82.4 ± 20.2		82.1	± 5.1
	Non-Hispanic	126	88.1	1454	87.0	62.7 ± 8.6		75.5	± 2.2
Sex*	Male	68	47.6	810	48.4	61.8 ± 11.9		75.9	± 3.0
	Female	75	52.4	862	51.6	68.0 ± 10.8		76.8	± 2.8
Siblings[†]	0	56	39.2	691	41.3	76.8 ± 11.4		82.2	± 2.9
	1	47	32.9	540	32.3	66.0 ± 14.1		76.1	± 3.6
	2+	40	28.0	441	26.4	47.5 ± 16.2		67.6	± 4.4
Vaccination Source	Private Medical Provider	115	80.4	1409	84.3	72.2 ± 8.3		82.0	± 2.0
	Health Department	4	2.8	24	1.4	sample size is too small to generate estimates		58.3	± 21.3
	Both	12	8.4	148	8.9	58.3 ± 32.7		69.6	± 7.5
	Unknown Source	12	8.4	91	5.4	0.0 ± 0.0		4.4	± 4.3
Program Enrollment	TennCare	94	65.7	1075	64.3	67.0 ± 9.7		74.5	± 2.6
	Not Enrolled	49	34.3	597	35.7	61.2 ± 14.1		79.7	± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ¥ Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 † Does not distinguish between Hispanic whites and non-Hispanic whites

Table 15-D: Parent Demographics and Immunization Rates, UCR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates					
		UCR [¥]		State [¥]		UCR		STATE	
		n	(%)	n	(%)	(%)	CI	(%)	CI
Mother Age*	≤24	47	32.9	497	29.7	72.3 ± 13.3		76.5	± 3.7
	25-34	79	55.2	978	58.5	65.8 ± 10.7		76.6	± 2.7
	≥35	17	11.9	197	11.8	41.2 ± 26.1		75.1	± 6.1
Father Age*	≤24	31	21.7	283	16.9	67.7 ± 17.4		75.3	± 5.1
	25-34	81	56.6	863	51.6	67.9 ± 10.4		77.3	± 2.8
	≥35	21	14.7	355	21.2	52.4 ± 23.3		77.7	± 4.3
	Unknown	10	7.0	171	10.2	sample size is too small to generate estimates		70.8	± 6.9
Mother Education*	< High School Diploma/ GED	22	15.4	206	12.3	54.5 ± 22.6		71.8	± 6.2
	High School Diploma/ GED	39	27.3	478	28.6	56.4 ± 16.3		72.0	± 4.0
	> High School Diploma/ GED	82	57.3	983	58.8	72.0 ± 9.9		79.5	± 2.5
Father Education*	< High School Diploma/ GED	21	14.7	186	11.1	57.1 ± 23.1		78.5	± 6.0
	High School Diploma/ GED	61	42.7	530	31.7	60.7 ± 12.6		73.0	± 3.8
	> High School Diploma/ GED	51	35.7	760	45.5	74.5 ± 12.4		80.0	± 2.9
	Unknown	10	7.0	196	11.7	sample size is too small to generate estimates		69.4	± 6.5
Marriage Status*	Married	95	66.4	949	56.8	63.2 ± 9.9		77.7	± 2.7
	Unmarried	48	33.6	722	43.2	68.8 ± 13.6		74.7	± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ¥ Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 † Does not distinguish between Hispanic whites and non-Hispanic whites

Southeast Region

Figure 27-A: Location of Southeast Region (SER)

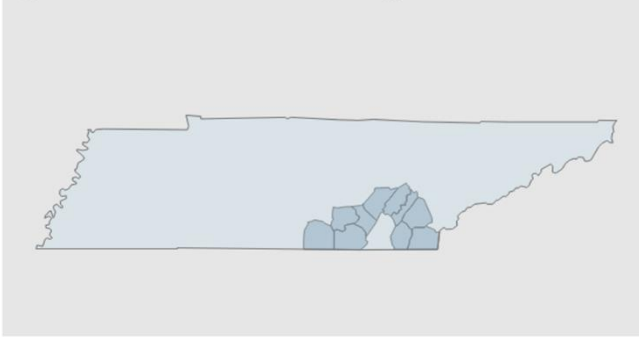
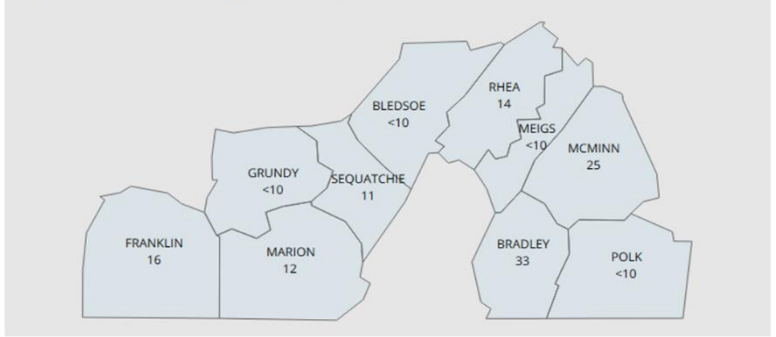


Figure 27-B: Sampling per County, SER, 2025



Final Cohort Determination

The initial 2025 SER sample included 150 children born between January and March of 2023 (Table 16-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 128. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a larger cohort and achieved a higher response rate.

Immunization Rates

In SER, the up-to-date (UTD) immunization rate by 24 months of age was 76.6%, which was lower than the 2024 rate (83.1%), and higher than the state average (76.4%) (Table 16-B). The UTD immunization rate as reported to TennIIS was 46.9%, significantly lower than the 2024 rate (63.7%) but higher than the state rate (35.6%).

The vaccine-specific rates reveal one significant difference, and several decreases compared to the previous year and the state overall (Table 16-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences (p<0.05) over the same period.

Immunization Administration

Of the 2,973 vaccine doses administered to the SER children, 2,889 (97.2%) were administered by private providers, 67 (2.3%) were administered by public health providers and 17 (0.6%) were administered by an unknown source.

Table 16-A: 24-Month-Old Survey Sampling, SER, 2025

	2024	2025	State 2025
Original sample (n)	150	150	1953
Ineligible (n)	22 (14.7%)	18 (12.0%)	122 (6.2%)
Refused Participation (n)	1 (0.7%)	1 (0.7%)	51 (2.6%)
Eligible sample (n)	127	131	1780
Unable to locate [†] (n)	3 (2.4%)	3 (2.3%)	108 (6.1%)
Final sample (n)	124	128	1672
Response Rate (%)*	97.6	97.7	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
[†] Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
 * Response Rate (%) is the number of survey responses from eligible children

Table 16-B: Immunization Rates by Series and Vaccine, SER, 2025

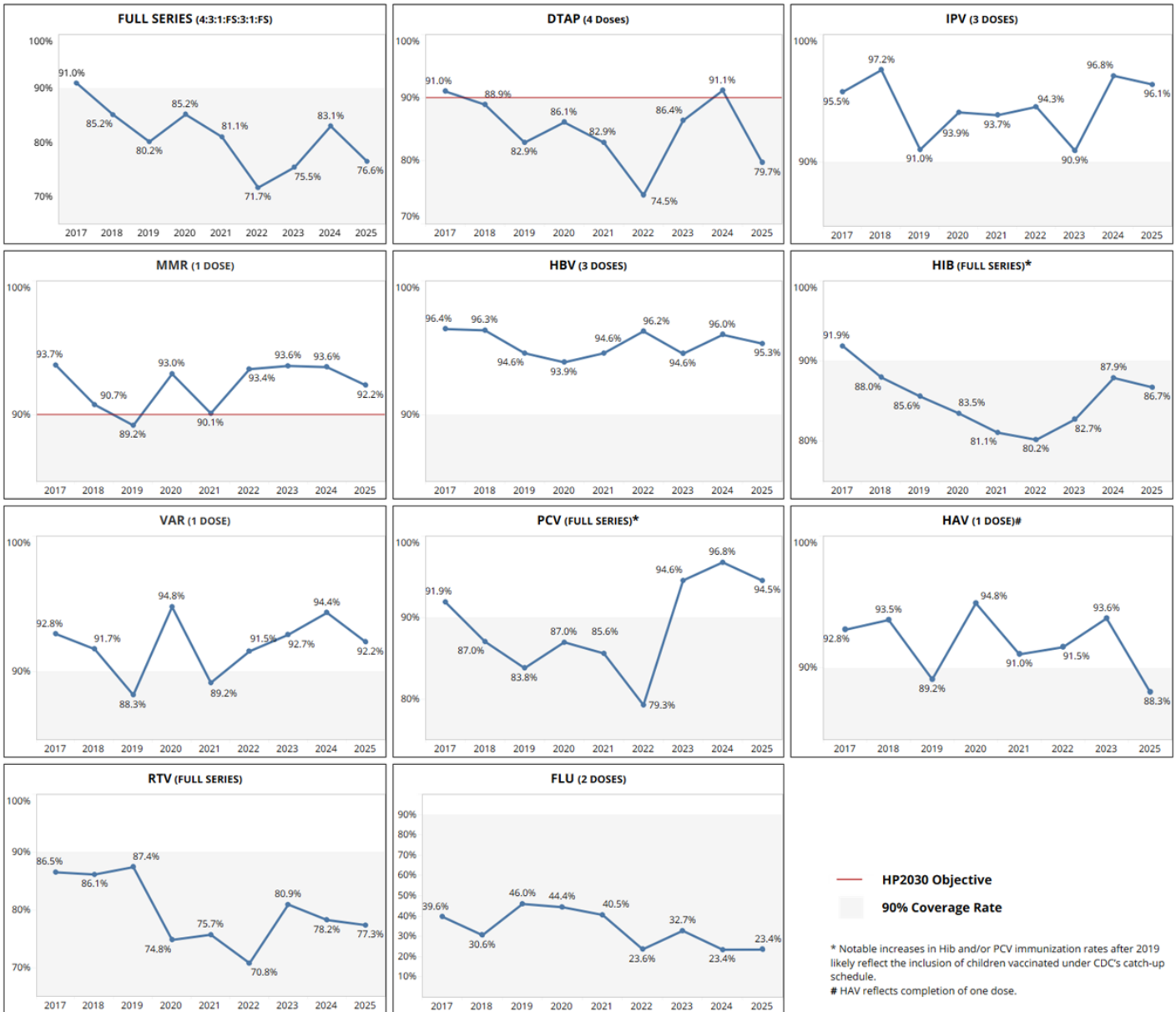
	2024 (n=124)		2025 (n=128)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up-to-Date (UTD):						
UTD immunization rate* (as reported to TennIIS)	63.7 ± 8.6		46.9 ± 8.8 ↓		35.6 ± 2.3	
UTD immunization rate* (with data collection)	83.1 ± 6.7		76.6 ± 7.4 ↓		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	91.1 ± 5.1		79.7 ± 7.1 ↓		79.4 ± 1.9	
IPV (3 Doses)	96.8 ± 3.2		96.1 ± 3.4 ↓		90.1 ± 1.4	
MMR (1 Dose)	93.6 ± 4.4		92.2 ± 4.7 ↓		88.6 ± 1.5	
HBV (3 Doses)	96.0 ± 3.5		95.3 ± 3.7 ↓		91.9 ± 1.3	
HBV, Birth Dose	83.1 ± 6.7		74.2 ± 7.7 ↓		76.0 ± 2.0	
Hib (Full Series)	87.9 ± 5.8		86.7 ± 6.0 ↓		85.2 ± 1.7	
VAR (1 Dose)	94.4 ± 4.1		92.2 ± 4.7 ↓		88.3 ± 1.5	
PCV (Full Series)	96.8 ± 3.2		94.5 ± 4.0 ↓		92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	83.1 ± 6.7		76.6 ± 7.4 ↓		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	94.4 ± 4.1		88.3 ± 5.6 ↓		88.3 ± 1.5	
RTV (Full Series)	78.2 ± 7.4		77.3 ± 7.4 ↓		75.1 ± 2.1	
FLU (2 Doses)	23.4 ± 7.6		23.4 ± 7.4 -		34.7 ± 2.3	
RSV (1 Dose) [‡]	- ± -		0.8 ± 1.5 ↑		1.1 ± 0.5	
COVID-19 (Full Series)	2.4 ± 2.7		0.0 ± 0.0 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 * Includes children up-to-date by ACIP-recommended catch-up schedule
[‡] Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference (p < 0.05) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 27-C illustrates the SER trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents VPDIP's target of a 90% coverage rate.

Figure 27-C: Immunization Rates (%) by Series and Vaccine Antigen, SER, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

The demographic breakdown of the SER cohort alongside the UTD immunization rates by demographic groups are shown in Table 16-C and 16-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for SER.

Table 16-C: Risk Factors and Immunization Rates, SER, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates				
		SER [‡] n (%)	State [‡] n (%)	SER (%) CI		STATE (%) CI		
Race**	Black	5	3.9	237	14.2	sample size is too small to generate estimates		65.8 ± 6.1
	White	112	87.5	1236	73.9	75.9 ± 8.0		77.2 ± 2.3
	Other	11	8.6	199	11.9	90.9 ± 20.3		83.9 ± 5.1
Ethnicity**	Hispanic	16	12.5	218	13.0	87.5 ± 18.2		82.1 ± 5.1
	Non-Hispanic	112	87.5	1454	87.0	75.0 ± 8.1		75.5 ± 2.2
Sex*			0.0					
	Male	62	48.4	810	48.4	77.4 ± 10.7		75.9 ± 3.0
	Female	66	51.6	862	51.6	75.8 ± 10.6		76.8 ± 2.8
Siblings*	0	55	43.0	691	41.3	81.8 ± 10.5		82.2 ± 2.9
	1	45	35.2	540	32.3	77.8 ± 12.6		76.1 ± 3.6
	2+	28	21.9	441	26.4	64.3 ± 18.9		67.6 ± 4.4
Vaccination Source	Private Medical Provider	115	89.8	1409	84.3	77.4 ± 7.8		82.0 ± 2.0
	Health Department	-	-	24	1.4	sample size is too small to generate estimates		58.3 ± 21.3
	Both	10	7.8	148	8.9	sample size is too small to generate estimates		69.6 ± 7.5
	Unknown Source	3	2.3	91	5.4	sample size is too small to generate estimates		4.4 ± 4.3
Program Enrollment	TennCare	98	76.6	1075	64.3	73.5 ± 8.9		74.5 ± 2.6
	Not Enrolled	30	23.4	597	35.7	86.7 ± 12.9		79.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
[‡] Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Table 16-D: Parent Demographics and Immunization Rates, SER, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates				
		SER [‡] n (%)	State [‡] n (%)	SER (%) CI		STATE (%) CI		
Mother Age*	≤24	53	41.4	497	29.7	77.4 ± 11.6		76.5 ± 3.7
	25-34	67	52.3	978	58.5	76.1 ± 10.5		76.6 ± 2.7
	≥35	8	6.3	197	11.8	sample size is too small to generate estimates		75.1 ± 6.1
Father Age*	≤24	31	24.2	283	16.9	74.2 ± 16.3		75.3 ± 5.1
	25-34	64	50.0	863	51.6	75.0 ± 10.9		77.3 ± 2.8
	≥35	25	19.5	355	21.2	76.0 ± 18.0		77.7 ± 4.3
	Unknown	8	6.3	171	10.2	sample size is too small to generate estimates		70.8 ± 6.9
Mother Education*	< High School Diploma/ GED	10	7.8	206	12.3	sample size is too small to generate estimates		71.8 ± 6.2
	High School Diploma/ GED	40	31.3	478	28.6	72.5 ± 14.5		72.0 ± 4.0
	> High School Diploma/ GED	77	60.2	983	58.8	79.2 ± 9.3		79.5 ± 2.5
Father Education*	< High School Diploma/ GED	12	9.4	186	11.1	83.3 ± 24.7		78.5 ± 6.0
	High School Diploma/ GED	51	39.8	530	31.7	66.7 ± 13.4		73.0 ± 3.8
	> High School Diploma/ GED	55	43.0	760	45.5	81.8 ± 10.5		80.0 ± 2.9
	Unknown	10	7.8	196	11.7	sample size is too small to generate estimates		69.4 ± 6.5
Marriage Status*	Married	76	59.4	949	56.8	77.6 ± 9.6		77.7 ± 2.7
	Unmarried	52	40.6	722	43.2	75.0 ± 12.2		74.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
[‡] Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Chattanooga-Hamilton County Region

Figure 28-A: Location of Chattanooga-Hamilton County Region (CHR)

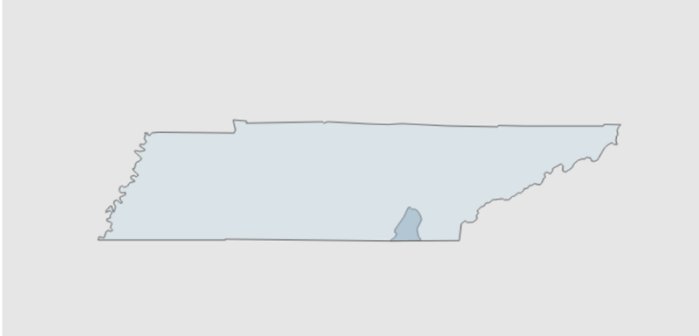
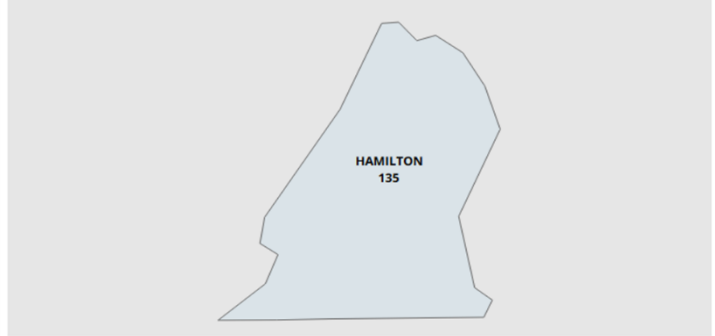


Figure 28-B: Sampling per County, CHR, 2025



Final Cohort Determination

The initial 2025 CHR sample included 151 children born between January and March of 2023 (Table 17-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 135. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a larger cohort and achieved the same, 100.0%, response rate.

Immunization Rates

In CHR, the up-to-date (UTD) immunization rate by 24 months of age was 74.1%, which was lower than the 2024 rate (75.4%) and the state average (76.4%) (Table 17-B). The UTD immunization rate as reported to TennIS was 45.9%, lower than the 2024 rate (50.8%) but higher than the state rate (35.6%).

The vaccine-specific rates reveal one significant difference, and several decreases compared to the previous year and the state overall (Table 17-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences ($p < 0.05$) over the same period.

Immunization Administration

Of the 3,117 vaccine doses administered to the CHR children, 3,058 (98.1%) were administered by private providers, 44 (1.4%) were administered by public health providers and 15 (0.5%) were administered by an unknown source.

Table 17-A: 24-Month-Old Survey Sampling, CHR, 2025

	2024	2025	State 2025
Original sample (n)	150	151	1953
Ineligible (n)	12 (1.7%)	9 (6.0%)	122 (6.2%)
Refused Participation (n)	4 (0.8%)	7 (4.6%)	51 (2.6%)
Eligible sample (n)	134	135	1780
Unable to locate [†] (n)	0 (0.0%)	0 (0.0%)	108 (6.1%)
Final sample (n)	134	135	1672
Response Rate (%)[*]	100.0	100.0	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
[†] Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in
^{*} Response Rate (%) is the number of survey responses from eligible children

Table 17-B: Immunization Rates by Series and Vaccine Antigen, CHR, 2025

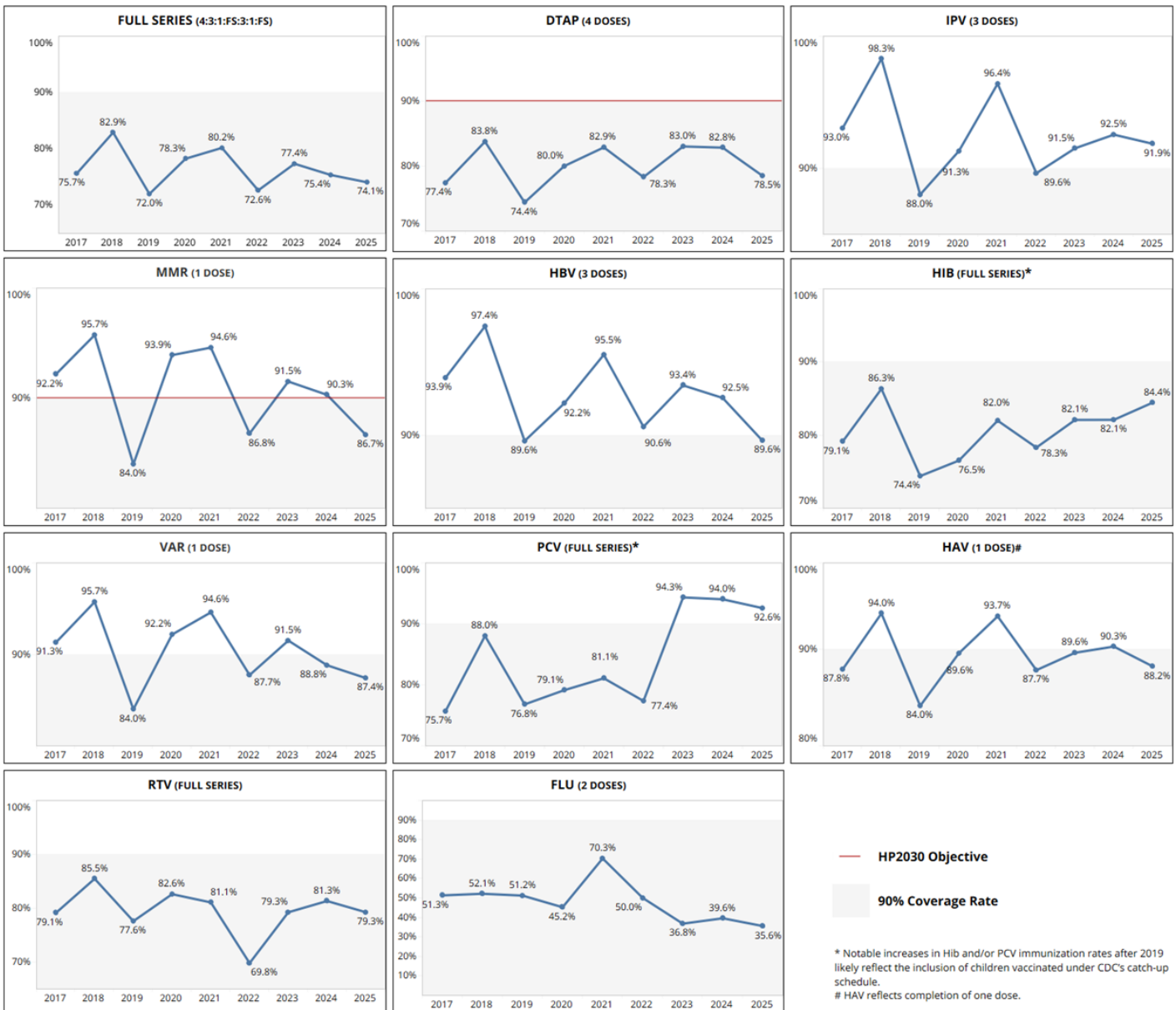
	2024 (n=134)		2025 (n=135)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up-to-Date (UTD):						
UTD immunization rate[*] (as reported to TennIS)	50.8 ± 8.6		45.9 ± 8.5	↑	35.6 ± 2.3	
UTD immunization rate[*] (with data collection)	75.4 ± 7.4		74.1 ± 7.5	↓	76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	82.8 ± 6.5		78.5 ± 7.0	↓	79.4 ± 1.9	
IPV (3 DOSES)	92.5 ± 4.5		91.9 ± 4.7	↓	90.1 ± 1.4	
MMR (1 DOSE)	90.3 ± 5.1		86.7 ± 5.8	↓	88.6 ± 1.5	
HBV (3 DOSES)	92.5 ± 4.5		89.6 ± 5.2	↓	91.9 ± 1.3	
HBV (Birth Dose)	74.6 ± 7.5		72.6 ± 7.6	↓	76.0 ± 2.0	
Hib (Full Series)	82.1 ± 6.6		84.4 ± 6.2	↑	85.2 ± 1.7	
VAR (1 DOSE)	88.8 ± 5.4		87.4 ± 5.7	↓	88.3 ± 1.5	
PCV (Full Series)	94.0 ± 4.1		92.6 ± 4.5	↓	92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	75.4 ± 7.4		74.1 ± 7.5	↓	76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	90.3 ± 5.9		88.1 ± 5.5	↓	88.3 ± 1.5	
RTV (Full Series)	81.3 ± 7.9		79.3 ± 6.9	↓	75.1 ± 2.1	
FLU (2 Doses)	39.6 ± 9.3		35.6 ± 8.2	↓	34.7 ± 2.3	
RSV (1 Dose) [†]	- ± -		0.7 ± 1.5	↑	1.1 ± 0.5	
COVID-19 (Full Series)	3.0 ± 2.6		0.0 ± 0.0	↓	0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
^{*} Includes children up-to-date by ACIP-recommended catch-up schedule
[†] Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
 ↓ Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference ($p < 0.05$) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 28-C illustrates the CHR trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents the VPDIP's target of a 90% coverage rate.

Figure 28-C: Immunization Rates (%) by Series and Vaccine Antigen, CHR, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

The demographic breakdown of the CHR cohort alongside the UTD immunization rates by demographic groups are shown in Table 17-C and 17-D

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for CHR.

Table 17-C: Risk Factors and Immunization Rates, CHR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates					
		CHR [†]		State [‡]		CHR		STATE	
		n	(%)	n	(%)	(%)	CI	(%)	CI
Race^{**}									
	Black	28	20.7	237	14.2	72.0	± 17.8	65.8	± 6.1
	White	82	60.7	1236	73.9	71.4	± 9.9	77.2	± 2.3
	Other	25	18.5	199	11.9	84.0	± 15.4	83.9	± 5.1
Ethnicity[†]									
	Hispanic	27	20.0	218	13.0	88.9	± 12.7	82.1	± 5.1
	Non-Hispanic	108	80.0	1454	87.0	70.4	± 8.8	75.5	± 2.2
Sex[†]			0.0						
	Male	77	57.0	810	48.4	71.4	± 10.3	75.9	± 3.0
	Female	58	43.0	862	51.6	77.6	± 11.1	76.8	± 2.8
Siblings[†]									
	0	64	47.4	691	41.3	79.7	± 10.1	82.2	± 2.9
	1	37	27.4	540	32.3	70.3	± 15.4	76.1	± 3.6
	2+	34	25.2	441	26.4	67.6	± 16.6	67.6	± 4.4
Vaccination Source									
	Private Medical Provider	117	86.7	1409	84.3	79.5	± 7.4	82.0	± 2.0
	Health Department	-	-	24	1.4	sample size is too small to generate estimates			
	Both	9	6.7	148	8.9	sample size is too small to generate estimates			
	Unknown Source	9	6.7	91	5.4	sample size is too small to generate estimates			
Program Enrollment									
	TennCare	79	58.5	1075	64.3	74.7	± 9.8	74.5	± 2.6
	Not Enrolled	56	41.5	597	35.7	73.2	± 12.0	79.7	± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 † Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 ‡ Does not distinguish between Hispanic whites and non-Hispanic whites

Table 17-D: Parent Demographics and Immunization Rates, CHR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates					
		CHR [†]		State [‡]		CHR		STATE	
		n	(%)	n	(%)	(%)	CI	(%)	CI
Mother Age[†]									
	≤24	33	24.4	497	29.7	81.8	± 13.9	76.5	± 3.7
	25-34	87	64.4	978	58.5	70.1	± 9.8	76.6	± 2.7
	≥35	15	11.1	197	11.8	80.0	± 22.9	75.1	± 6.1
Father Age[†]									
	≤24	19	14.1	283	16.9	84.2	± 18.1	75.3	± 5.1
	25-34	74	54.8	863	51.6	68.9	± 10.8	77.3	± 2.8
	≥35	28	20.7	355	21.2	85.7	± 13.8	77.7	± 4.3
	Unknown	14	10.4	171	10.2	64.3	± 28.7	70.8	± 6.9
Mother Education[†]									
	< High School Diploma/ GED	24	17.8	206	12.3	83.3	± 16.1	71.8	± 6.2
	High School Diploma/ GED	22	16.3	478	28.6	63.6	± 21.8	72.0	± 4.0
	> High School Diploma/ GED	89	65.9	983	58.8	74.2	± 9.3	79.5	± 2.5
Father Education[†]									
	< High School Diploma/ GED	23	17.0	186	11.1	61.1	± 17.2	78.5	± 6.0
	High School Diploma/ GED	24	17.8	530	31.7	82.6	± 16.8	73.0	± 3.8
	> High School Diploma/ GED	70	51.9	760	45.5	62.5	± 20.9	80.0	± 2.9
	Unknown	18	13.3	196	11.7	78.6	± 9.9	69.4	± 6.5
Marriage Status[†]									
	Married	81	60.0	949	56.8	77.8	± 9.3	77.7	± 2.7
	Unmarried	54	40.0	722	43.2	68.5	± 12.8	74.7	± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 † Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 ‡ Does not distinguish between Hispanic whites and non-Hispanic whites

East Tennessee Region

Figure 29-A: Location of East Tennessee Region (ETR)

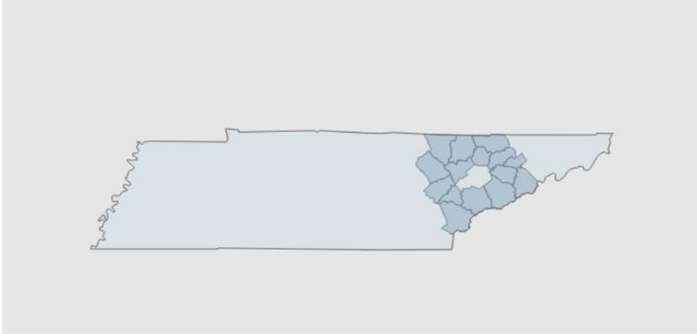
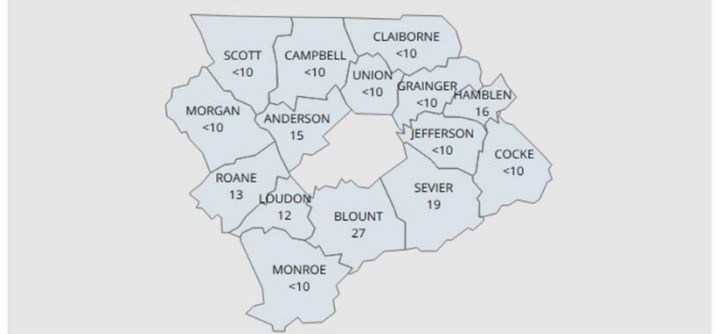


Figure 29-B: Sampling per County, ETR, 2025



Final Cohort Determination

The initial 2025 ETR sample included 150 children born between January and March of 2023 (Table 18-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 140. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a smaller cohort and had a lower response rate.

Immunization Rates

In ETR, the up-to-date (UTD) immunization rate by 24 months of age was 80.0%, which was lower than the 2024 rate (84.5%) but higher than the state average (76.4%) (Table 18-B). The UTD immunization rate as reported to TennIIS was 28.6%, lower than the 2024 rate (39.4%) and the state rate (35.6%).

The vaccine-specific rates reveal four significant differences, and several decreases compared to the previous year and the state overall (Table 18-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, **while italicized and bolded** figures highlight statistically significant differences (p<0.05) over the same period.

Immunization Administration

Of the 3,179 vaccine doses administered to the ETR children, 2,883 (90.7%) were administered by private providers, 80 (2.5%) were administered by public health providers, and 216 (6.8%) were administered by an unknown source.

Table 18-A: 24-Month-Old Survey Sampling, ETR, 2025

	2024	2025	State 2025
Original sample (n)	150	152	1953
Ineligible (n)	3 (2.0%)	7 (4.6%)	122 (6.2%)
Refused Participation (n)	2 (1.3%)	0 (0.0%)	51 (2.6%)
Eligible sample (n)	145	145	1780
Unable to locate† (n)	3 (2.1%)	5 (3.4%)	108 (6.1%)
Final sample (n)	142	140	1672
Response Rate (%)*	97.9	96.6	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 † Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
 * Response Rate (%) is the number of survey responses from eligible children

Table 18-B: Immunization Rates by Series and Vaccine, ETR, 2025

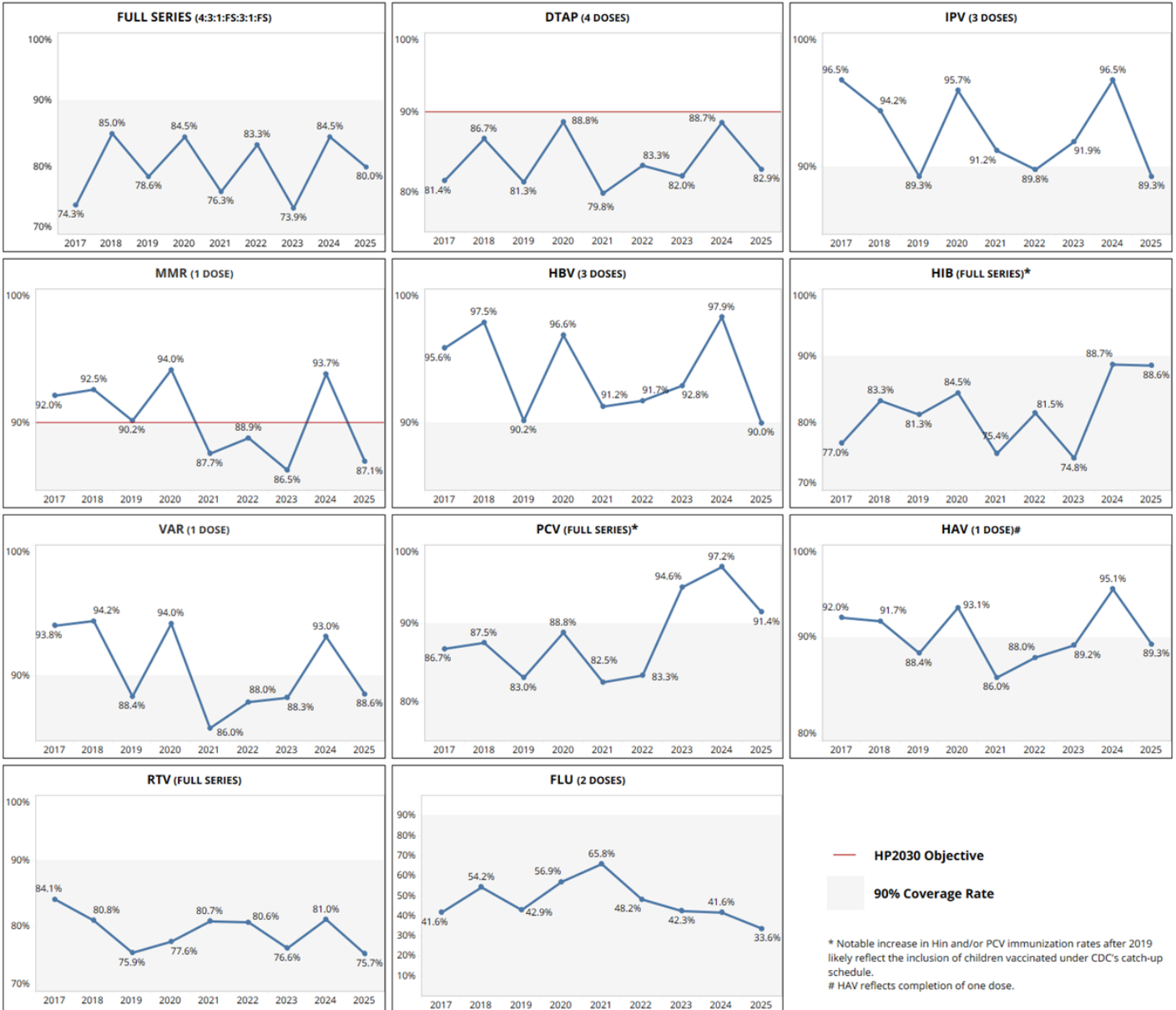
	2024 (n=142)		2025 (n=140)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up-to-Date (UTD):						
UTD immunization rate* (as reported to TennIIS)	39.4 ± 8.1		28.6 ± 7.6 ↓		35.6 ± 2.3	
UTD immunization rate* (with data collection)	84.5 ± 6.0		80.0 ± 6.7 ↓		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	88.7 ± 5.3		82.9 ± 6.3 ↓		79.4 ± 1.9	
IPV (3 Doses)	96.5 ± 3.1		89.3 ± 5.2 ↓		90.1 ± 1.4	
MMR (1 Dose)	93.7 ± 4.1		87.1 ± 5.6 ↓		88.6 ± 1.5	
HBV (3 Doses)	97.9 ± 2.4		90.0 ± 5.0 ↓		91.9 ± 1.3	
HBV, Birth Dose	84.5 ± 6.0		79.3 ± 6.8 ↓		76.0 ± 2.0	
Hib (Full Series)	88.7 ± 5.3		88.6 ± 5.3 ↓		85.2 ± 1.7	
VAR (1 Dose)	93.0 ± 4.3		88.6 ± 5.3 ↓		88.3 ± 1.5	
PCV (Full Series)	97.2 ± 2.8		91.4 ± 4.7 ↓		92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	84.5 ± 6.0		80.0 ± 6.7 ↓		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	95.1 ± 3.6		89.3 ± 3.6 ↓		88.3 ± 1.5	
RTV (Full Series)	81.0 ± 6.5		75.7 ± 7.2 ↓		75.1 ± 2.1	
FLU (2 Doses)	41.6 ± 8.2		33.6 ± 7.9 ↓		34.7 ± 2.3	
RSV (1 Dose)‡	- ± -		0.7 ± 1.4 ↑		1.1 ± 0.5	
COVID-19 (Full Series)	2.8 ± 2.8		0.0 ± 0.0 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 † Includes children up-to-date by ACIP-recommended catch-up schedule
 ‡ Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
 Red font indicates a rate decrease since 2024
 Italicized and bolded font indicates a significant difference (p < 0.05) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 29-C illustrates the ETR trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents the VPDIP's target of a 90% coverage rate.

Figure 29-C: Immunization Rates (%) by Series and Vaccine Antigen, ETR, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

The demographic breakdown of the ETR cohort alongside the UTD immunization rates by demographic groups are shown in Table 18-C and 18-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for ETR.

Table 18-C: Risk Factors and Immunization Rates, ETR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates				
		ETR ^Y n (%)	State ^X n (%)	ETR (%) CI		STATE (%) CI		
Race**	Black	3	2.1	237	14.2	sample size is too small to generate estimates		65.8 ± 6.1
	White	124	88.6	1236	73.9	79.0 ± 7.3		77.2 ± 2.3
	Other	13	9.3	199	11.9	84.6 ± 22.7		83.9 ± 5.1
Ethnicity**	Hispanic	15	10.7	218	13.0	86.7 ± 16.5		82.1 ± 5.1
	Non-Hispanic	125	89.3	1454	87.0	79.2 ± 7.2		75.5 ± 2.2
Sex*	Male	81	57.9	810	48.4	76.5 ± 9.4		75.9 ± 3.0
	Female	59	42.1	862	51.6	84.7 ± 9.5		76.8 ± 2.8
Siblings*	0	56	40.0	691	41.3	85.7 ± 9.5		82.2 ± 2.9
	1	46	32.9	540	32.3	82.6 ± 11.4		76.1 ± 3.6
	2+	38	27.1	441	26.4	68.4 ± 15.5		67.6 ± 4.4
Vaccination Source	Private Medical Provider	118	84.3	1409	84.3	88.1 ± 5.9		82.0 ± 2.0
	Health Department	1	0.7	24	1.4	sample size is too small to generate estimates		58.3 ± 21.3
	Both	10	7.1	148	8.9	sample size is too small to generate estimates		69.6 ± 7.5
	Unknown Source	11	7.9	91	5.4	0.0 ± 0.0		4.4 ± 4.3
Program Enrollment	TennCare	93	66.4	1075	64.3	77.4 ± 8.7		74.5 ± 2.6
	Not Enrolled	47	33.6	597	35.7	85.1 ± 10.6		79.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence interval, showing the range where the true value is likely to be
^Y Percentages may not add up to 100% due to missing participant information
^X Information was collected from birth certificate at time of delivery
 * Does not distinguish between Hispanic whites and non-Hispanic whites

Table 18-D: Parent Demographics and Immunization Rates, ETR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates				
		ETR ^Y n (%)	State ^X n (%)	ETR (%) CI		STATE (%) CI		
Mother Age*	≤24	50	35.7	497	29.7	84.0 ± 10.5		76.5 ± 3.7
	25-34	69	49.3	978	58.5	81.2 ± 9.5		76.6 ± 2.7
	≥35	21	15.0	197	11.8	66.7 ± 22.0		75.1 ± 6.1
Father Age*	≤24	28	20.0	283	16.9	82.1 ± 15.2		75.3 ± 5.1
	25-34	69	49.3	863	51.6	81.2 ± 9.5		77.3 ± 2.8
	≥35	31	22.1	355	21.2	74.2 ± 16.3		77.7 ± 4.3
	Unknown	12	8.6	171	10.2	83.3 ± 24.7		70.8 ± 6.9
Mother Education*	< High School Diploma/ GED	20	14.3	206	12.3	75.0 ± 20.8		71.8 ± 6.2
	High School Diploma/ GED	46	32.9	478	28.6	76.1 ± 12.9		72.0 ± 4.0
	> High School Diploma/ GED	74	52.9	983	58.8	83.8 ± 8.6		79.5 ± 2.5
Father Education*	< High School Diploma/ GED	15	10.7	186	11.1	93.3 ± 14.3		78.5 ± 6.0
	High School Diploma/ GED	54	38.6	530	31.7	70.4 ± 12.6		73.0 ± 3.8
	> High School Diploma/ GED	57	40.7	760	45.5	86.0 ± 9.3		80.0 ± 2.9
	Unknown	14	10.0	196	11.7	78.6 ± 24.6		69.4 ± 6.5
Marriage Status*	Married	76	54.3	949	56.8	75.0 ± 10.0		77.7 ± 2.7
	Unmarried	64	45.7	722	43.2	85.9 ± 8.8		74.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence interval, showing the range where the true value is likely to be
^Y Percentages may not add up to 100% due to missing participant information
^X Information was collected from birth certificate at time of delivery
 * Does not distinguish between Hispanic whites and non-Hispanic whites

Knoxville-Knox County Region

Figure 30-A: Location of Knoxville-Knox County Region (KKR)

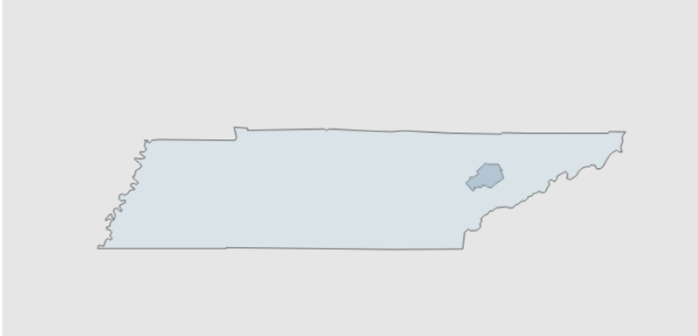
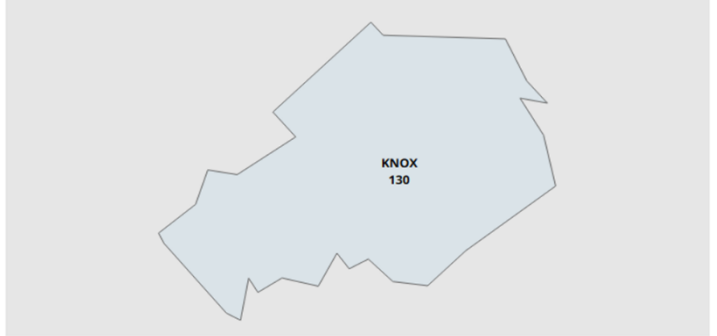


Figure 30-B: Sampling per County, KKR, 2025



Final Cohort Determination

The initial 2025 KKR sample included 151 children born between January and March of 2023 (Table 19-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 130. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a smaller cohort and had a lower response rate.

Immunization Rates

In KKR, the up-to-date (UTD) immunization rate by 24 months of age was 83.1%, which was higher than the 2024 rate (75.4%) and the state average (76.4%) (Table 19-B). The UTD immunization rate as reported to TennNIS was 15.4%, significantly lower than the 2024 rate (25.4%) and the state rate (35.6%).

The vaccine-specific rates reveal one significant difference, and several increases and decreases compared to the previous year and the state overall (Table 19-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences ($p < 0.05$) over the same period.

Immunization Administration

Of the 3,084 vaccine doses administered to the KKR children, 2,987 (96.9%) were administered by private providers, 84 (2.7%) were administered by public health providers and 13 (0.4%) were administered by an unknown source.

Table 19-A: 24-Month-Old Survey Sampling, KKR, 2025

	2024	2025	State 2025
Original sample (n)	151	151	1953
Ineligible (n)	11 (7.3%)	10 (6.6%)	122 (6.2%)
Refused Participation (n)	6 (4.0%)	10 (6.6%)	51 (2.6%)
Eligible sample (n)	134	131	1780
Unable to locate† (n)	0 (0.0%)	1 (0.8%)	108 (6.1%)
Final sample (n)	134	130	1672
Response Rate (%)*	100.0	99.2	93.9

(n) = Sample size or number of observations included in the analysis

(%) = Percentage, representing a proportion of the cohort, subset, or population

† Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.

* Response Rate (%) is the number of survey responses from eligible children

Table 19-B: Immunization Rates by Series and Vaccine, KKR, 2025

	2024 (n=134)		2025 (n=130)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up-to-Date (UTD):						
UTD immunization rate* (based on TennNIS alone)	25.4 ± 7.5		15.4 ± 6.3 ↓		35.6 ± 2.3	
UTD immunization rate* (by end of data collection)	75.4 ± 7.4		83.1 ± 6.5 ↑		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	82.8 ± 6.5		87.7 ± 5.7 ↑		79.4 ± 1.9	
IPV (3 Doses)	92.5 ± 4.5		92.3 ± 4.6 ↓		90.1 ± 1.4	
MMR (1 Dose)	91.8 ± 4.7		90.8 ± 5.0 ↓		88.6 ± 1.5	
HBV (3 Doses)	96.3 ± 3.3		92.3 ± 4.6 ↓		91.9 ± 1.3	
HBV, Birth Dose	85.6 ± 6.0		84.6 ± 6.3 ↓		76.0 ± 2.0	
Hib (Full Series)	78.4 ± 7.1		90.8 ± 5.0 ↑		85.2 ± 1.7	
VAR (1 Dose)	91.0 ± 4.9		88.5 ± 5.6 ↓		88.3 ± 1.5	
PCV (Full Series)	92.5 ± 4.5		93.8 ± 4.2 ↑		92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	75.4 ± 7.4		83.1 ± 6.5 ↑		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	89.6 ± 5.2		87.7 ± 5.7 ↓		88.3 ± 1.5	
RTV (Full Series)	82.1 ± 6.6		74.6 ± 7.6 ↓		75.1 ± 2.1	
FLU (2 Doses)	53.0 ± 8.6		47.7 ± 8.7 ↓		34.7 ± 2.3	
RSV (1 Dose) [‡]	- ± -		1.5 ± 2.1 ↑		1.1 ± 0.5	
COVID-19 (Full Series)	3.7 ± 3.2		1.5 ± 2.1 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis

(%) = Percentage, representing a proportion of a cohort, subset, or population

(CI) = Confidence Interval, showing the range where the true value is likely to be

↑ Includes children up-to-date by ACIP-recommended catch-up schedule

‡ Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year

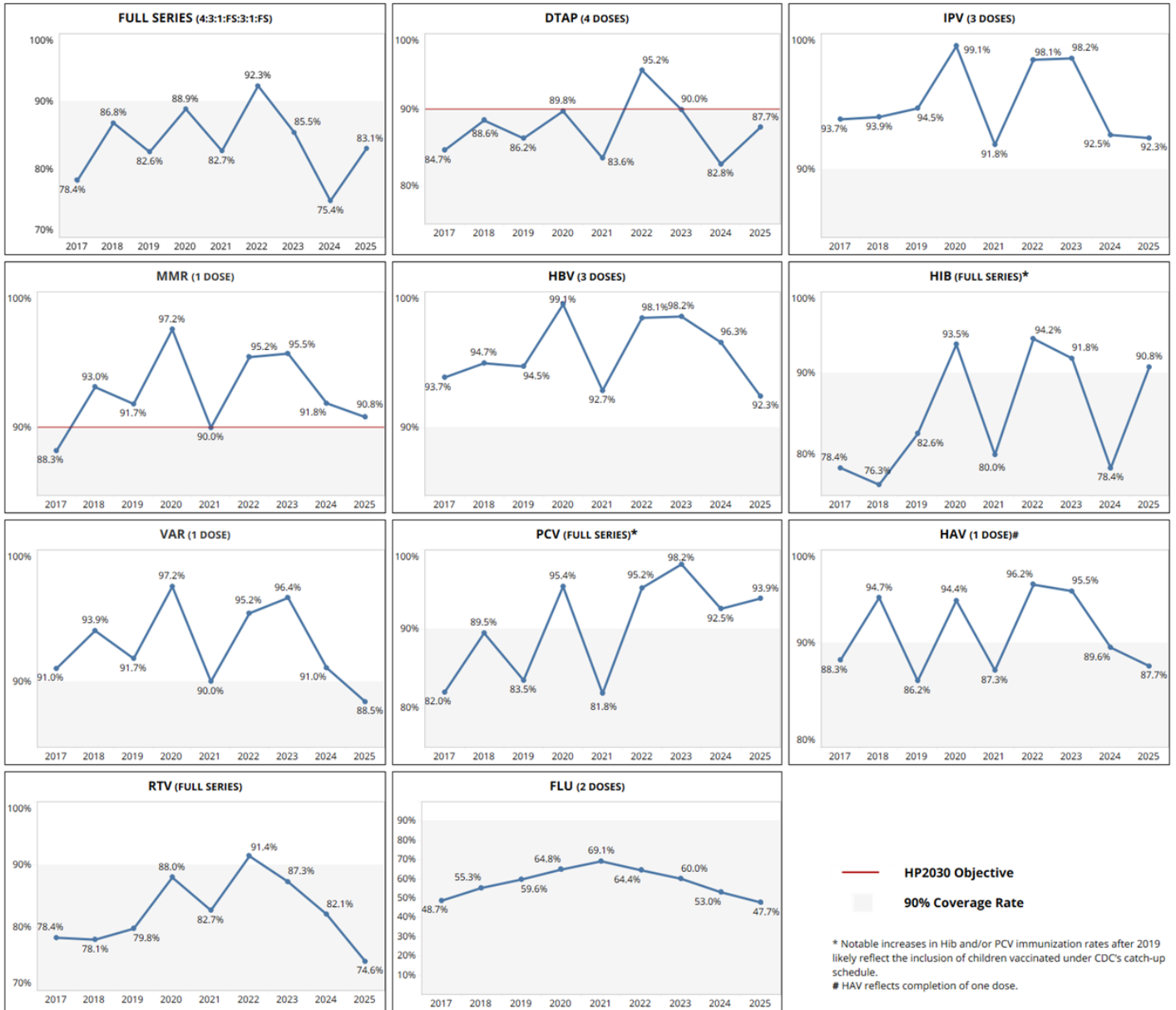
Red font indicates a rate decrease since 2024

Italicized and bolded font indicates a significant difference ($p < 0.05$) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 30-C illustrates the KKR trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents VPDIP's target of a 90% coverage rate.

Figure 30-C: Immunization Rates (%) by Series and Vaccine Antigen, KKR, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

The demographic breakdown of the KKR cohort alongside the UTD immunization rates by demographic groups are shown in Table 19-C and 19-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for KKR.

Table 19-C: Risk Factors and Immunization Rates, KKR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates			
		KKR [‡] n (%)	State [‡] n (%)	KKR (%) CI		STATE (%) CI	
Race**	Black	14	10.8	237	14.2	71.4 ± 27.1	65.8 ± 6.1
	White	95	73.1	1236	73.9	84.2 ± 7.5	77.2 ± 2.3
	Other	21	16.2	199	11.9	85.7 ± 16.3	83.9 ± 5.1
Ethnicity**	Hispanic	16	12.3	218	13.0	93.8 ± 13.3	82.1 ± 5.1
	Non-Hispanic	114	87.7	1454	87.0	81.6 ± 7.2	75.5 ± 2.2
Sex*	Male	57	43.8	810	48.4	87.7 ± 8.8	75.9 ± 3.0
	Female	73	56.2	862	51.6	79.5 ± 9.5	76.8 ± 2.8
Siblings*	0	53	40.8	691	41.3	84.9 ± 10.0	82.2 ± 2.9
	1	45	34.6	540	32.3	84.4 ± 11.0	76.1 ± 3.6
	2+	32	24.6	441	26.4	78.1 ± 15.1	67.6 ± 4.4
Vaccination Source	Private Medical Provider	113	86.9	1409	84.3	91.2 ± 5.3	82.0 ± 2.0
	Health Department	1	0.8	24	1.4	sample size is too small to generate estimates	58.3 ± 21.3
	Both	10	7.7	148	8.9	sample size is too small to generate estimates	69.6 ± 7.5
	Unknown Source	6	4.6	91	5.4	sample size is too small to generate estimates	4.4 ± 4.3
Program Enrollment	TennCare	63	48.5	1075	64.3	82.5 ± 9.6	74.5 ± 2.6
	Not Enrolled	67	51.5	597	35.7	83.6 ± 9.1	79.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ‡ Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Table 19-D: Parent Demographics and Immunization Rates, KKR, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates			
		KKR [‡] n (%)	State [‡] n (%)	KKR (%) CI		STATE (%) CI	
Mother Age*	≤24	29	22.3	497	29.7	82.8 ± 14.6	76.5 ± 3.7
	25-34	71	54.6	978	58.5	87.3 ± 7.9	76.6 ± 2.7
	≥35	30	23.1	197	11.8	73.3 ± 16.8	75.1 ± 6.1
Father Age*	≤24	16	12.3	283	16.9	75.0 ± 23.8	75.3 ± 5.1
	25-34	60	46.2	863	51.6	88.3 ± 8.4	77.3 ± 2.8
	≥35	45	34.6	355	21.2	80.0 ± 12.2	77.7 ± 4.3
	Unknown	9	6.9	171	10.2	sample size is too small to generate estimates	70.8 ± 6.9
Mother Education*	< High School Diploma/ GED	16	12.3	206	12.3	87.5 ± 18.2	71.8 ± 6.2
	High School Diploma/ GED	30	23.1	478	28.6	70.0 ± 17.4	72.0 ± 4.0
	> High School Diploma/ GED	83	63.8	983	58.8	88.0 ± 7.2	79.5 ± 2.5
Father Education*	< High School Diploma/ GED	15	11.5	186	11.1	80.0 ± 22.9	78.5 ± 6.0
	High School Diploma/ GED	30	23.1	530	31.7	76.7 ± 16.1	73.0 ± 3.8
	> High School Diploma/ GED	73	56.2	760	45.5	87.7 ± 7.0	80.0 ± 2.9
	Unknown	12	9.2	196	11.7	75.0 ± 28.7	69.4 ± 6.5
Marriage Status*	Married	84	64.6	949	56.8	84.5 ± 7.9	77.7 ± 2.7
	Unmarried	46	35.4	722	43.2	80.4 ± 11.9	74.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ‡ Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Northeast Region

Figure 31-A: Location of Northeast Region (NER)

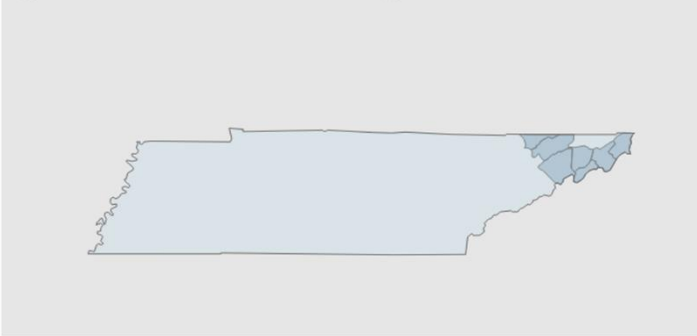
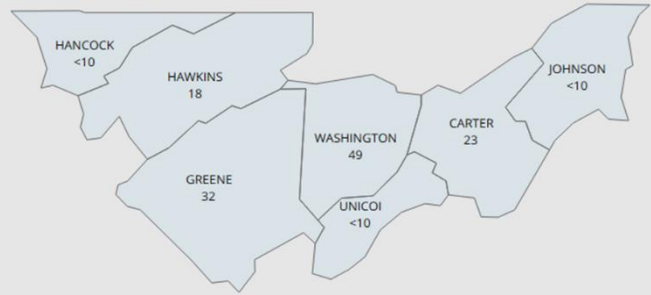


Figure 31-B: Sampling per County, NER, 2025



Final Cohort Determination

The initial 2025 NER sample included 150 children born between January and March of 2023 (Table 20-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 137. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a smaller cohort and had a lower response rate.

Immunization Rates

In NER, the up to date (UTD) immunization rate by 24 months of age was 85.3%, which was significantly higher than the 2024 rate (73.9%), and the state average (76.4%) (Table 20-B). The UTD immunization rate as reported to TennIS was 18.4%, significantly lower than the 2024 rate (31.2%) and the state rate (35.6%).

The vaccine-specific rates reveal three significant differences, and several increases compared to the previous year and the state overall (Table 20-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, while **italicized and bolded** figures highlight statistically significant differences ($p < 0.05$) over the same period.

Immunization Administration

Of the 3,121 vaccine doses administered to the NER children, 3,083 (98.8%) were administered by private providers, 37 (1.2%) were administered by public health providers, and 1 (<1%) were administered by an unknown source.

Table 20-A: 24-Month-Old Survey Sampling, NER, 2025

	2024	2025	State 2025
Original sample (n)	152	150	1953
Ineligible (n)	13 (5.0%)	11 (7.3%)	122 (6.2%)
Refused Participation (n)	1 (0.7%)	2 (1.3%)	51 (2.6%)
Eligible sample (n)	138	137	1780
Unable to locate [†] (n)	0 (0.0%)	1 (0.7%)	108 (6.1%)
Final sample (n)	138	136	1672
Response Rate (%)[*]	100.0	99.3	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
[†] Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
^{*} Response Rate (%) is the number of survey responses from eligible children

Table 20-B: Immunization Rates by Series and Vaccine, NER, 2025

	2024 (n=138)		2025 (n=136)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up-to-Date (UTD):						
UTD immunization rate[*] (as reported to TennIS)	31.2 ± 7.8		18.4 ± 6.6 ↓		35.6 ± 2.3	
UTD immunization rate[*] (with data collection)	73.9 ± 7.4		85.3 ± 7.4 ↑		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	79.7 ± 6.8		86.8 ± 5.8 ↑		79.4 ± 1.9	
IPV (3 Doses)	86.2 ± 5.8		92.6 ± 4.4 ↑		90.1 ± 1.4	
MMR (1 Dose)	86.2 ± 5.8		89.0 ± 5.3 ↑		88.6 ± 1.5	
HBV (3 Doses)	87.0 ± 5.7		93.4 ± 4.2 ↑		91.9 ± 1.3	
HBV, Birth Dose	65.9 ± 8.0		71.3 ± 7.7 ↑		76.0 ± 2.0	
Hib (Full Series)	80.4 ± 6.7		91.2 ± 4.8 ↑		85.2 ± 1.7	
VAR (1 Dose)	85.5 ± 6.0		89.7 ± 5.2 ↑		88.3 ± 1.5	
PCV (Full Series)	87.0 ± 5.7		94.1 ± 4.0 ↑		92.1 ± 1.3	
Full Series (4:3:1:FS:3:1:FS)	73.9 ± 7.4		85.3 ± 7.4 ↑		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	87.7 ± 5.6		89.7 ± 5.2 ↑		88.3 ± 1.5	
RTV (Full Series)	79.0 ± 6.9		83.8 ± 6.3 ↑		75.1 ± 2.1	
FLU (2 Doses)	37.7 ± 8.2		36.0 ± 8.2 ↓		34.7 ± 2.3	
RSV (1 Dose) [‡]	- ± -		0.7 ± 1.5 ↑		1.1 ± 0.5	
COVID-19 (Full Series)	2.9 ± 2.8	3.1	0.7 ± 1.5 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
^{*} Includes children up-to-date by ACIP-recommended catch-up schedule
[‡] Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference (p < 0.05) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 31-C illustrates the NER trend for each individual vaccine series from 2017 to 2025. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents VPDIP's target of a 90% coverage rate.

Figure 31-C: Immunization Rates (%) by Series and Vaccine Antigen, NER, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

The demographic breakdown of the NER cohort alongside the UTD immunization rates by demographic groups are shown in Table 20-C and 20-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for NER.

Table 20-C: Risk Factors and Immunization Rates, NER, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates				
		NER [¥] n (%)	State [¥] n (%)	NER (%) CI		STATE (%) CI		
Race⁺⁺	Black	4	2.9	237	14.2	sample size is too small to generate estimates		65.8 ± 6.1
	White	123	90.4	1236	73.9	84.6 ± 6.5		77.2 ± 2.3
	Other	9	6.6	199	11.9	sample size is too small to generate estimates		83.9 ± 5.1
Ethnicity⁺⁺	Hispanic	10	7.4	218	13.0	sample size is too small to generate estimates		82.1 ± 5.1
	Non-Hispanic	126	92.6	1454	87.0	84.9 ± 6.3		75.5 ± 2.2
Sex[*]	Male	73	53.7	810	48.4	87.7 ± 7.7		75.9 ± 3.0
	Female	63	46.3	862	51.6	82.5 ± 9.6		76.8 ± 2.8
Siblings[*]	0	61	44.9	691	41.3	91.8 ± 7.1		82.2 ± 2.9
	1	43	31.6	540	32.3	86.0 ± 10.8		76.1 ± 3.6
	2+	32	23.5	441	26.4	71.9 ± 16.5		67.6 ± 4.4
Vaccination Source	Private Medical Provider	126	92.6	1409	84.3	89.7 ± 5.4		82.0 ± 2.0
	Health Department	-	-	24	1.4	sample size is too small to generate estimates		58.3 ± 21.3
	Both	2	1.5	148	8.9	sample size is too small to generate estimates		69.6 ± 7.5
	Unknown Source	9	6.6	91	5.4	sample size is too small to generate estimates		4.4 ± 4.3
Program Enrollment	TennCare	99	72.8	1075	64.3	86.9 ± 6.8		74.5 ± 2.6
	Not Enrolled	37	27.2	597	35.7	81.1 ± 13.2		79.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ¥ Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Table 21-D: Parent Demographics and Immunization Rates, NER, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates				
		NER [¥] n (%)	State [¥] n (%)	NER (%) CI		STATE (%) CI		
Mother Age[*]	≤24	51	37.5	497	29.7	92.2 ± 7.6		76.5 ± 3.7
	25-34	77	56.6	978	58.5	80.5 ± 9.0		76.6 ± 2.7
	≥35	8	5.9	197	11.8	sample size is too small to generate estimates		75.1 ± 6.1
Father Age[*]	≤24	24	17.6	283	16.9	83.3 ± 16.1		75.3 ± 5.1
	25-34	76	55.9	863	51.6	85.5 ± 8.1		77.3 ± 2.8
	≥35	25	18.4	355	21.2	80.0 ± 16.9		77.7 ± 4.3
	Unknown	11	8.1	171	10.2	100.0 ± 0.0		70.8 ± 6.9
Mother Education[*]	< High School Diploma/ GED	13	9.6	206	12.3	100.0 ± 0.0		71.8 ± 6.2
	High School Diploma/ GED	48	35.3	478	28.6	87.5 ± 9.7		72.0 ± 4.0
	> High School Diploma/ GED	73	53.7	983	58.8	80.8 ± 9.2		79.5 ± 2.5
Father Education[*]	< High School Diploma/ GED	9	6.6	186	11.1	sample size is too small to generate estimates		78.5 ± 6.0
	High School Diploma/ GED	55	40.4	530	31.7	85.5 ± 9.6		73.0 ± 3.8
	> High School Diploma/ GED	58	42.6	760	45.5	79.3 ± 10.7		80.0 ± 2.9
	Unknown	14	10.3	196	11.7	100.0 ± 0.0		69.4 ± 6.5
Marriage Status[*]	Married	83	61.0	949	56.8	78.3 ± 9.1		77.7 ± 2.7
	Unmarried	52	38.2	722	43.2	96.2 ± 5.4		74.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ¥ Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 + Does not distinguish between Hispanic whites and non-Hispanic whites

Sullivan County Region

Figure 32-A: Location of Sullivan County Region (SUL)

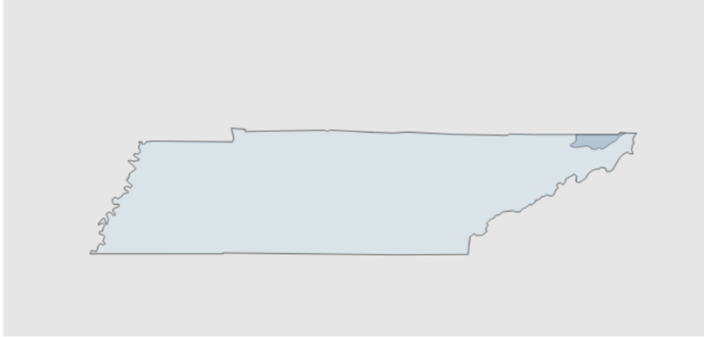
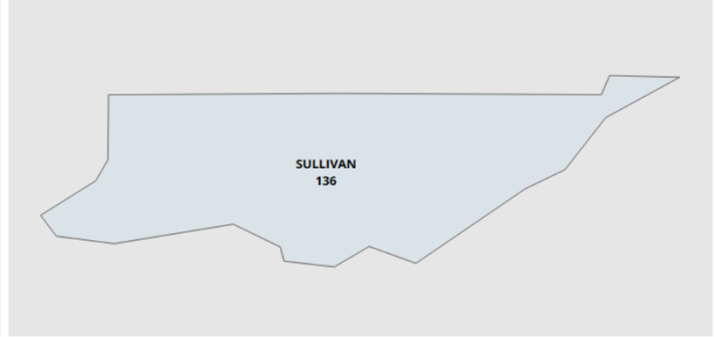


Figure 32-B: Sampling per County, SUL, 2025



Final Cohort Determination

The initial 2025 SUL sample included 150 children born between January and March of 2023 (Table 21-A). After excluding ineligible children, those who declined participation, and those who could not be reached, the final cohort size was 136. The response rate was determined by dividing the number of participants in the final cohort by the eligible population. Compared to the previous year, the 2025 analysis utilized a larger cohort and achieved a higher response rate

Immunization Rates

In SUL, the up-to-date (UTD) immunization rate by 24 months of age was 80.1%, which was higher than the 2024 rate (73.2%) and the state average (76.4%) (Table 21-B). The UTD immunization rate as reported to TennIS was 8.8%, lower than the 2024 rate (14.2%) and lower than the state rate (35.6%).

The vaccine-specific rates reveal no significant differences, and several increases and decreases compared to the previous year and the state overall (Table 21-B). In this table, figures in **red** indicate a decrease in vaccine coverage rates between 2024 and 2025, **while italicized and bolded** figures highlight statistically significant differences ($p < 0.05$) over the same period.

Immunization Administration

Of the 3,099 vaccine doses administered to the SUL children, 2,919 (94.2%) were administered by private providers, 83 (2.7%) were administered by public health providers, and 97 (3.1%) were administered by an unknown source.

Table 21-A: 24-Month-Old Survey Sampling, SUL, 2025

	2024	2025	State 2025
Original sample (n)	148	150	1953
Ineligible (n)	14 (9.5%)	9 (6.0%)	122 (6.2%)
Refused Participation (n)	6 (4.1%)	4 (2.7%)	51 (2.6%)
Eligible sample (n)	128	137	1780
Unable to locate† (n)	1 (0.8%)	1 (0.7%)	108 (6.1%)
Final sample (n)	127	136	1672
Response Rate (%)*	99.2	99.3	93.9

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 † Children are classified as "Unable to Locate" after multiple attempts were unsuccessful in locating and communicating with the child's guardian and/or the child's provider was either unknown or also unable to locate the guardian.
 * Response Rate (%) is the number of survey responses from eligible children

Table 21-B: Immunization Rates by Series and Vaccine, SUL, 2025

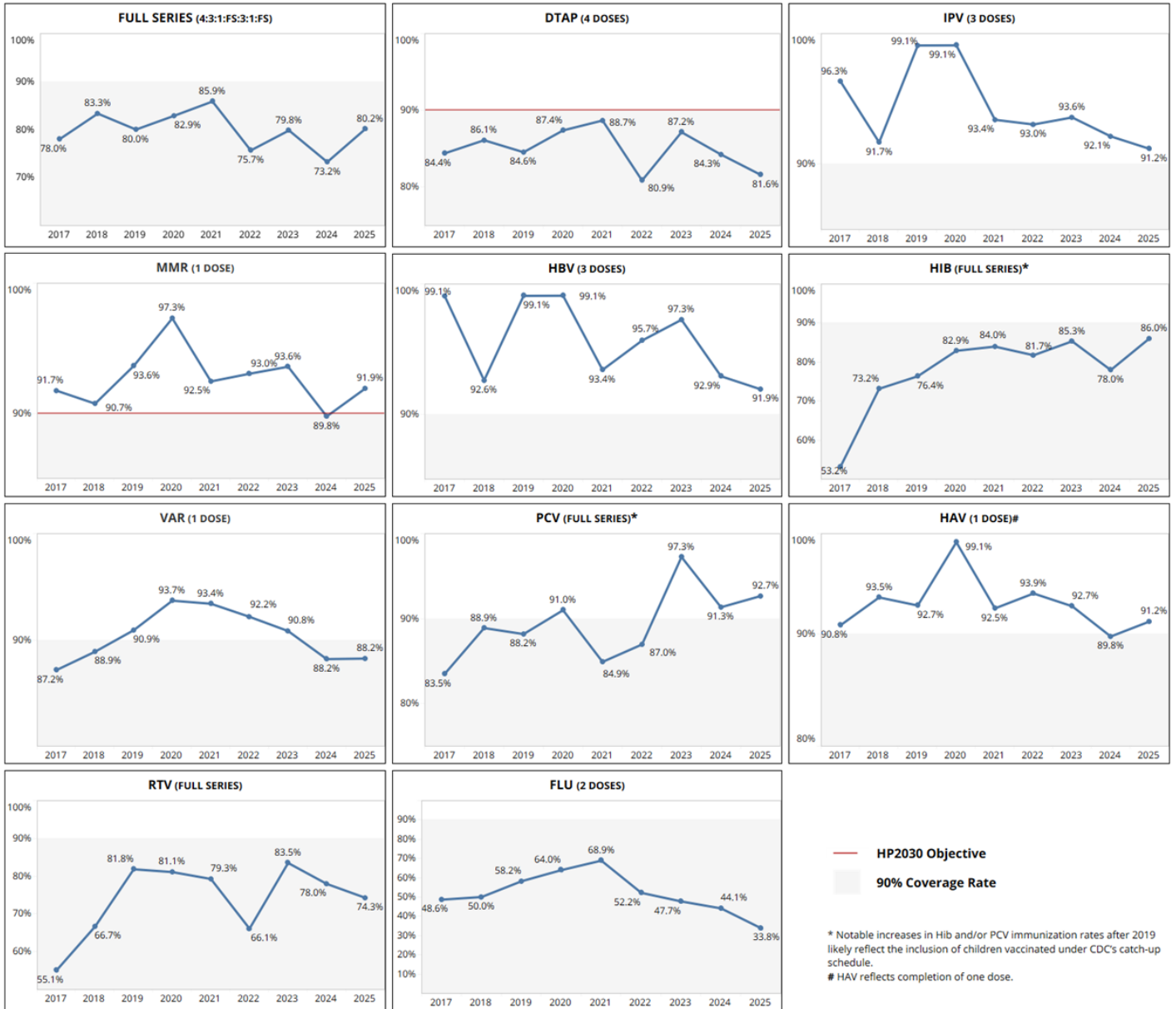
	2024 (n=127)		2025 (n=136)		State 2025 (n=1672)	
	(%)	CI	(%)	CI	(%)	CI
Up-to-Date (UTD):						
UTD immunization rate* (as reported to TennIS)	14.2 ± 6.2		8.8 ± 4.8 ↓		35.6 ± 2.3	
UTD immunization rate* (with data collection)	73.2 ± 7.8		80.1 ± 6.8 ↑		76.4 ± 2.0	
ACIP Recommended Vaccine Series (By 24 Months of Age)						
DTaP (4 Doses)	84.3 ± 6.4		81.6 ± 6.6 ↓		79.4 ± 1.9	
IPV (3 Doses)	92.1 ± 4.8		91.2 ± 4.8 ↓		90.1 ± 1.4	
MMR (1 Dose)	89.8 ± 5.3		91.9 ± 4.6 ↑		88.6 ± 1.5	
HBV (3 Dose)	92.9 ± 4.5		91.9 ± 4.6 ↓		91.9 ± 1.3	
HBV, Birth Dose	81.1 ± 6.9		77.9 ± 7.1 ↓		76.0 ± 2.0	
Hib (Full Series)	78.0 ± 7.3		86.0 ± 5.9 ↓		85.2 ± 1.7	
VAR (1 Dose)	88.2 ± 5.7		88.2 ± 5.5 -		88.3 ± 1.5	
PCV (Full Series)	91.3 ± 5.0		92.6 ± 4.4 ↑		92.1 ± 1.3	
Full Series 4:3:1:FS:3:1:FS	73.2 ± 7.8		80.1 ± 6.8 ↑		76.4 ± 2.0	
Additional Vaccines of Interest (By 24 Months of Age)						
HAV (1 Dose)	89.8 ± 5.3		91.2 ± 4.8 ↑		88.3 ± 1.5	
RTV (Full Series)	78.0 ± 7.3		74.3 ± 7.4 ↓		75.1 ± 2.1	
FLU (2 Doses)	44.1 ± 8.8		33.8 ± 8.1 ↓		34.7 ± 2.3	
RSV (1 Dose)†	- ± -		0.0 ± 0.0 -		1.1 ± 0.5	
COVID-19 (Full Series)	2.4 ± 2.7		0.0 ± 0.0 ↓		0.8 ± 0.4	

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of a cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 † Includes children up-to-date by ACIP-recommended catch-up schedule
 ‡ Statistical significance cannot be assessed due to vaccine administration guideline changes from the previous year
Red font indicates a rate decrease since 2024
Italicized and bolded font indicates a significant difference ($p < 0.05$) with 2024 rate

IMMUNIZATION STATUS SURVEY – 2025

Figure 32-C shows the SUL trend for each individual vaccine series over the seven years. The red lines denote the HP2030 objectives for each assessed vaccine, while the gray fill represents VPDIPs target of a 90% coverage rate.

Figure 32-C: Immunization Rates (%) by Series and Vaccine Antigen, SUL, 2017-2025



IMMUNIZATION STATUS SURVEY – 2025

Demographic Information

The demographic breakdown of the SUL cohort alongside the UTD immunization rates by demographic groups are shown in Table 21-C and 21-D.

Due to small sample sizes and inherent limitations of the data, significant differences in the UTD rates between the demographic subgroups in 2025 are not reported for SUL.

Table 21-C: Risk Factors and Immunization Rates, SUL, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates	
		SUL [¥] n (%)	State [¥] n (%)	SUL (%) CI	STATE (%) CI
Race**	Black	3 2.2	237 14.2	sample size is too small to generate estimates	
	White	124 91.2	1236 73.9	81.5 ± 6.9	77.2 ± 2.3
	Other	9 6.6	199 11.9	sample size is too small to generate estimates	
Ethnicity*	Hispanic	8 5.9	218 13.0	sample size is too small to generate estimates	
	Non-Hispanic	128 94.1	1454 87.0	80.5 ± 7.0	75.5 ± 2.2
Sex†	Male	64 47.1	810 48.4	79.7 ± 10.1	75.9 ± 3.0
	Female	72 52.9	862 51.6	80.6 ± 9.4	76.8 ± 2.8
Siblings*	0	56 41.2	691 41.3	87.5 ± 8.9	82.2 ± 2.9
	1	55 40.4	540 32.3	74.5 ± 11.9	76.1 ± 3.6
	2+	25 18.4	441 26.4	76.0 ± 18.0	67.6 ± 4.4
Vaccination Source	Private Medical Provider	119 87.5	1409 84.3	84.9 ± 6.5	82.0 ± 2.0
	Health Department	- -	24 1.4	sample size is too small to generate estimates	
	Both	8 5.9	148 8.9	sample size is too small to generate estimates	
	Unknown Source	8 5.9	91 5.4	sample size is too small to generate estimates	
Program Enrollment	TennCare	89 65.4	1075 64.3	75.3 ± 9.1	74.5 ± 2.6
	Not Enrolled	47 34.6	597 35.7	89.4 ± 9.2	79.7 ± 3.2

(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ¥ Percentages may not add up to 100% due to missing participant information
 * Information was collected from birth certificate at time of delivery
 † Does not distinguish between Hispanic whites and non-Hispanic whites

Table 21-D: Parent Demographics and Immunization Rates, SUL, 2025

Group	Subgroup	Demographic Breakdown		UTD Immunization Rates	
		SUL [¥] n (%)	State [¥] n (%)	SUL (%) CI	STATE (%) CI
Mother Age*	≤24	40 29.4	497 29.7	77.5 ± 13.5	76.5 ± 3.7
	25-34	83 61.0	978 58.5	80.7 ± 8.7	76.6 ± 2.7
	≥35	13 9.6	197 11.8	84.6 ± 22.7	75.1 ± 6.1
Father Age*	≤24	21 15.4	283 16.9	81.0 ± 18.3	75.3 ± 5.1
	25-34	79 58.1	863 51.6	86.1 ± 7.8	77.3 ± 2.8
	≥35	24 17.6	355 21.2	75.0 ± 18.7	77.7 ± 4.3
	Unknown	12 8.8	171 10.2	50.0 ± 33.2	70.8 ± 6.9
Mother Education*	< High School Diploma/ GED	8 5.9	206 12.3	sample size is too small to generate estimates	
	High School Diploma/ GED	41 30.1	478 28.6	63.4 ± 15.4	72.0 ± 4.0
	> High School Diploma/ GED	87 64.0	983 58.8	75.0 ± 38.7	79.5 ± 2.5
Father Education*	< High School Diploma/ GED	11 8.1	186 11.1	72.7 ± 31.4	78.5 ± 6.0
	High School Diploma/ GED	37 27.2	530 31.7	81.1 ± 13.2	73.0 ± 3.8
	> High School Diploma/ GED	76 55.9	760 45.5	85.5 ± 8.1	80.0 ± 2.9
	Unknown	12 8.8	196 11.7	50.0 ± 33.2	69.4 ± 6.5
Marriage Status*	Married	75 55.1	949 56.8	85.3 ± 8.2	77.7 ± 2.7
	Unmarried	61 44.9	722 43.2	73.8 ± 11.4	74.7 ± 3.2

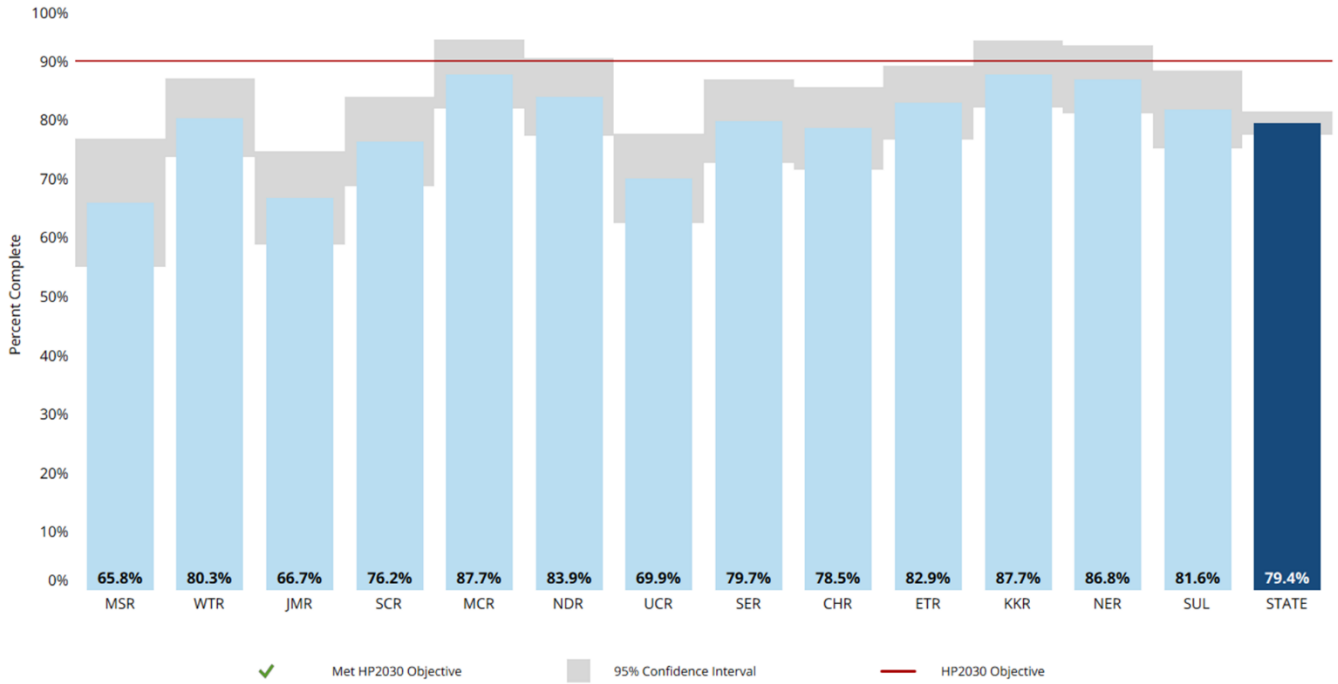
(n) = Sample size or number of observations included in the analysis
 (%) = Percentage, representing a proportion of the cohort, subset, or population
 (CI) = Confidence Interval, showing the range where the true value is likely to be
 ¥ Percentages may not add up to 100% due to missing participant information
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 † Does not distinguish between Hispanic whites and non-Hispanic whites

Appendix I

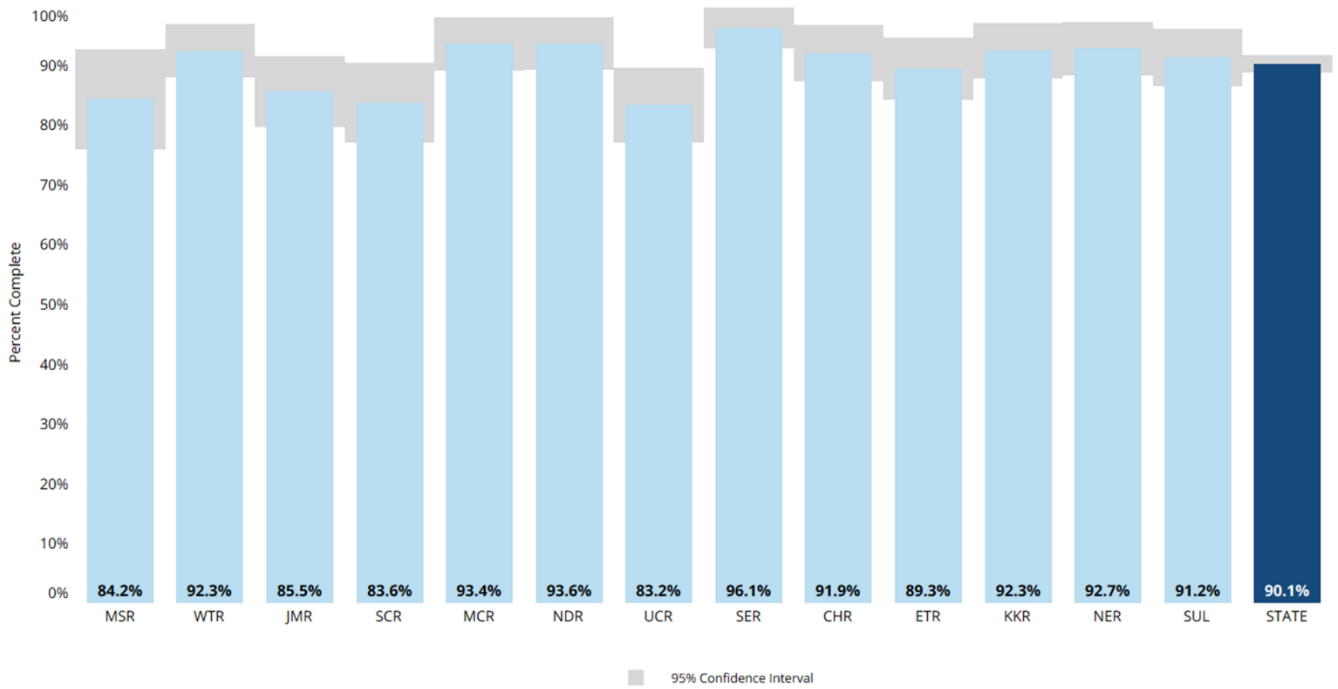
Regional Vaccine Specific Results

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Hepatitis B (3-dose coverage) & Hepatitis B (birth dose)	87
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Rotavirus & Influenza (2-dose coverage)	90

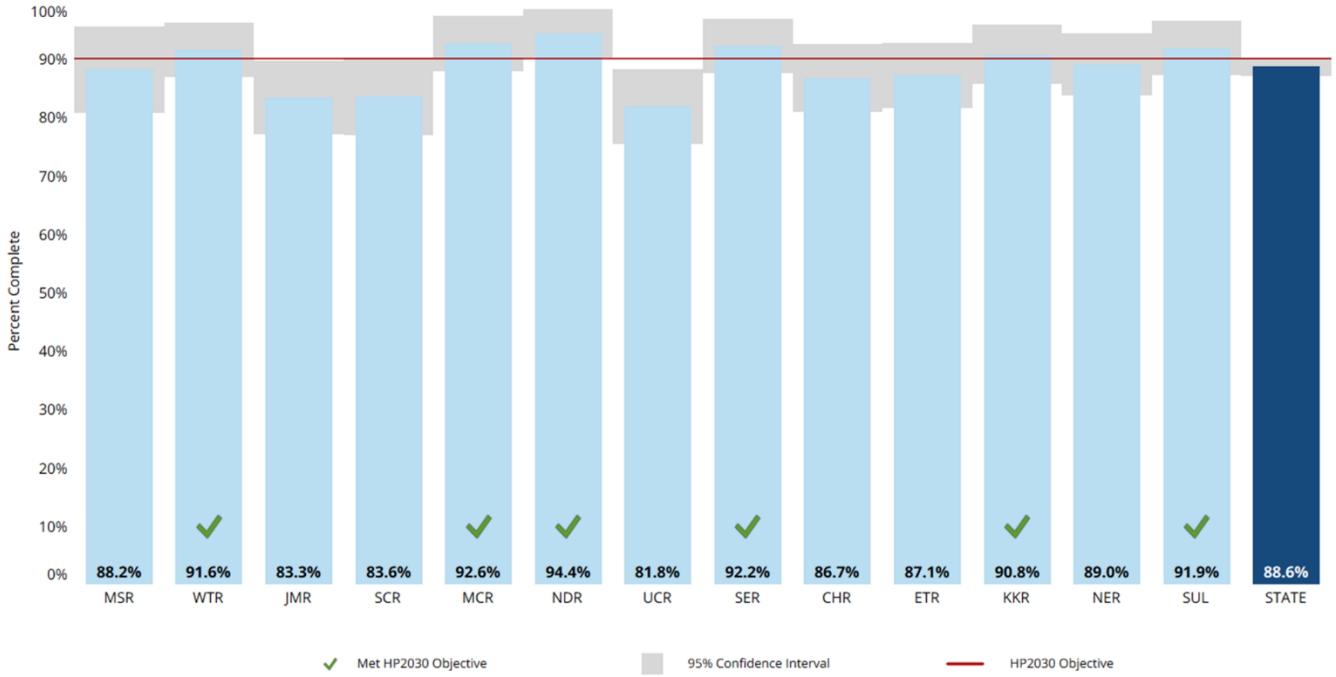
Percentage of Children with Complete Diphtheria, Tetanus, Pertussis (DTaP) Series by Health Department Region, Tennessee, 2025



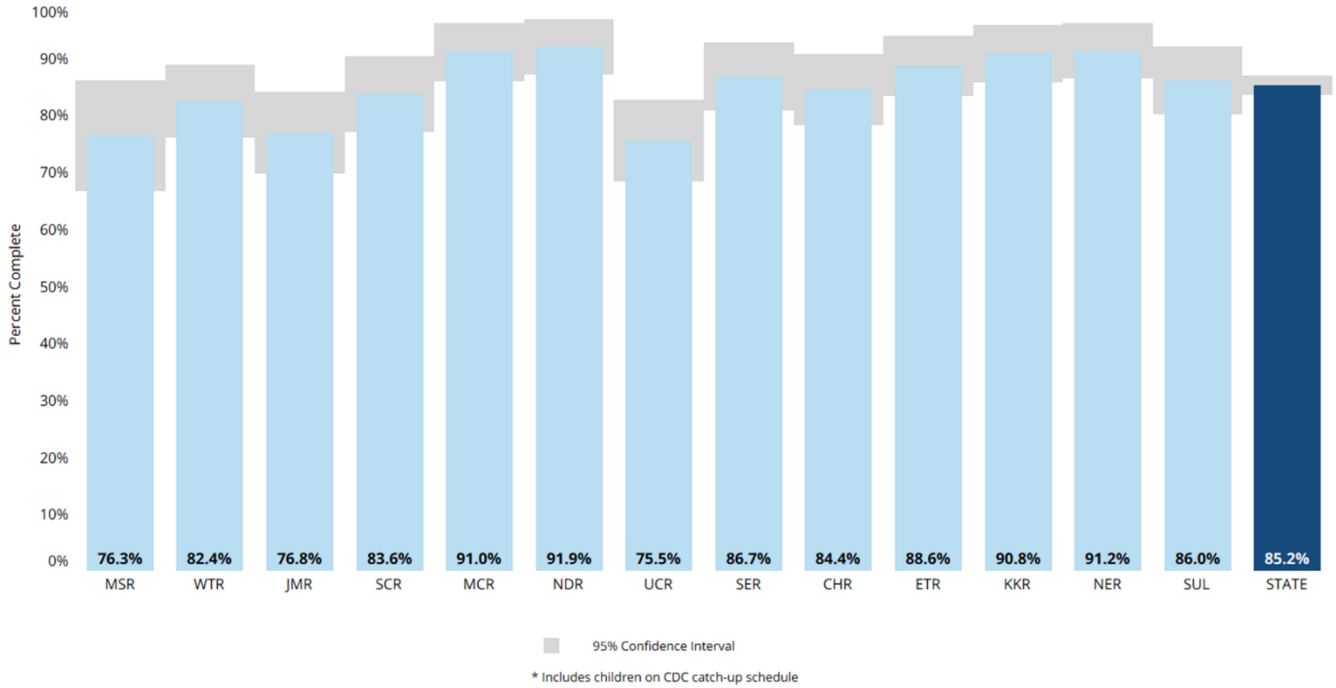
Percentage of Children with Complete Polio (IPV) Series by Health Department Region, Tennessee, 2025



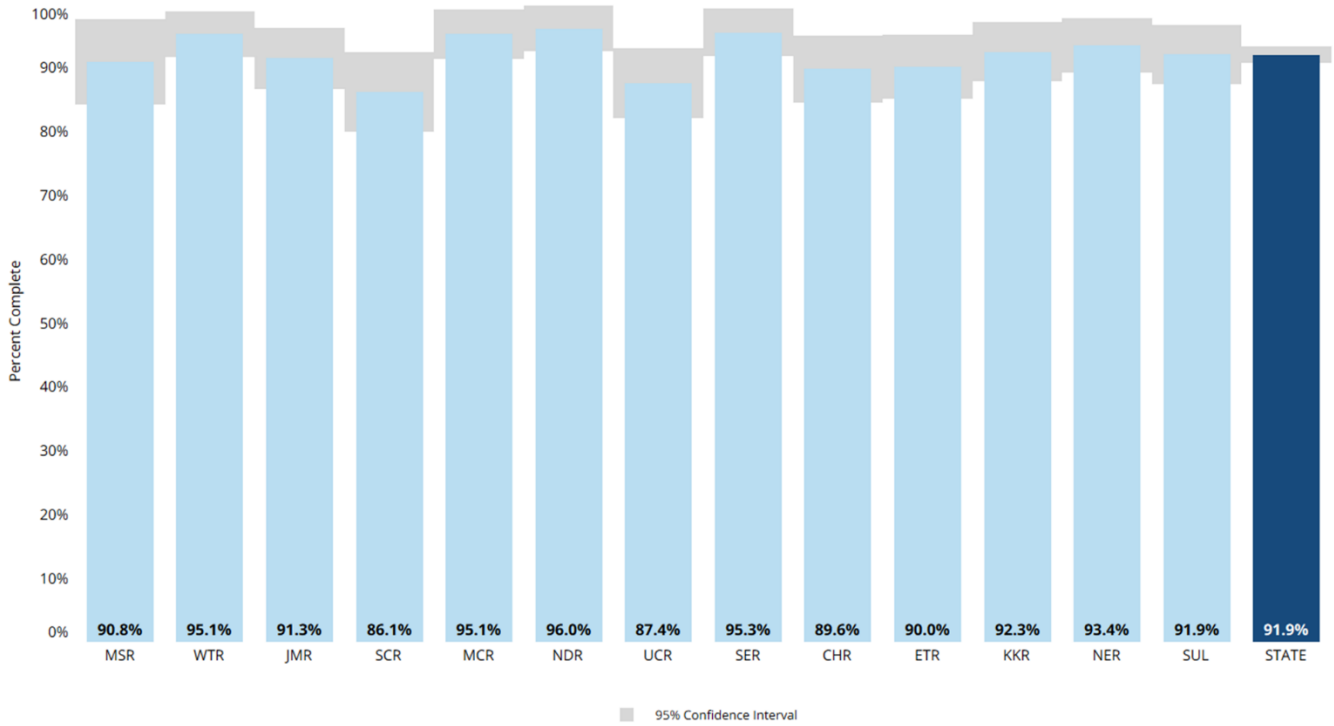
Percentage of Children with Complete Measles, Mumps, Rubella (MMR) Series by Health Department Region, Tennessee, 2025



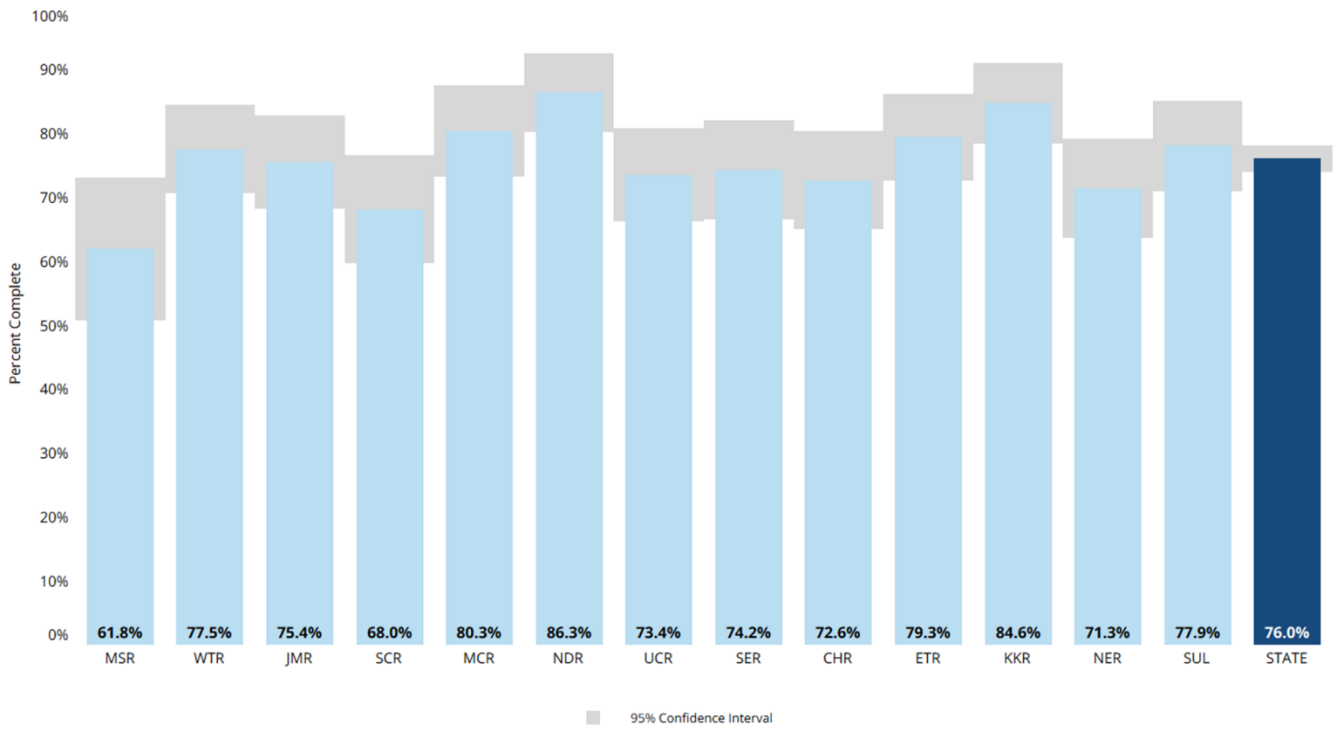
Percentage of Children with Complete Haemophilus Influenzae Type B (HIB)* Series by Health Department Region, Tennessee, 2025



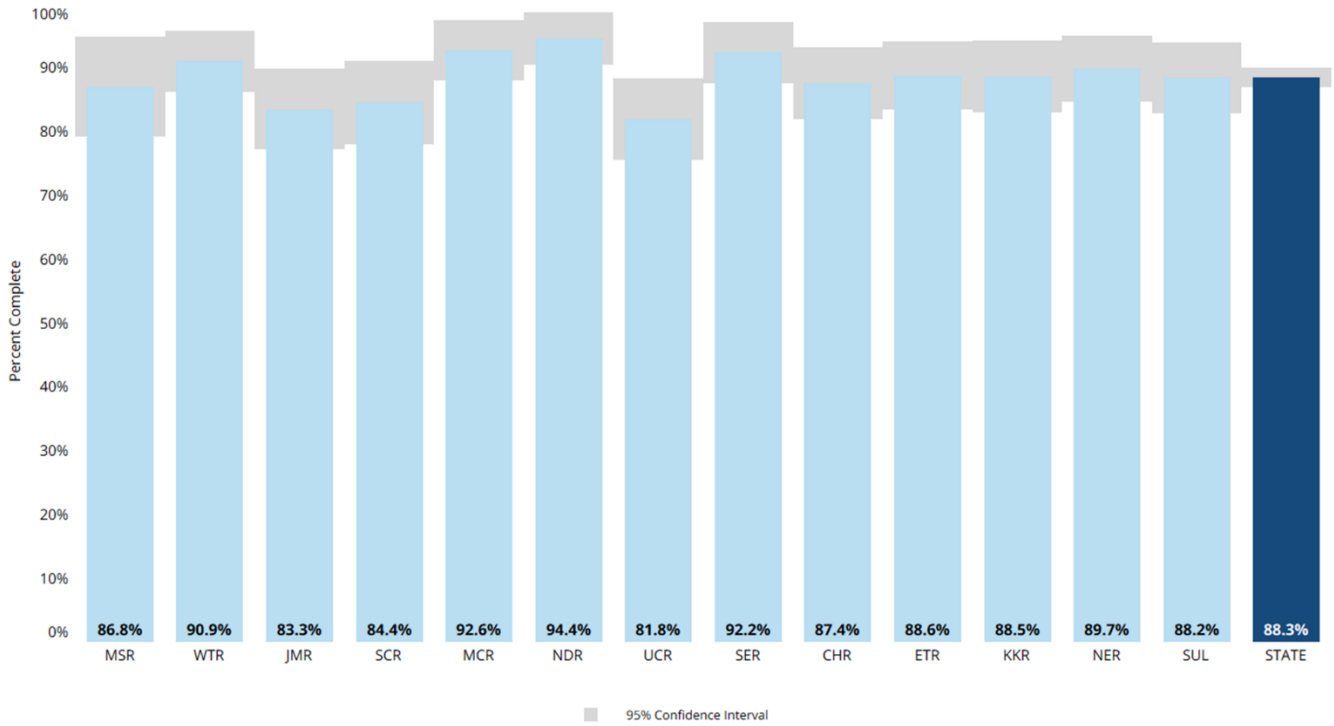
Percentage of Children with Complete Hepatitis B (HBV) Series by Health Department Region, Tennessee, 2025



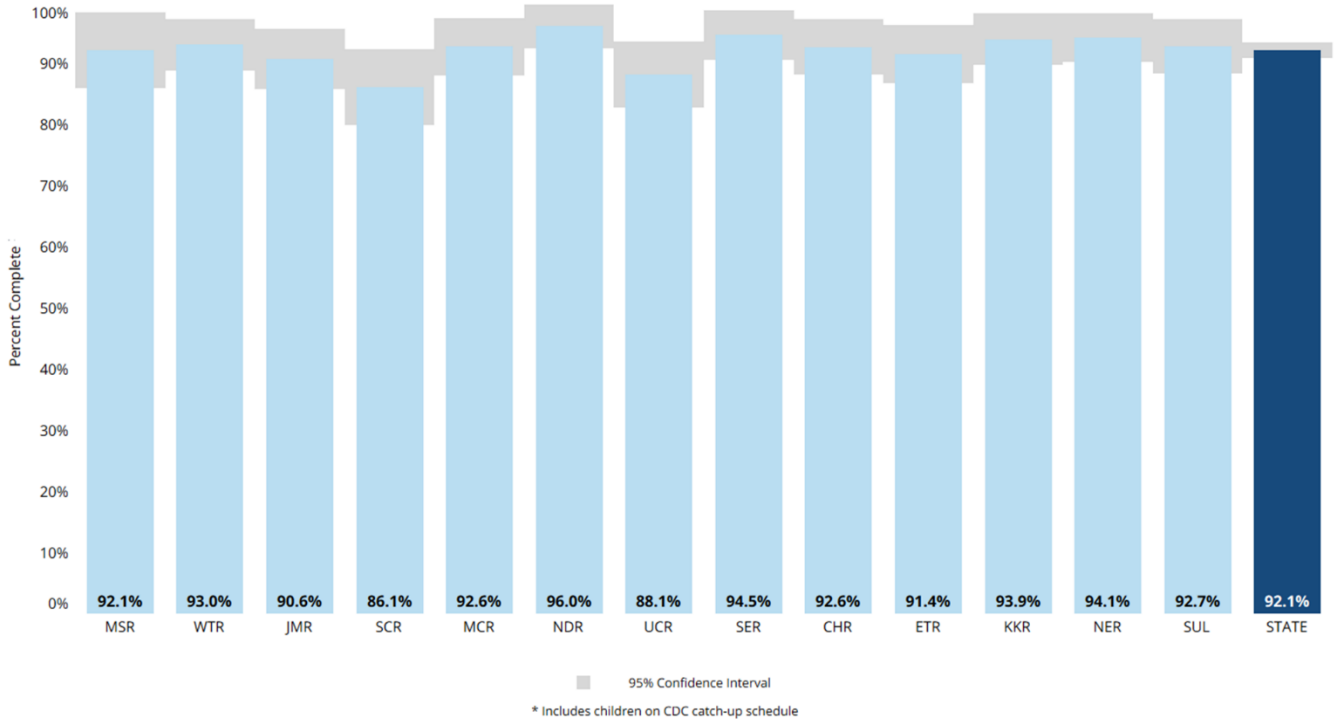
Percentage of Children with Complete Birth Dose Hepatitis B (bHBV) Series by Health Department Region, Tennessee, 2025



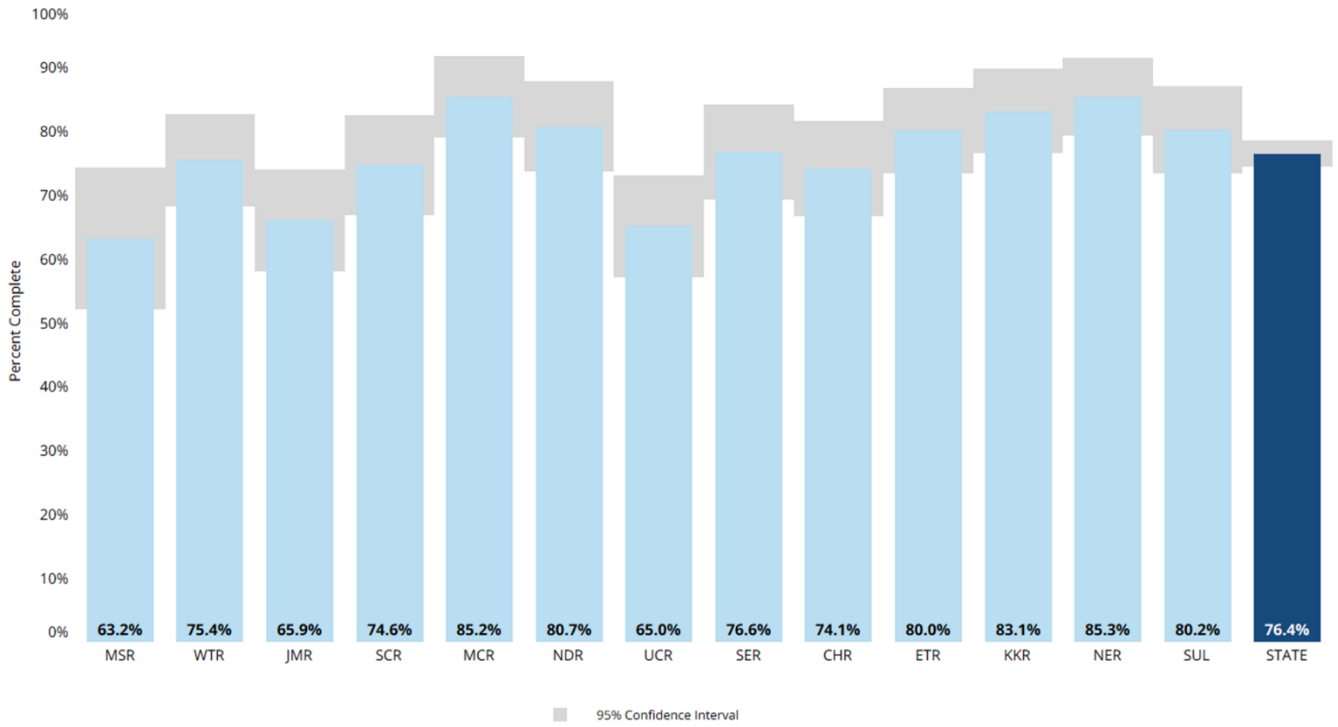
Percentage of Children with Complete **Varicella (VAR)** Series by Health Department Region, Tennessee, 2025



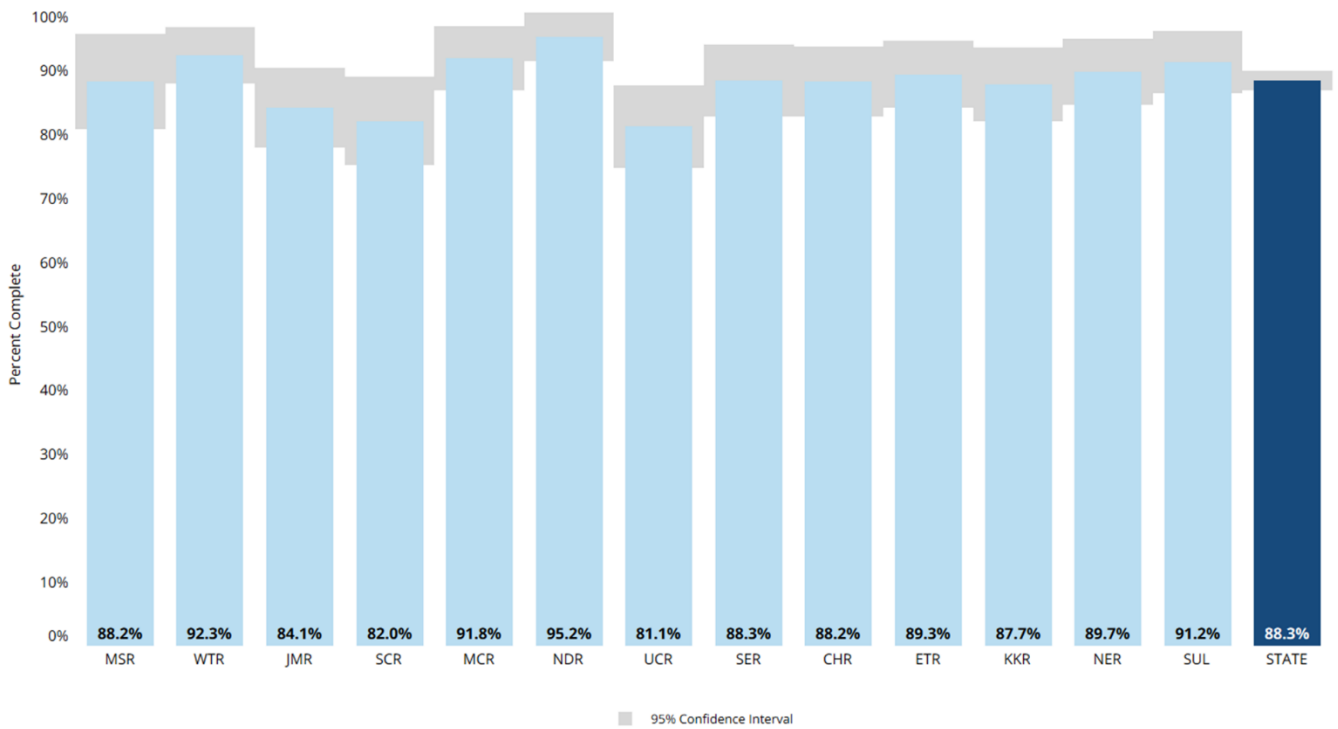
Percentage of Children with Complete **Pneumococcus (PCV)** Series by Health Department Region, Tennessee, 2025



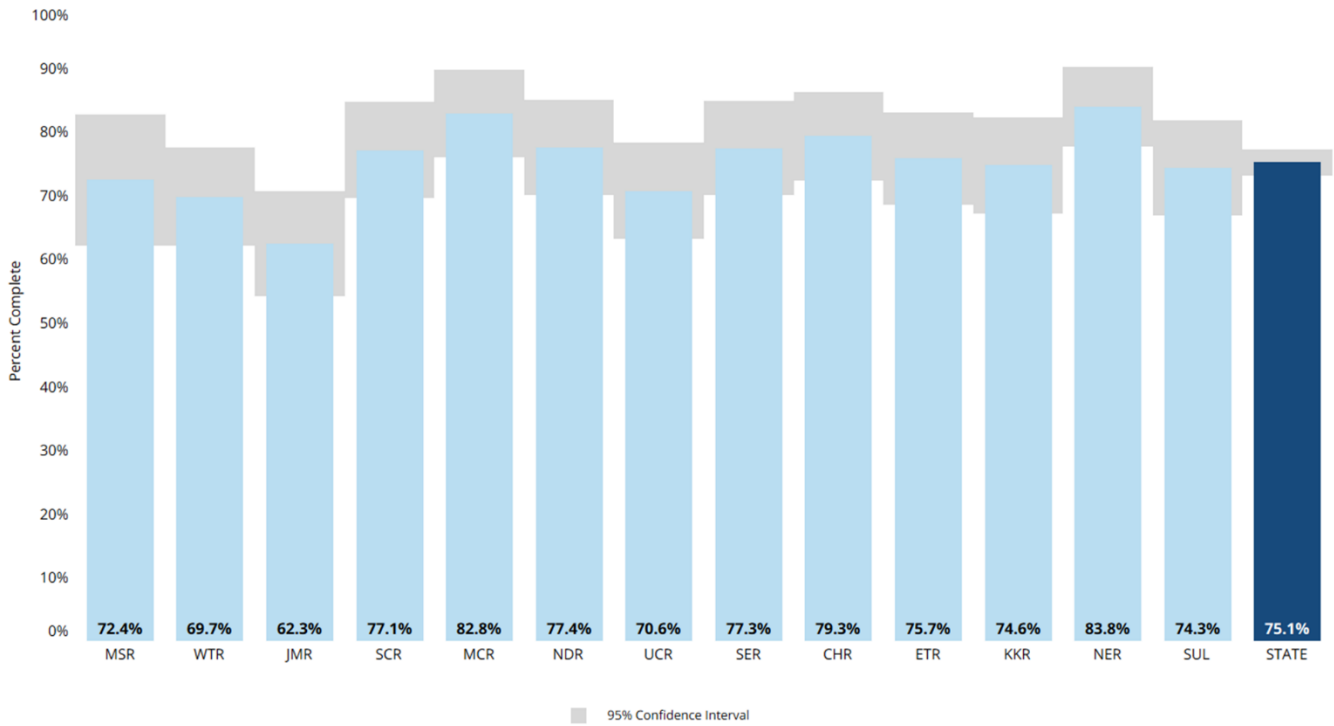
Percentage of Children with Complete Full Series (Complete 4:3:1:FS:3:1:FS) Series by Health Department Region, Tennessee, 2025



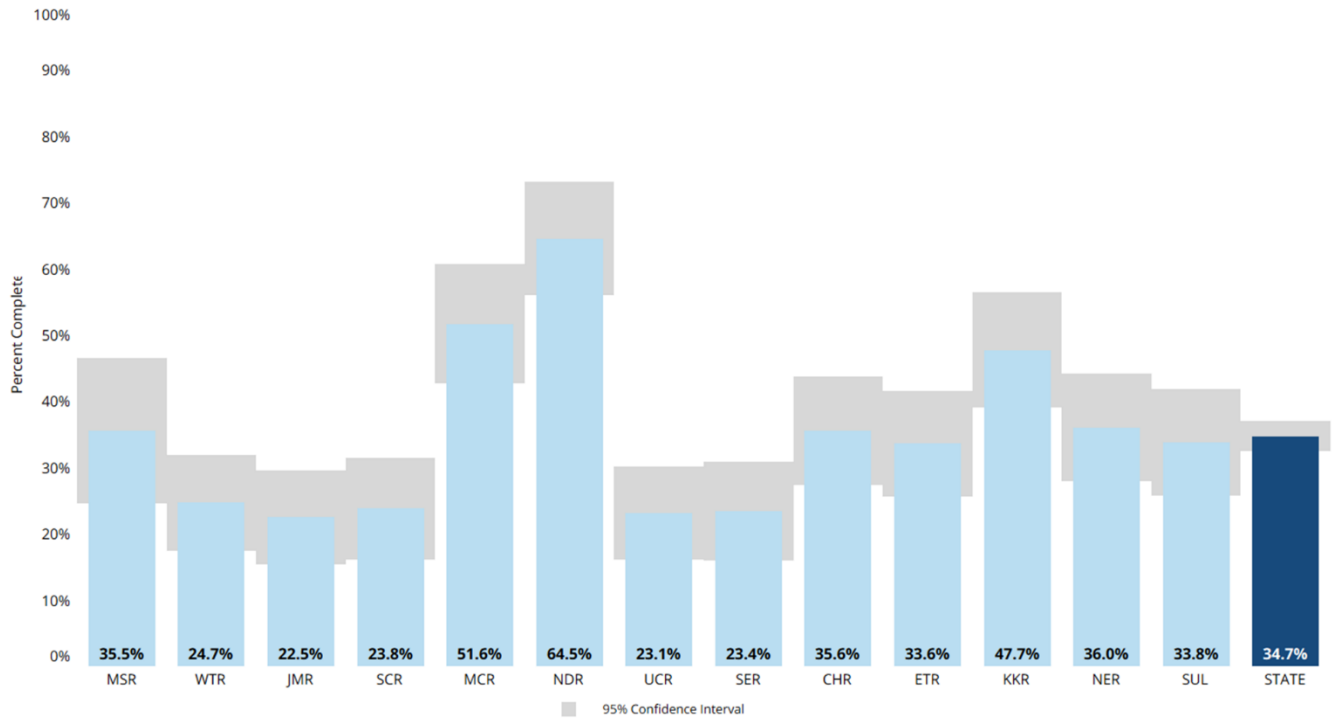
Percentage of Children with Complete Hepatitis A (HAV) Series by Health Department Region, Tennessee, 2025



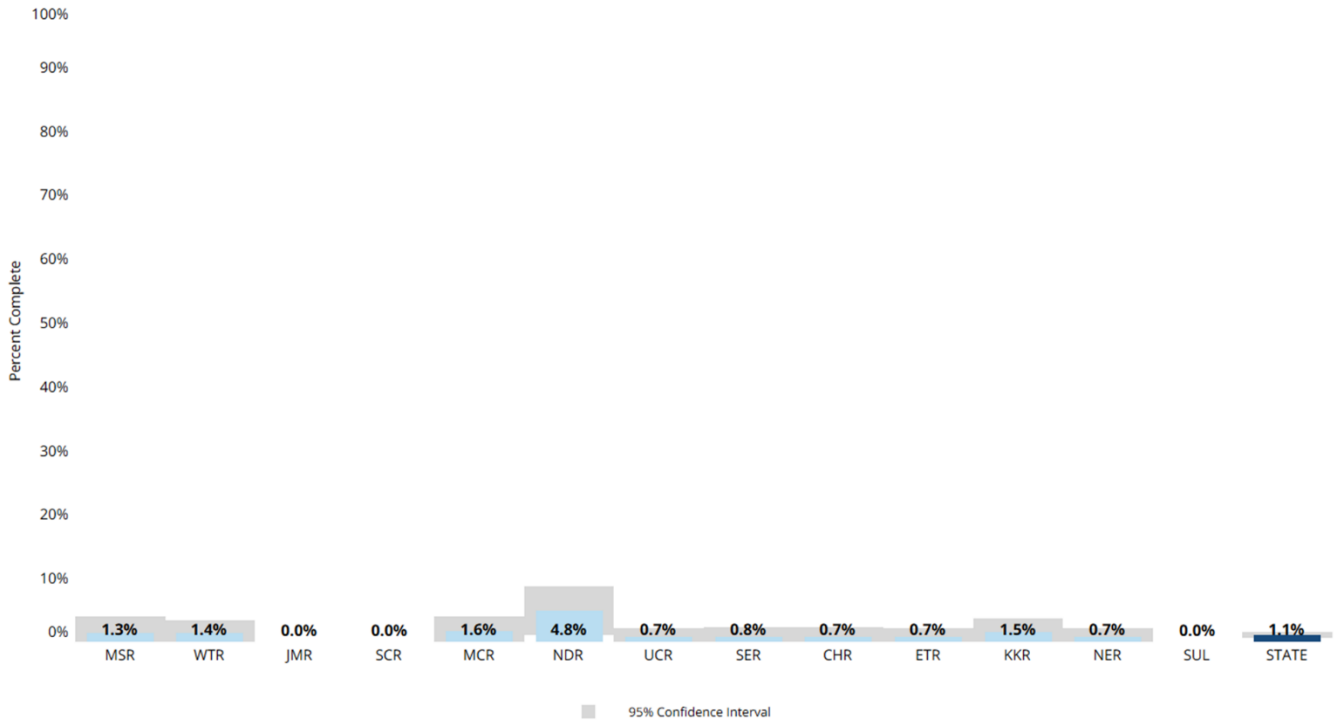
Percentage of Children with Complete Rotavirus (RTV) Series by Health Department Region, Tennessee, 2025



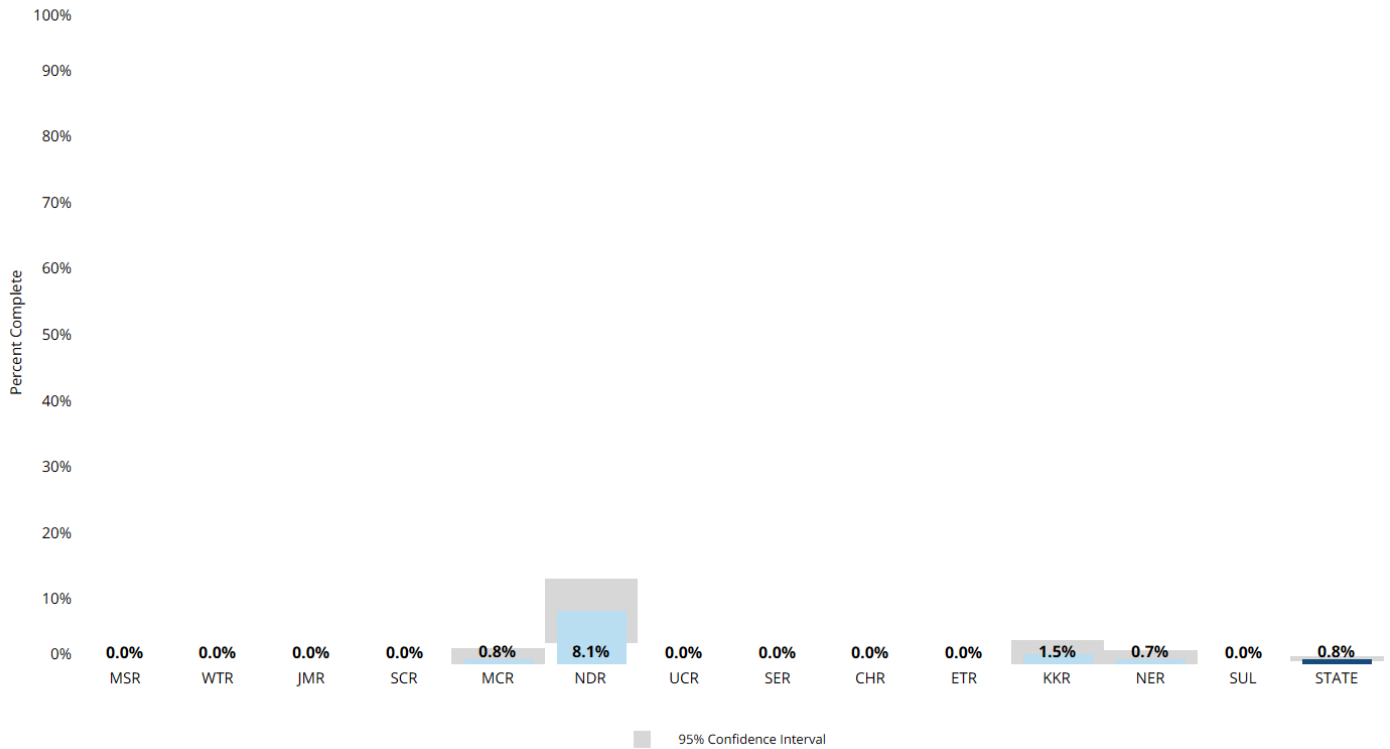
Percentage of Children with Complete Influenza (Flu) Series by Health Department Region, Tennessee, 2025



Percentage of Children with Complete Respiratory Syncytial Virus (RSV) Series by Health Department Region, Tennessee, 2025



Percentage of Children with Complete Coronavirus Disease (COVID) Series by Health Department Region, Tennessee, 2025



Appendix II

Data Tables for Selected Analyses

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Series Complete (4:3:1:FS:3:1:FS) by WIC Enrollment	95

2025 Up-to-Date (UTD) Immunization Status by Region

Region	Cohort (N)	UTD (%)
Memphis-Shelby County Region	76	63.2
West Tennessee Region	135	75.4
Madison County Region	138	65.9
South Central Region	122	74.6
Mid-Cumberland Region	122	85.2
Nashville-Davidson County Region	124	80.6
Upper Cumberland Region	143	65.0
Southeast Region	128	76.6
Chattanooga-Hamilton County Region	135	74.1
East Tennessee Region	140	80.0
Knoxville-Knox County Region	130	83.1
Northeast Region	136	85.3
Sullivan County Region	136	80.1
Tennessee	1672	76.4

Indicates value is above 90%

2025 Up-to-Date (UTD) Immunization Status by Immunization Source

Region	Health Department Only		Private Provider Only		Both Sources Complete		Unknown Source	
	(N)	(%)	(N)	(%)	(N)	(%)	(N)	(%)
Memphis-Shelby County Region	-	-	59	67.8	13	61.5	4	0.0
West Tennessee Region	4	75.0	117	78.6	17	70.6	4	0.0
Madison County Region	4	50.0	109	69.7	19	57.9	6	33.3
South Central Region	8	37.5	85	89.4	14	85.7	15	0.0
Mid-Cumberland Region	-	-	106	88.7	12	75.0	4	25.0
Nashville-Davidson County Region	-	-	110	83.6	12	66.7	-	-
Upper Cumberland Region	4	75.0	115	72.2	12	58.3	12	0.0
Southeast Region	-	-	115	77.0	10	90.0	3	0.0
Chattanooga-Hamilton County Region	-	-	117	79.5	9	77.87	9	0.0
East Tennessee Region	1	100.0	118	88.1	10	70.0	11	0.0
Knoxville-Knox County Region	1	0.0	113	91.2	10	50.0	6	0.0
Northeast Region	-	-	126	89.7	2	100.0	7	0.0
Sullivan County Region	-	-	119	84.9	8	75.0	8	12.5
Tennessee	25	58.3	1409	82.0	148	69.6	91	4.4

Indicates value is above 90%

2025 Up-to-Date (UTD) Immunization Status by Race

Region	White		Black		Other	
	Cohort (N)	UTD (%)	Cohort (N)	UTD (%)	Cohort (N)	UTD (%)
Memphis-Shelby County Region	19	68.4	45	55.6	12	83.3
West Tennessee Region	107	75.7	25	68.0	10	90.0
Madison County Region	64	73.4	59	59.3	15	60.0
South Central Region	98	74.5	9	66.7	15	80.0
Mid-Cumberland Region	90	86.7	14	78.6	18	83.3
Nashville-Davidson County Region	65	76.9	26	80.8	33	87.9
Upper Cumberland Region	133	63.9	2	50.0	8	87.5
Southeast Region	112	75.9	5	60.0	11	90.9
Chattanooga-Hamilton County Region	82	72.0	28	71.4	25	84.0
East Tennessee Region	124	79.0	3	100.0	13	84.6
Knoxville-Knox County Region	95	84.2	14	71.4	21	85.7
Northeast Region	123	84.6	4	75.0	9	100.0
Sullivan County Region	124	81.5	3	33.3	9	77.8
Tennessee	1236	77.2	237	65.8	199	83.9

Indicates value is above 90%


2025 Up-to-Date (UTD) Immunization Status by Sibling Number

Region	0 Siblings		1 Sibling		2+ Siblings	
	Cohort (N)	UTD (%)	Cohort (N)	UTD (%)	Cohort (N)	UTD (%)
Memphis-Shelby County Region	22	63.6	30	70.0	24	54.2
West Tennessee Region	63	81.0	36	69.4	43	72.1
Madison County Region	51	68.6	42	61.9	45	66.7
South Central Region	46	82.6	39	84.6	37	54.1
Mid-Cumberland Region	54	90.7	39	82.1	29	79.3
Nashville-Davidson County Region	54	81.5	36	77.8	34	82.4
Upper Cumberland Region	56	76.8	47	66.0	40	47.5
Southeast Region	55	81.8	45	77.8	28	64.3
Chattanooga-Hamilton County Region	64	79.7	37	70.3	34	67.6
East Tennessee Region	56	85.7	46	82.6	38	68.4
Knoxville-Knox County Region	53	84.9	45	84.4	32	78.1
Northeast Region	61	91.8	43	86.0	32	71.9
Sullivan County Region	56	87.5	55	74.5	25	76.0
Tennessee	691	82.2	540	76.1	441	67.6

Indicates value is above 90%

2025 Up-to-Date (UTD) Immunization Status Among TennCare Enrolled Children

Region	Cohort (N)	UTD (%)
Memphis-Shelby County Region	55	60.0
West Tennessee Region	96	76.0
Madison County Region	103	62.1
South Central Region	72	73.6
Mid-Cumberland Region	62	82.3
Nashville-Davidson County Region	72	77.8
Upper Cumberland Region	94	67.0
Southeast Region	98	73.5
Chattanooga-Hamilton County Region	79	74.7
East Tennessee Region	93	77.4
Knoxville-Knox County Region	63	82.5
Northeast Region	99	86.9
Sullivan County Region	89	75.3
Tennessee	1075	74.5

 Indicates value is above 90%

Appendix III

Regional One Page Summaries

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Figure A. Comparison of WTR and Tennessee UTD Rate by Vaccine Antigen, 2025

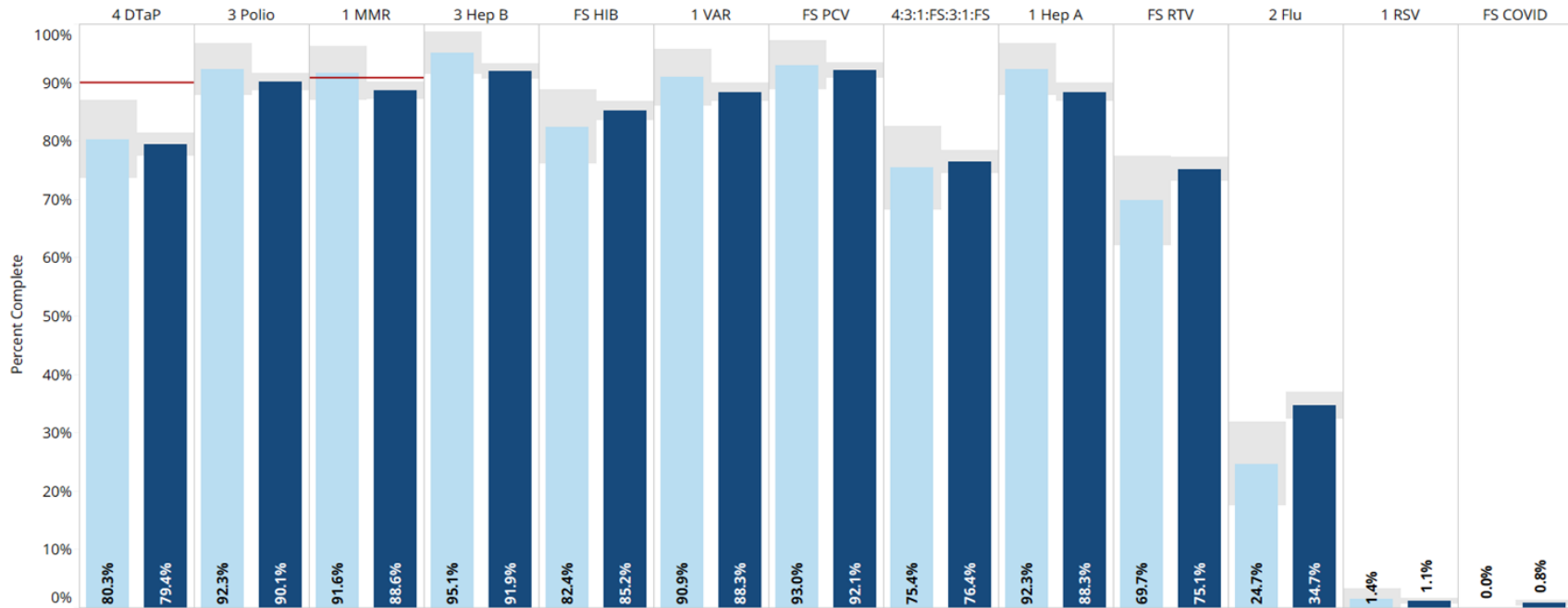


Figure B. WTR Survey Results, by Vaccine Antigen, 2025

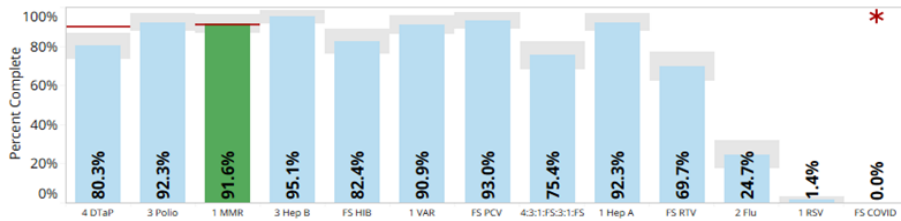
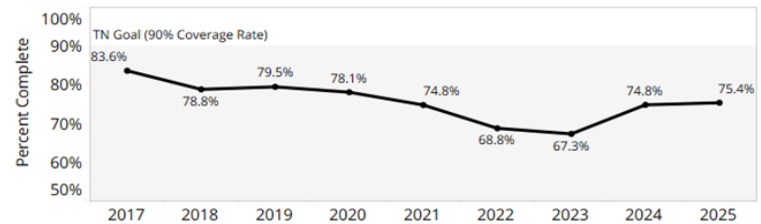


Figure C. UTD Immunization Rate Trend, WTR, 2017-2025



Legend			Notes
■ Region Rate	■ Met Healthy People 2030 Objective	★ Significantly Higher than Previous Year	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■ Tennessee Rate	 95% Confidence Interval	★ Significantly Lower than Previous Year	
		— Healthy People 2030 Objective	

Figure A. Comparison of JMR and Tennessee UTD Rate by Vaccine Antigen, 2025

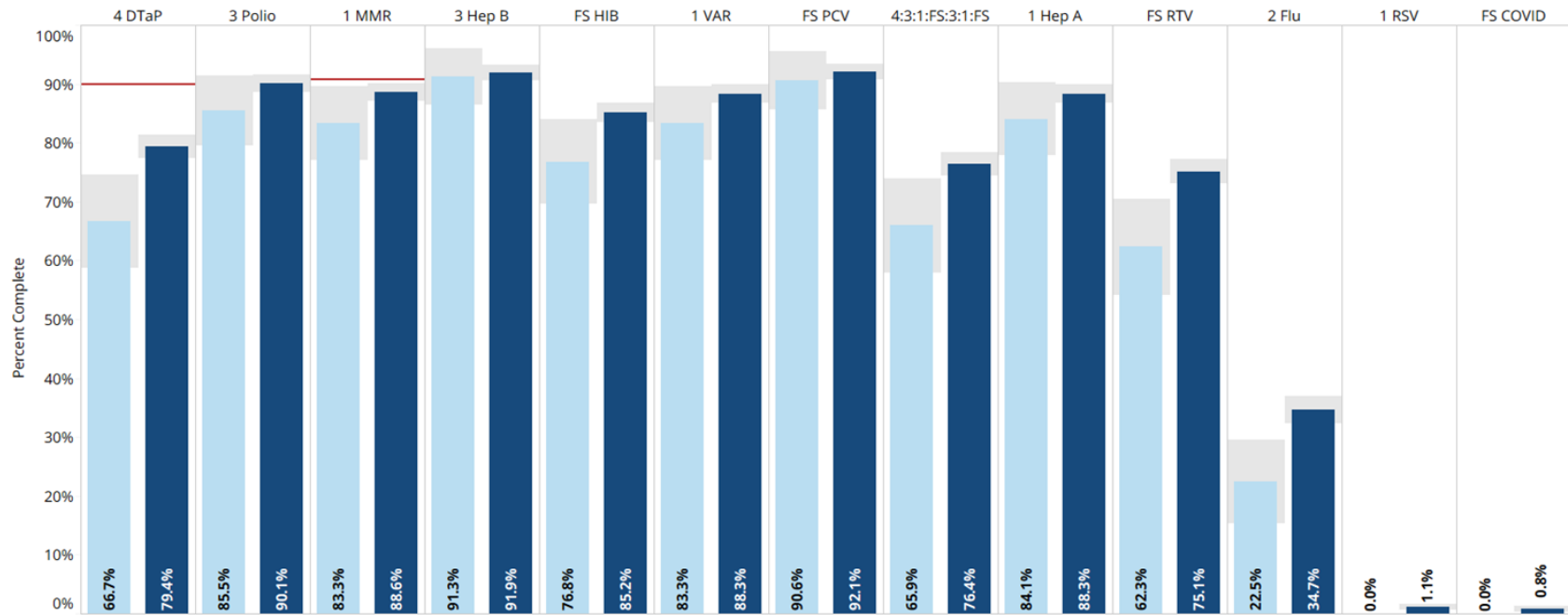


Figure B. JMR Survey Results, by Vaccine Antigen, 2025

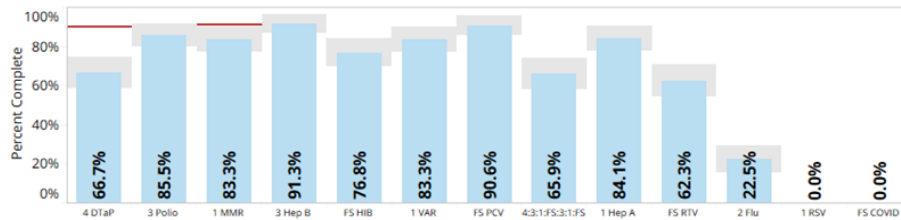
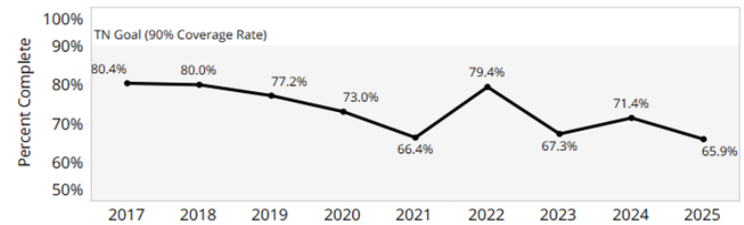


Figure C. UTD Immunization Rate Trend, JMR, 2017-2025



Legend			Notes
■ Region Rate	■ Met Healthy People 2030 Objective	* Significantly Higher than Previous Year	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■ Tennessee Ra..	 95% Confidence Interval	* Significantly Lower than Previous Year	
		— Healthy People 2030 Objective	

Figure A. Comparison of SCR and Tennessee UTD Rate by Vaccine Antigen, 2025

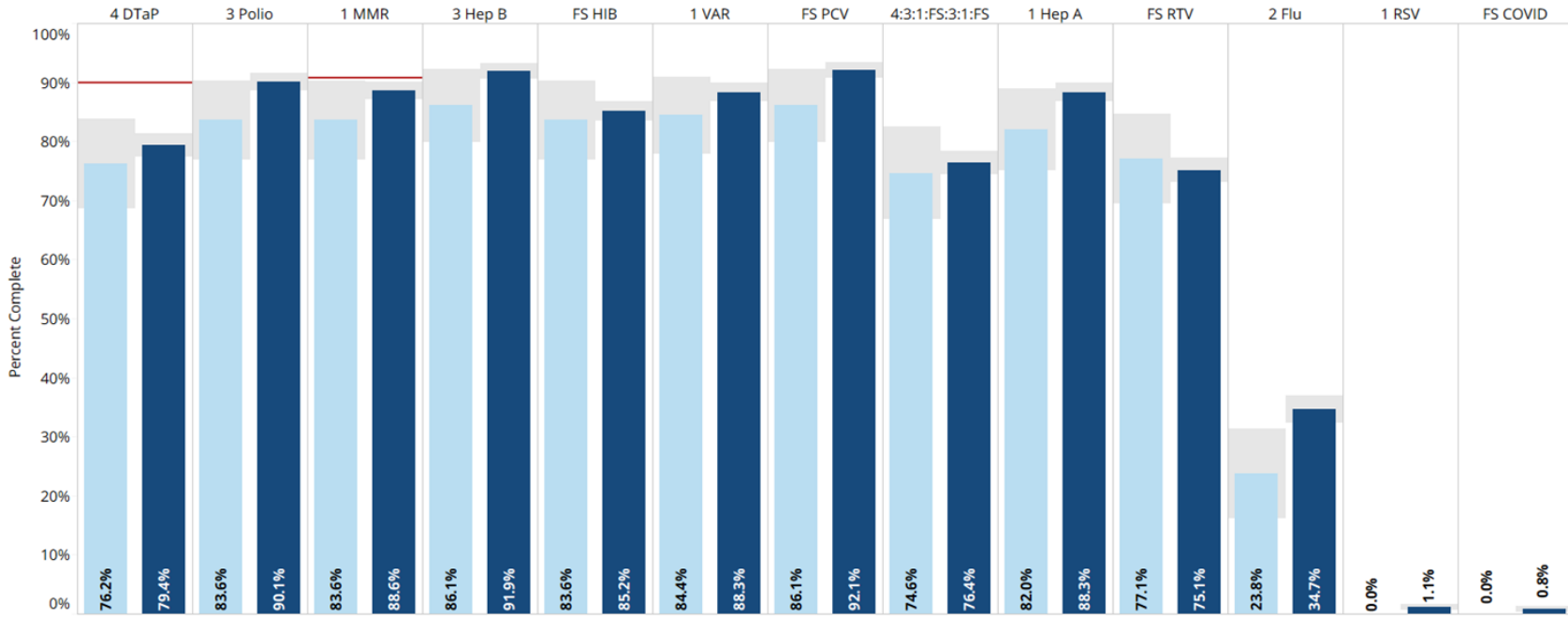


Figure B. SCR Survey Results, by Vaccine Antigen, 2025

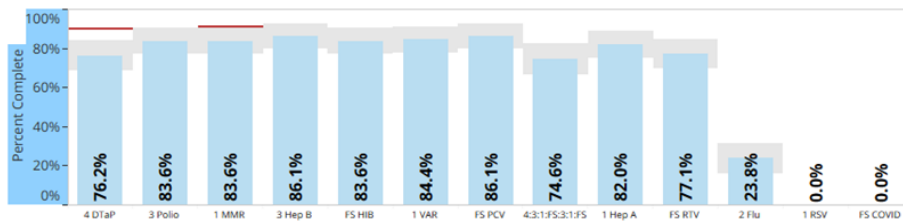
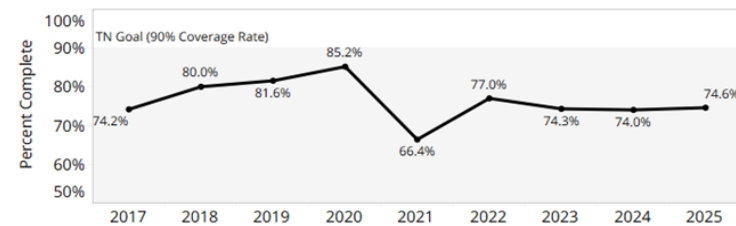


Figure C. UTD Immunization Rate Trend, SCR, 2017-2025



Legend				Notes
■ Region Rate	■ Met Healthy People 2030 Objective	* Significantly Higher than Previous Year	— Healthy People 2030 Objective	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■ Tennessee Ra..	■ 95% Confidence Interval	* Significantly Lower than Previous Year		

Figure A. Comparison of MCR and Tennessee UTD Rate by Vaccine Antigen, 2025

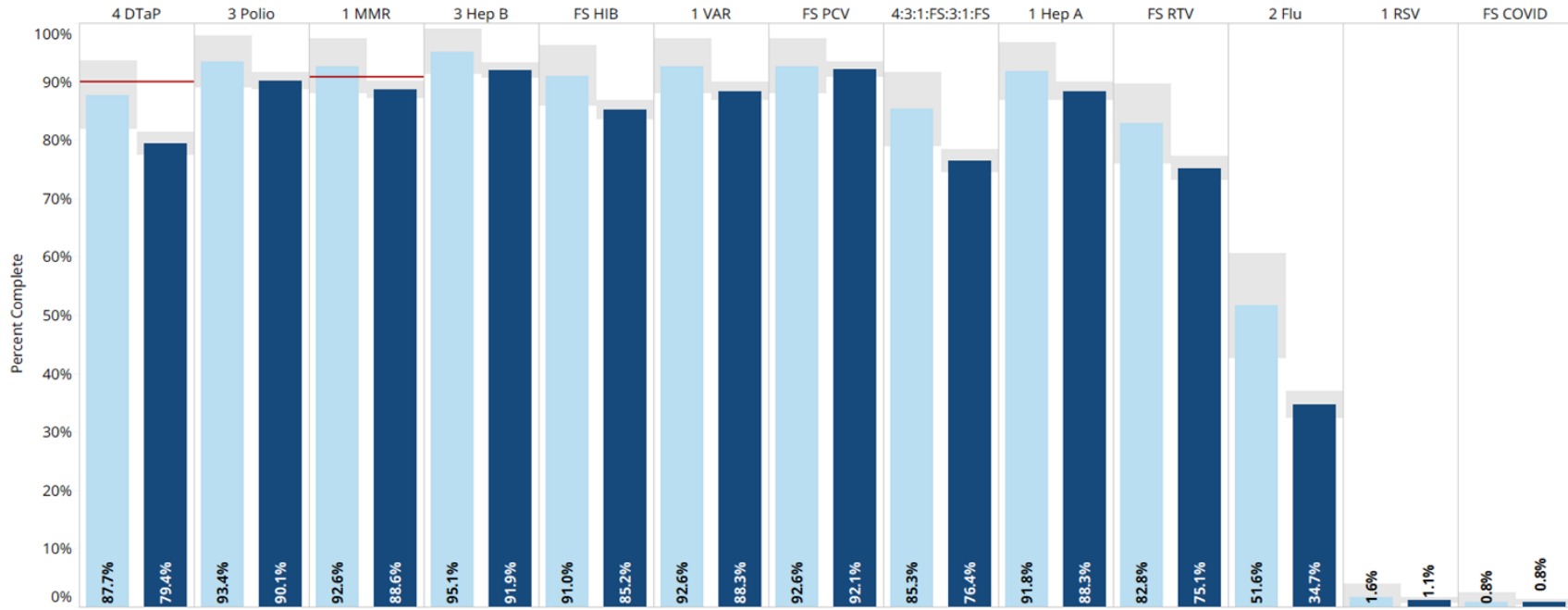


Figure B. MCR Survey Results, by Vaccine Antigen, 2025

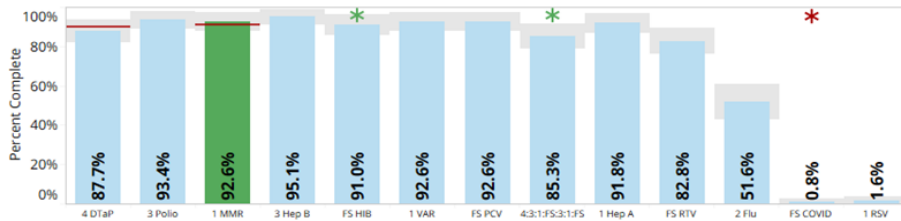
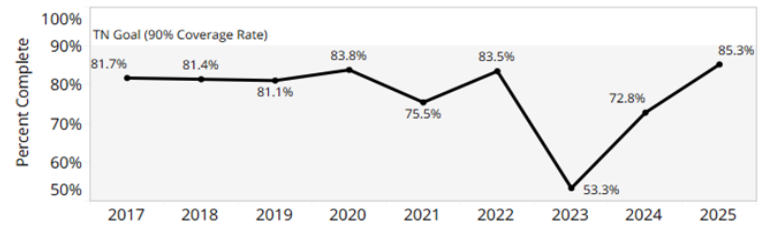


Figure C. UTD Immunization Rate Trend, MCR, 2017-2025



Legend				Notes
	Region Rate		Met Healthy People 2030 Objective	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
	Tennessee Rate		95% Confidence Interval	
			Significantly Higher than Previous Year	
			Significantly Lower than Previous Year	
			Healthy People 2030 Objective	

Figure A. Comparison of NDR and Tennessee UTD Rate by Vaccine Antigen, 2025

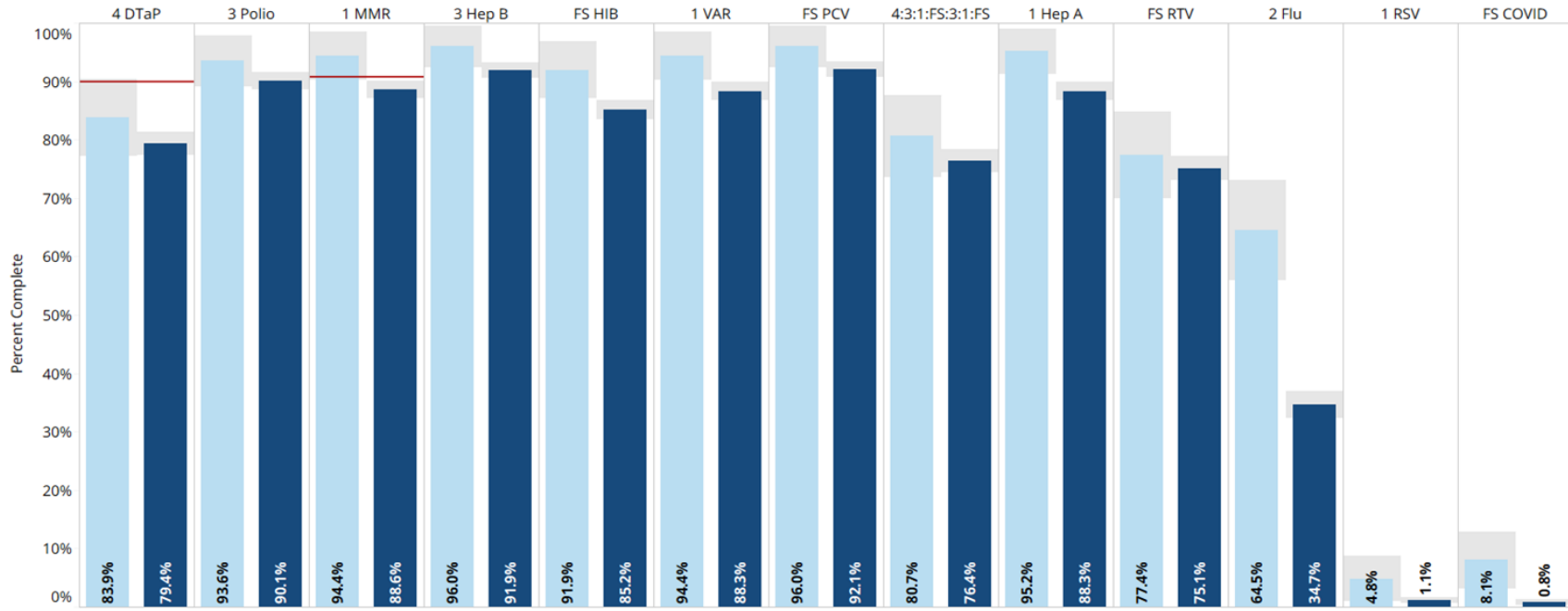


Figure B. NDR Survey Results, by Vaccine Antigen, 2025

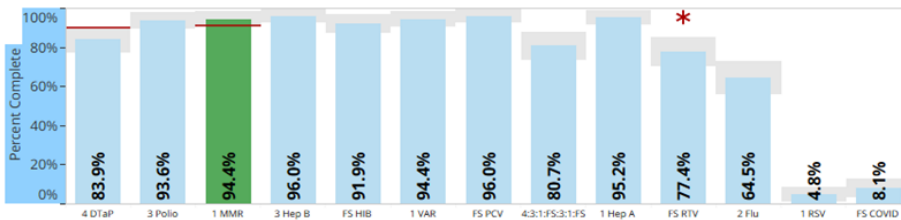
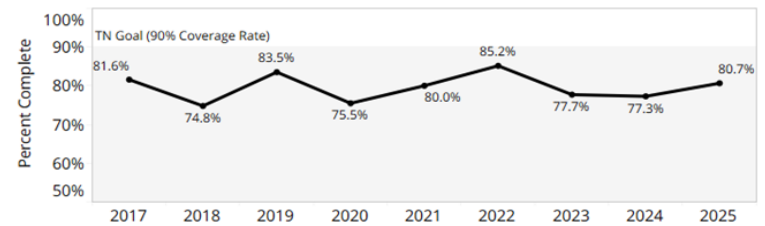


Figure C. UTD Immunization Rate Trend, NDR, 2017-2025



Legend				Notes
	Region Rate		Met Healthy People 2030 Objective	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
	Tennessee Rate		95% Confidence Interval	

Figure A. Comparison of UCR and Tennessee UTD Rate by Vaccine Antigen, 2025

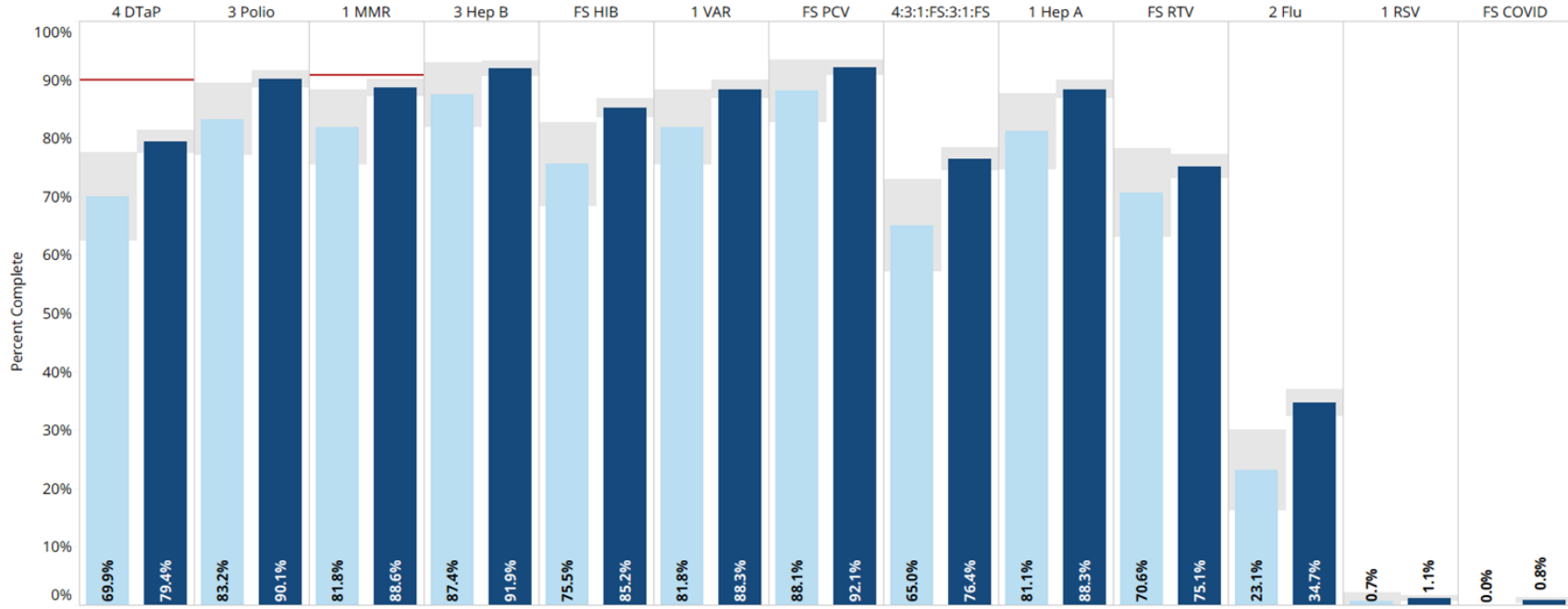


Figure B. UCR Survey Results, by Vaccine Antigen, 2025

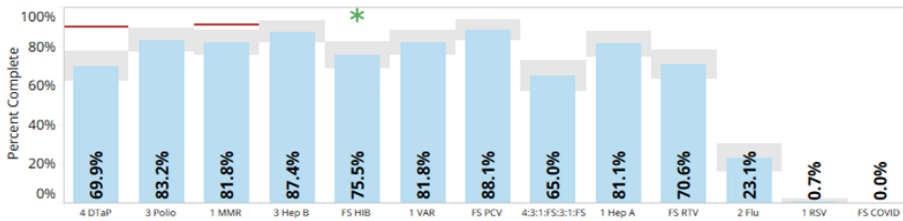
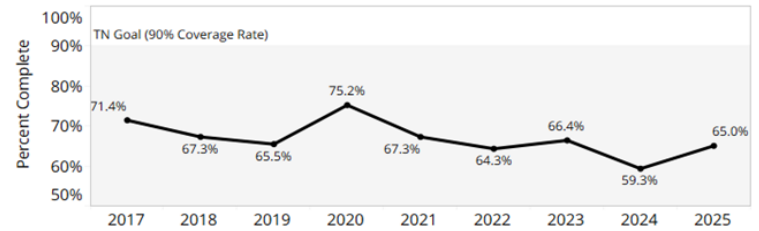


Figure C. UTD Immunization Rate Trend, UCR, 2017-2025



Legend			Notes	
■ Region Rate	■ Met Healthy People 2030 Objective	* Significantly Higher than Previous Year	— Healthy People 2030 Objectives	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■ Tennessee Rate	 95% Confidence Interval	* Significantly Lower than Previous Year		

Figure A. Comparison of SER and Tennessee UTD Rate by Vaccine Antigen, 2025

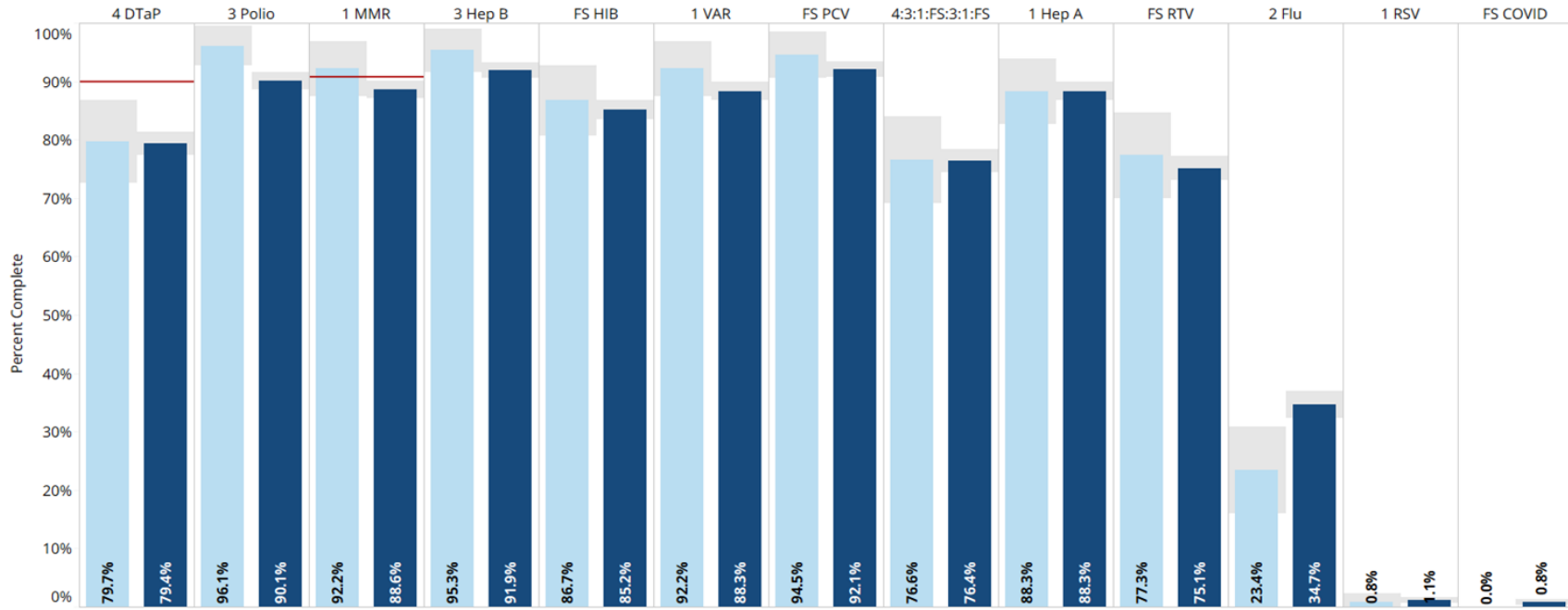


Figure B. SER Survey Results, by Vaccine Antigen, 2025

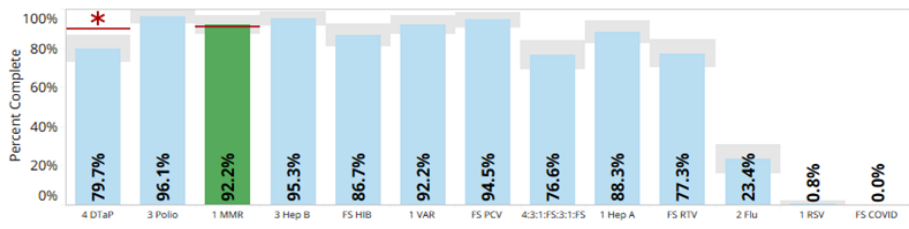
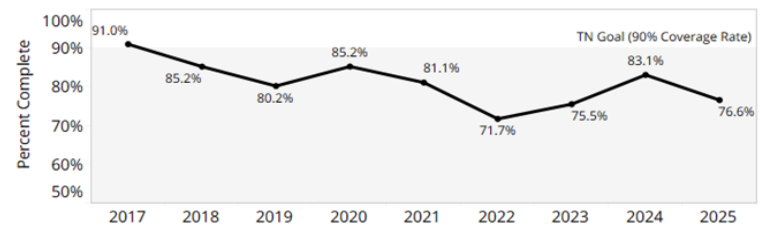


Figure C. UTD Immunization Rate Trend, SER, 2017-2025



Legend			Notes
■ Region Rate	■ Met Healthy People 2030 Objective	* Significantly Higher than Previous Year	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■ Tennessee Rate	 95% Confidence Interval	* Significantly Lower than Previous Year	
		— Healthy People 2030 Objectives	

Figure A. Comparison of CHR and Tennessee UTD Rate by Vaccine Antigen, 2025

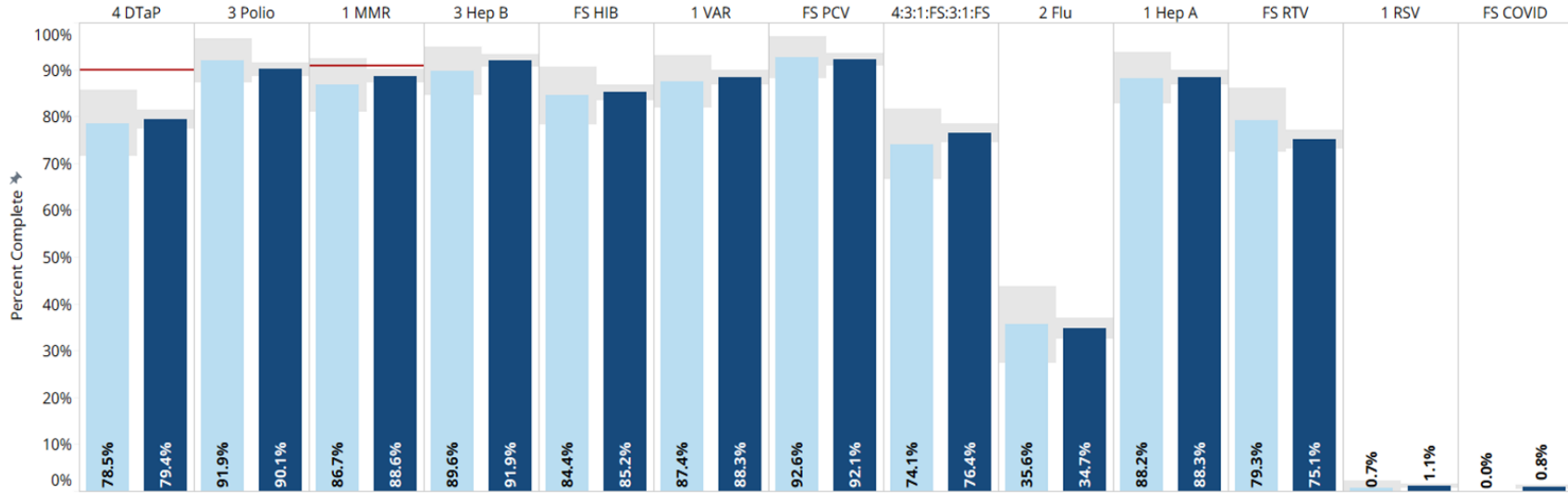


Figure B. CHR Survey Results, by Vaccine Antigen, 2025

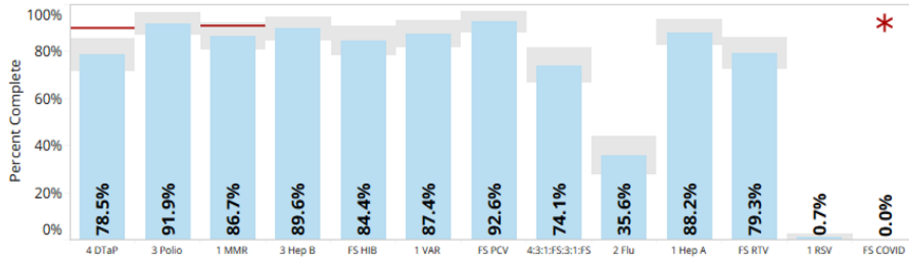
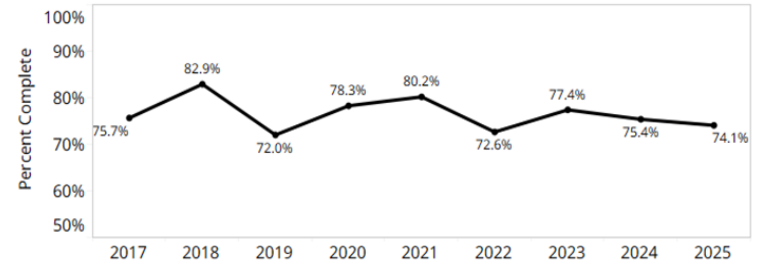


Figure C. UTD Immunization Rate Trend, CHR, 2017-2025



Legend			Notes	
■ Region Rate	■ Met Healthy People 2030 Objective	* Significantly Higher than Previous Year	— Healthy People 2030 Objectives	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■ Tennessee Rate	 95% Confidence Interval	* Significantly Lower than Previous Year		

Figure A. Comparison of ETR and Tennessee UTD Rate by Vaccine Antigen, 2025

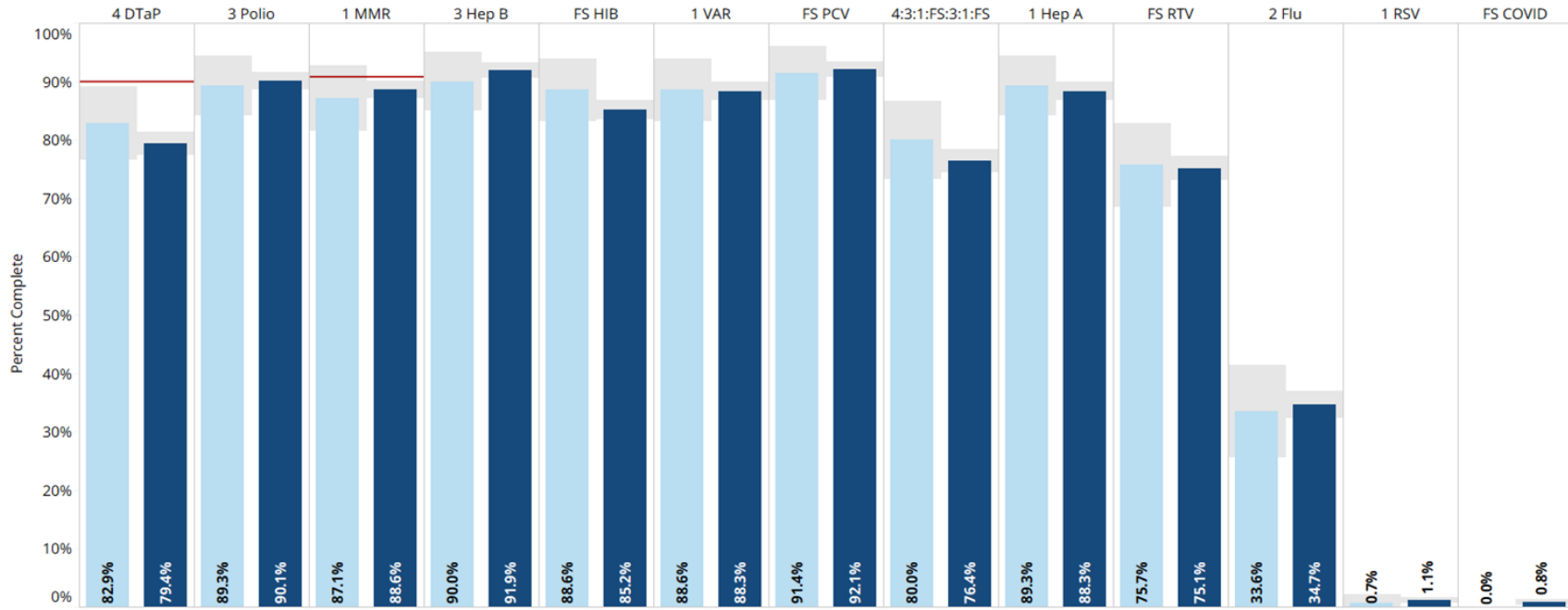


Figure B. ETR Survey Results, by Vaccine Antigen, 2025

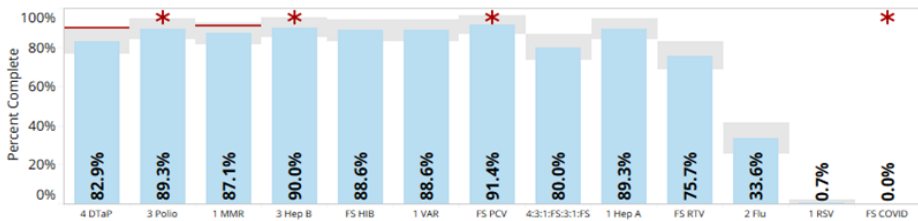
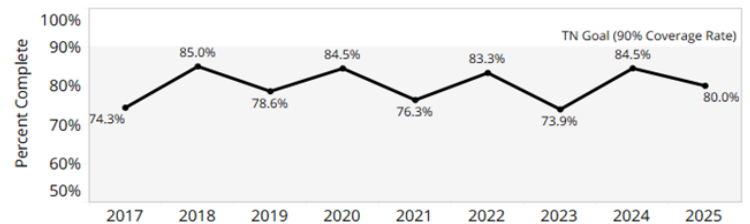


Figure C. UTD Immunization Rate Trend, ETR, 2017-2025



Legend				Notes
■ Region Rate	■ Met Healthy People 2030 Objective	★ Significantly Higher than Previous Year	— Healthy People 2030 Objective	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■ Tennessee Rate	■ 95% Confidence Interval	★ Significantly Lower than Previous Year		

Figure A. Comparison of KKR and Tennessee UTD Rate by Vaccine Antigen, 2025

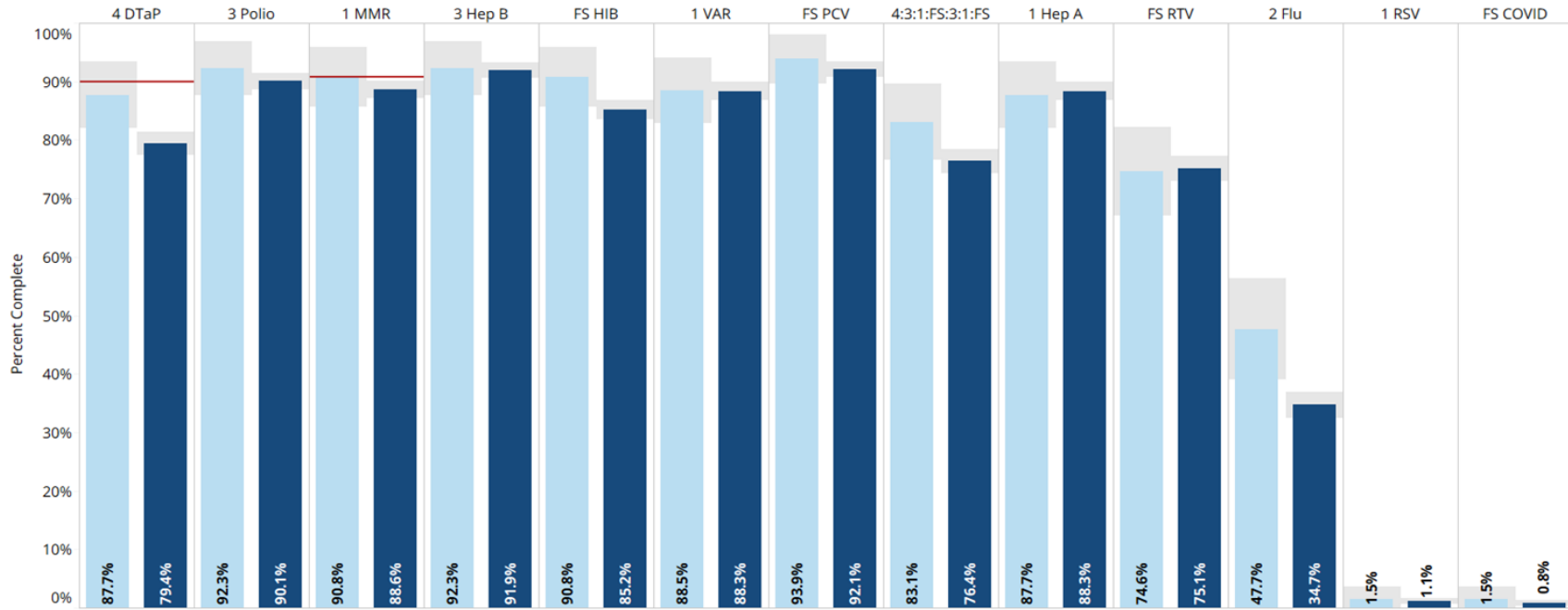


Figure B. KKR Survey Results, by Vaccine Antigen, 2025

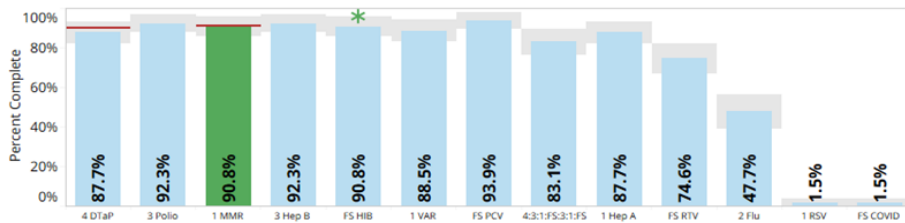
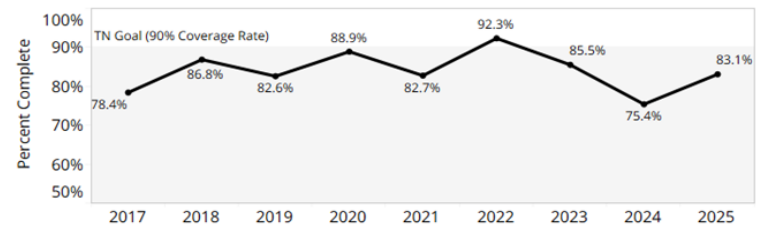


Figure C. UTD Immunization Rate Trend, KKR, 2017-2025



Legend				Notes
■	Region Rate	■	Met Healthy People 2030 Objective	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■	Tennessee Rate		95% Confidence Interval	
*	Significantly Higher than Previous Year	*	Significantly Lower than Previous Year	
—	Healthy People 2030 Objective			

Figure A. Comparison of NER and Tennessee UTD Rate by Vaccine Antigen, 2025

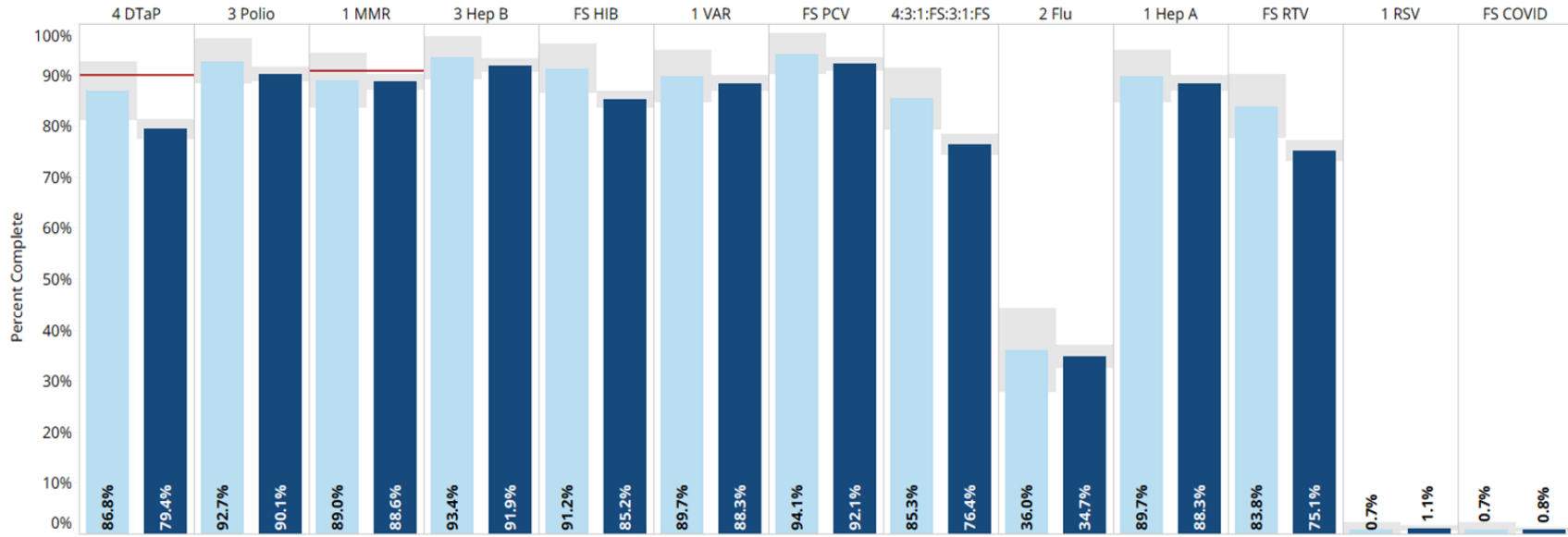


Figure B. NER Survey Results, by Vaccine Antigen, 2025

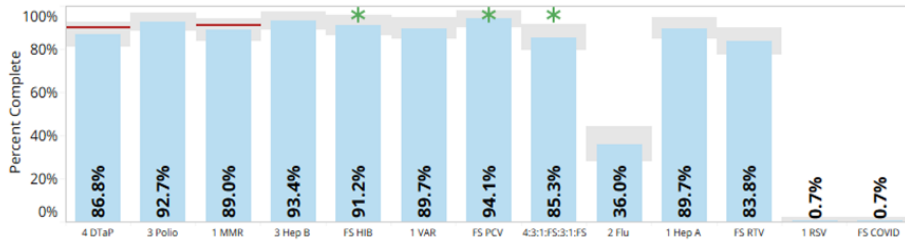
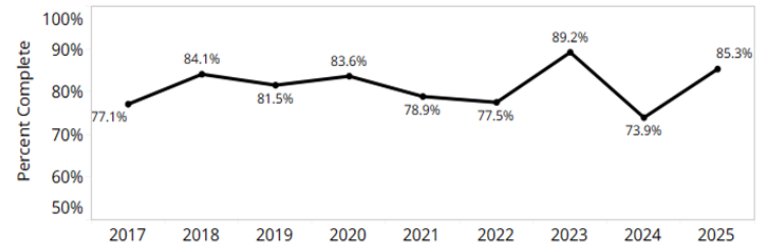


Figure C. UTD Immunization Rate Trend, NER, 2017-2025



Legend				Notes
■ Region Rate	■ Met Healthy People 2030 Objective	* Significantly Higher than Previous Year	— Healthy People 2030 Objective	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■ Tennessee Rate	■ 95% Confidence Interval	* Significantly Lower than Previous Year		

Figure A. Comparison of SUL and Tennessee UTD Rate by Vaccine Antigen, 2025

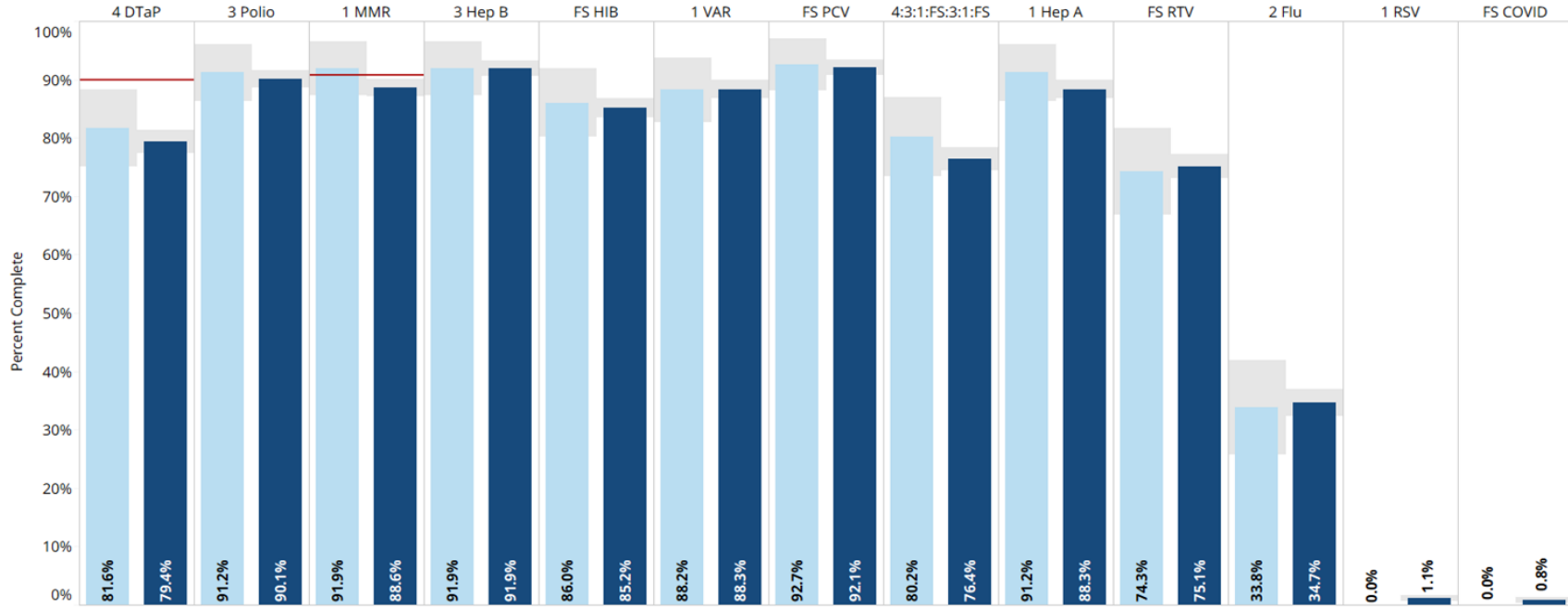


Figure B. SUL Survey Results, by Vaccine Antigen, 2025

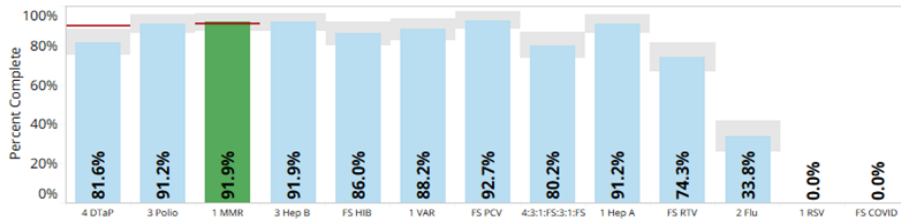
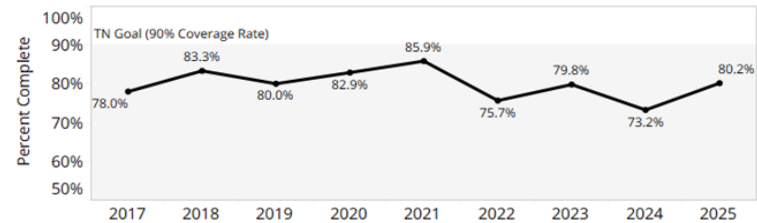


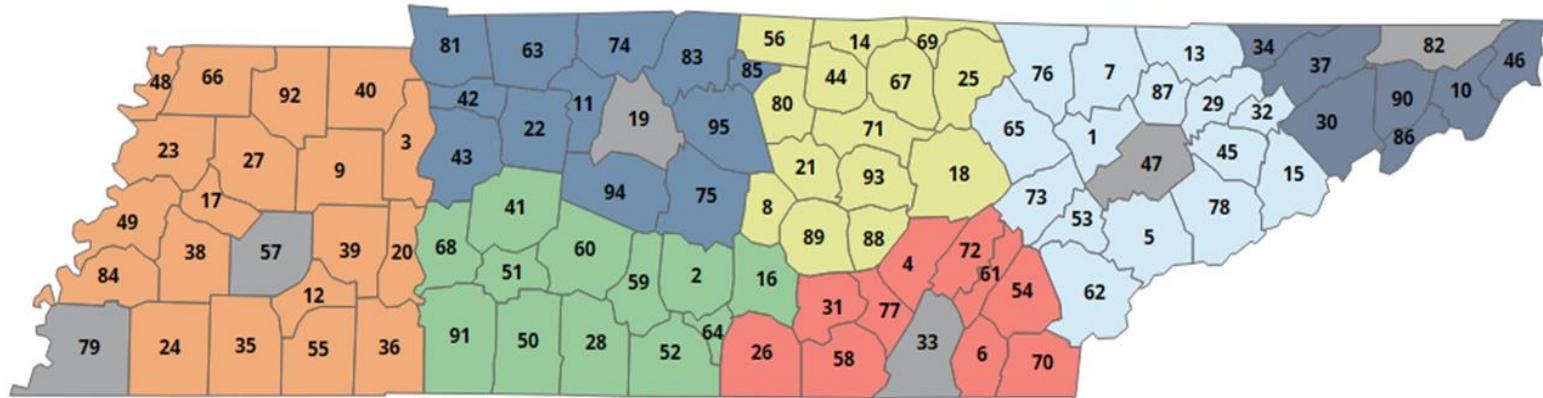
Figure C. UTD Immunization Rate Trend, SUL, 2017-2025



Legend			Notes
■ Region Rate	■ Met Healthy People 2030 Objective	* Significantly Higher than Previous Year	Up-to-Date (UTD) status is defined as the completion of all immunizations and subsequent doses that comprise the Full Series (4:3:1:FS:3:1:FS): 4 DTaP, 3 Polio, 1 MMR, FS (3/4) Hib, 3 Hepatitis B, 1 Varicella, and FS (3/4) PCV administered before or after 24 months of age. Immunization status is based on the childhood immunization and catch-up schedules recommended by the ACIP.
■ Tennessee Rate	 95% Confidence Interval	* Significantly Lower than Previous Year	
— Healthy People 2030 Objective			

Appendix IV

Tennessee Rural and Metro Health Department Regions



West Tennessee Region (WTR)	
Benton	3
Carroll	9
Chester	12
Crockett	17
Decatur	20
Dyer	23
Fayette	24
Gibson	27
Hardeman	35
Hardin	36
Haywood	38
Henderson	39
Henry	40
Lake	48
Lauderdale	49
McNairy	55
Obion	66
Tipton	84
Weakley	92

Mid-Cumberland Region (MCR)	
Cheatham	11
Dickson	22
Houston	42
Humphreys	43
Montgomery	63
Robertson	74
Rutherford	75
Stewart	81
Sumner	83
Trousdale	85
Williamson	94
Wilson	95

South Central Region (SCR)	
Bedford	2
Coffee	16
Giles	28
Hickman	41
Lawrence	50
Lewis	51
Lincoln	52
Marshall	59
Maury	60
Moore	64
Perry	68
Wayne	91

Southeast Region (SER)	
Bledsoe	4
Bradley	6
Franklin	26
Grundy	31
Marion	58
McMinn	54
Meigs	61
Polk	70
Rhea	72
Sequatchie	77

Upper Cumberland Region (UCR)	
Cannon	8
Clay	14
Cumberland	18
DeKalb	21
Fentress	25
Jackson	44
Macon	56
Overton	67
Pickett	69
Putnam	71
Smith	80
Van Buren	88
Warren	89
White	93

East Tennessee Region (ETR)	
Anderson	1
Blount	5
Campbell	7
Claiborne	13
Cocke	15
Grainger	29
Hamblen	32
Jefferson	45
Loudon	53
Monroe	62
Morgan	65
Roane	73
Scott	76
Sevier	78
Union	87

Northeast Region (NER)	
Carter	10
Greene	30
Hancock	34
Hawkins	37
Johnson	46
Unicoi	86
Washington	90

Metro Regions (MSR, JMR, NDR, CHR, KKR, SUL)	
Davidson	19
Hamilton	33
Knox	47
Madison	57
Shelby	79
Sullivan	82



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