

Georgia Immunization Study

— 2014 FINAL REPORT —



GEORGIA
DEPARTMENT
of PUBLIC HEALTH
Immunization Program
Acute Disease Epidemiology Section

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Executive Summary

The 2014 Georgia Immunization Study (GIS) was conducted by the Georgia Department of Public Health Epidemiology Program, Georgia Immunization Program and Public Health Districts. However, this study could not have been completed without the assistance of the private providers, public health providers and Vaccines for Children providers of Georgia that contributed to this collaborative effort. Their cooperation and assistance throughout the study was greatly appreciated.

The 2014 GIS employed a retrospective cohort research design to determine the up-to-date immunization rate for 2-year-old children born in the State of Georgia. Immunization history data for 18 Health District cohorts of children who turned 2 in January, 2014 were analyzed to calculate these rates. Identifying information was obtained from electronic birth records, and immunization history data were collected primarily via the Georgia Registry of Immunization Transactions and Services (GRITS). Immunization rates for the 4:3:1:3:3:1:4 series (4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 Hepatitis B, 1 Varicella and 4 PCV) were based on the childhood immunization and catch-up schedules recommended by the Advisory Committee on Immunization Practices (ACIP) in 2013¹.

Each child's immunization record was reviewed in GRITS for completeness. If the child's record was not up-to-date (UTD), an effort was made by local public health staff to contact parents, guardians and providers to obtain any missing immunization history data. If further follow-up revealed that the child was truly not up-to-date, the data collection process served as a reminder-recall system. If all of the 4:3:1:3:3:1:4 series dates occurred before the child reached 24 months, the child was classified as *up-to-date by 24 months*. Children were excluded from the *up-to-date by 24 months* classification if some of the 4:3:1:3:3:1:4 dates occurred after the child reached 24 months of age. Due to the reminder-recall effect of the data collection process, readers are strongly encouraged to use the *up-to-date by 24 months* measures for reporting purposes, since these were the rates prior to any parent or provider contact. **In 2014, the Georgia statewide up-to-date immunization rate by 24 months was 87.6 percent, up from 85.0 percent in 2013 (Page 18, Table 2).**

An additional immunization rate was calculated: up-to-date by 24 months based on GRITS alone. This was classified by documenting all the dates in the vaccine series based solely on information in GRITS. This rate can be used to determine how accurately GRITS data reflects true UTD by 24 months status. The UTD immunization rate based on GRITS data alone for the state was 82.3 percent. This was 5.3 percent below the UTD by 24 months rate of 87.6 percent.

Efforts to bring children up-to-date resulted in an overall 6.8 percent increase in the immunization rate between 24 months of age and the end of the data collection period (Page ix, Appendix Table E-1). This increase provides evidence that many of the children who are not up-to-date by 24 months can be brought up-to-date within six months if adequate parent recall and educational measures are taken. Although the majority of immunizations in our sample were administered in the private sector, the increase in up-to-date immunization rates by the end of the data collection period is a testament to how instrumental District- and County-level public health staff can be in raising childhood immunization rates for a selected group of children. In addition, this increase shows that parents want their children to stay current on their vaccinations, but may benefit from reminders and follow-up from their providers.

Although acute infection with Hepatitis B causes severe disease in only a small proportion of those infected, the greater burden of disease lies in those cases progressing to chronic infection, cirrhosis and liver cancer later in life. Therefore, timely immunization practices with hepatitis B vaccine are a high priority for the Georgia Immunization Program, as well as for providers and hospitals throughout the state. **Among the 2014 study sample of children who were born in Georgia in 2012, 85.6 percent received their first dose of hepatitis B vaccine at birth (Page x, Appendix Table E-2), up from 83.6 percent in 2013. In addition, the percentage of children who received the entire 3-dose hepatitis B series by 24 months of age increased from 95.9 percent in 2013 to 96.2 percent in 2014.** These data suggest that the best way to fully protect children from hepatitis B infection by 24 months of age is to begin vaccination at birth. Credit goes

¹ Department of Health and Human Services - Centers for Disease Control and Prevention. (February 1, 2013). MMWR weekly: Recommended Immunization Schedule for Persons Aged 0 Through 18 Years --- United States, 2013. MMWR 2013; 63(01). Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/su6201a2.htm>

to birthing hospitals, obstetricians, pediatricians and public health staff who have been dedicated to this cause.

There was considerable variation by District in the percent of 24-month-old children found to be fully immunized by 24 months, ranging from 79.0 percent in the Clayton District (3-3) to 93.9 percent in the Macon District (5-2). Between 2013 and 2014, District up-to-date by 24 months immunization rates rose by 3.1 percent overall for the state, with the greatest increase of 16.7 percent seen in the Cobb District (3-1) (Page ix, Appendix Table E-1).

Although the percentage of Georgia children who received the fourth dose of DTaP by 24 months of age remained the same in 2014, it continued to significantly lag behind the percentage of children who received the third dose by 24 months of age. In fact, 96.9 percent of children had received three doses of DTaP by 24 months of age while only 84.6 percent had received their fourth dose in 2014 (Page 18, Table 2). The third dose of DTaP can be given as early as 6 months of age; however, the fourth dose must be delayed until at least 12 months of age and 6 months after the third dose. These results suggest that patient recall efforts specific for the fourth dose of DTaP may be helpful for parents after their child's 1 year check-up.

During the 2014 data collection period, an effort was made to collect information on Medicaid coverage of vaccine administration. This information was collected to examine whether loss of Medicaid coverage after the first year of life was associated with lower rates of fourth DTaP coverage. Twenty-five children who were covered by Medicaid in the first year of life, and whose Medicaid coverage was not renewed during the second year of life, were identified among a total of 279 children with incomplete vaccination status at 24 months of age. Reasons for the discontinuation of Medicaid during the second year of life were sought during the phone interview. In most cases, the child was no longer eligible and was insured elsewhere. In several other cases, the reason was not determined due to loss of contact after the initial interview. Detailed findings are included in this report (Page 21). Further efforts will be made in future immunization studies to investigate possible underlying reasons for the failure to receive the fourth DTaP dose by 24 months of age.

Some variation remained by District in the percent of 2-year-olds reported to be fully immunized by the end of the data collection period, ranging from 86.0 percent in the Clayton District (3-3) to 97.9 percent in the DeKalb District (3-5). These data suggest that follow up with the parents and providers of children who were incomplete *made a difference*. The greatest impact was seen in the Columbus District (7-0), where up-to-date immunization rates rose 17.9 percent by the end of the data collection period.

Individual Health District results revealed some common demographic themes when identifying "high risk" groups, i.e. those less often up-to-date by 24 months of age. The groups that were high risk in at least nine Districts included children of unmarried mothers and children of mothers less than 25 years of age. The groups that were high risk in at least twelve Districts included children of white, non-Hispanic mothers and children of mothers with a high school level of education or less. Future study years will reveal which of these associations is consistent from year to year. Please see Section III (Page 25) for individual Health District results.

Perhaps one of the most important parts of the 2014 report is the list of the top three Health Districts for various categories, including response rates, series immunization rates, and antigen-specific immunization rates (Page 23, Table 8). These rankings highlight our *Immunization Champions*; Districts challenged by a specific measure are encouraged to reach out to these champions to identify strategies for success.

The 2014 GIS report offers the people of Georgia and its Health Districts a chance to study demographic and immunization history data simultaneously, so that evidence-based programs can be created to raise immunization rates across the State of Georgia. The 2014 data clearly show that although the vast majority of immunizations are administered outside of public health clinics, public health staff can effectively collaborate with parents and private sector providers and have an impact on improving immunization coverage rates.

Abbreviations & Vaccine Names

Abbreviations	Definitions
2YO	Two-year-old
ACIP	Advisory Committee on Immunization Practices
CDC	Centers for Disease Control and Prevention
GIS	Georgia Immunization Study
GRITS	Georgia Registry of Immunization Transactions and Services
NIS	National Immunization Survey (CDC)
UTD	Up-to-date [immunization history]
WIC	Women, Infants, and Children Program
Vaccine Names	
DTaP	Diphtheria, Tetanus, and acellular Pertussis [vaccine]
IPV	Inactivated Polio Virus [vaccine]
MMR	Measles, Mumps, Rubella [vaccine]
HepB	Hepatitis B [vaccine]
Hib	Haemophilus influenza type b [vaccine]
Varicella	Varicella (chicken pox) [vaccine]
PCV	Pneumococcal Conjugate Vaccine
Rotavirus	Rotavirus [vaccine]
Influenza	Seasonal Influenza [vaccine]
HepA	Hepatitis A [vaccine]

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Section I

Project Overview

Methods

Study Design

The annual Georgia Immunization Study (GIS) employs a retrospective cohort research design to ascertain the up-to-date (UTD) immunization rate for 2-year-old children born in the State of Georgia. Immunization history data for cohorts of children who turned 2 in January, 2014 from 18 Health Districts were analyzed to calculate these rates. Identifying information was obtained from electronic birth records, and immunization history data were collected primarily via the Georgia Registry of Immunization Transactions and Services (GRITS). Immunization rates for the 4:3:1:3:3:1:4 vaccine series (4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 Hepatitis B, 1 Varicella and 4 PCV vaccine doses) were based on the childhood immunization and catch-up schedules recommended by the Advisory Committee on Immunization Practices (ACIP) in 2013.

During the six-month data collection period, each immunization date was compared to the child's birth date to determine whether it was administered before or after 24 months of age. If all of the 4:3:1:3:3:1:4 series administration dates occurred before the child reached 24 months of age, then the child was classified as *UTD by 24 months*. Children were excluded from the *UTD by 24 months* classification if some of the 4:3:1:3:3:1:4 administration dates occurred after the child reached 24 months of age. A distinction was made between "UTD by 24 months" and "UTD by end of data collection" because the data collection process, which involved contact with each child's parent and healthcare provider, indirectly served as a reminder-recall system. Many of the parents of study participants were simply unaware that their child was not current on their immunizations; therefore, the difference between the percentage of children *UTD by 24 months* and children *UTD by end of data collection* may be a proxy measure of the impact of parent and provider contact in raising

immunization rates. A third rate was calculated, *UTD by 24 months based on GRITS alone*, to ascertain how accurately GRITS data reflect UTD immunization rates by 24 months of age, without parent/provider contact. Children who were classified as *UTD by 24 months based on GRITS alone* and *UTD by 24 months* were also included in the *UTD by end of data collection* group. UTD immunization rates (both *UTD by 24 months* and *UTD by end of data collection*) were calculated for the state sample and the District samples, as well as for demographic groups within these samples. The *UTD by 24 months based on GRITS alone* immunization rate was calculated for the state sample and its demographic groups, as well as for each District sample.

Target and Sample Populations

The target population of the 2014 GIS included all 24-month-old children born in the State of Georgia in 2012. A sample of 2,550 children born in the month of January 2012 was selected for the study. The sample design allowed for independent estimates to be calculated for each of the 18 Health Districts in the state. The final sample estimate for the state was based on weighted data to account for differential probabilities of selection for each Health District and selected from the total number of statewide births during the month of January, 2012. The number of children randomly selected from each District depended on population distribution statistics, response rates and District immunization rates from the 2013 GIS. Information for each child, including all available birth certificate variables, was collected.

Examples of the type of birth certificate information obtained for each child included:

- Child's first, middle and last name
- Child's sex

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- Child's date of birth
- Mother's residential and mailing address(es)
- Mother's residential county
- Mother's first, middle and last name
- Father's first, middle and last name (if available)
- Mother's race and ethnicity
- Mother's level of education
- Mother's marital status
- Mother's age

Other demographic variables used in the analysis, such as Provider Type and Number of Providers, were obtained during the data collection period and from GRITS. The WIC enrollment variable was collected for each child by matching the names and dates of birth for all of the sample children with WIC enrollment data. If a child was found to be enrolled in WIC for any amount of time during their first 24 months of life, they were designated as "enrolled in WIC."

The provider-related variables were compiled using GRITS data. When the data were originally collected, the number of providers was recorded. Each child was classified as having 1, 2, or 3+ providers.

The "Provider Type" variable was determined based on the location where each individual vaccine was administered (see Part III: Immunization History, below). If a child received vaccines exclusively in private provider offices, the child was classified as "Private Sector Only." If a child received vaccines exclusively in public health clinics, the child was classified as "Public Sector Only." If a child received vaccines in both private provider offices *and* public health clinics, the child was classified as "Both." This information was also gathered from GRITS.

Data Collection

An electronic web-based data collection system named "TWOY" was used to systematically collect the

required information for each child. The TWOY system follows the recommended schedule of childhood immunizations jointly approved by the Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP). The TWOY data collection system contains six distinct sections to be completed by the public health data collectors: Child, Medicaid Eligibility, Notes, Guardians, Providers and VX List (Immunization History).

Data collection was carried out primarily by County and District Public Health Nurses. Data collectors in each Health District participated in training via conference call at the start of the data collection period. A Training Manual was also provided and made available on the TWOY log-in screen.

Data Collection Protocol

Step #1: Search for immunization records at State and local health departments.

Before the data collection process began at the Health District level, the Principal Investigator at the State Epidemiology office queried GRITS records and loaded the immunization history of each child into the TWOY system. If a child was up-to-date (UTD) at this point, the child was listed as "Complete, Based on Initial GRITS Record," and no longer required follow-up. If a child was *not* UTD at this point, the data collection process was passed to the District staff, with the dates found in GRITS already entered into the TWOY system. Next, data collectors reviewed GRITS records or health department records for additional immunization history. If the child's immunization record was still incomplete, the data collectors proceeded to Steps 2 and 3 below.

Step #2: Search for immunization records through the parent(s) and/or guardian(s).

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In this step, data collectors used the contact information from the birth certificate or any updated contact information found at the health department, provider's office or in GRITS to contact the child's parent. Data collectors also used sources such as city phone directories, directory assistance and the internet to find current contact information for parents.

Parents were then contacted by phone and/or letter and asked to provide an immunization history or the location of immunization information for their child (i.e., the name of the doctor or clinic office). Data collectors also sent consent forms to parents. In some cases, representatives made home visits to collect data.

Step #3: Search for immunization records through private physician(s).

In this step, data collectors contacted private physicians by phone or fax and requested the child's immunization history. Most physicians preferred to respond by updating the child's immunization history in GRITS. In some cases, providers preferred to communicate by phone, fax or office visit.

Step #4: Data returned to State Epidemiology office and checked for accuracy.

Using the TWOY system, data collectors completed follow-up on all children by the end of the six-month data collection period, and all completed records were reviewed by the Principal Investigator throughout the process. Attempts were made to resolve any unclear information before data cleaning using Microsoft Excel and SPSS 19.

Data Analysis

The 2014 data analysis methods were similar to those employed in 2013. Analyses were done using IBM SPSS Statistics 19 software and macros developed by the Principal Investigator.

Demographic variables were used to determine which demographic groups were more or less often *UTD by 24 months*. UTD immunization rates for demographic groups were assessed at both the state and District levels.

Up-to-date (UTD) immunization rates were calculated using each individual vaccine date for each child. An immunization was classified as given prior to the 24 month birthday if the difference between the dose date and the child's DOB was equal to or less than 24 months; this was the case even for dates that were not originally found in the child's GRITS record. For a child to be considered UTD by 24 months, all of the doses in the 4:3:1:3:3:1:4 series had to be given within 24 months of the child's birth date.

To account for possible scheduling delays by physician office staff, a 2-week grace period was applied to the 24-month calculations.

Limitations

The following describe important limitations of the study that should be considered when interpreting study results:

1. There were three limitations related to sampling:
 - Although the study included a random sample of children born in Georgia during January, 2012 and, thus, represented a fair estimate of immunization rates for all 2-year-olds born in 2012, it could not account for variations that may routinely occur in other months of the year.
 - Second, limiting the sample to children born in one month does not form the basis of a surveillance system capable of detecting changes in the health care system.
 - Third, there may be children in the eligible sample

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who were erroneously included in the eligible sample and listed as unable-to-locate. Examples of this type of error would be cases where a child died, was adopted or was part of a military family, but the child's ineligibility related to these circumstances never became known to the public health data collectors because the child could not be found.

2. Response rates for each District are included on the first and second pages of all District reports. Response rate is calculated by subtracting the number of “Unable to Locate” children by the number of eligible participants and then dividing by the number of eligible participants. Caution should be taken when interpreting immunization rates for a District with a low response rate. The reason for this necessary caution is that the children who are unable-to-locate could also be the least UTD. However, we cannot use their immunization history without knowing that it is current, so they must be excluded. Table 1 (right) shows how the response rate was calculated for the state sample; this same method was used for each of the Health District samples.

3. Maternal race/ethnicity was used as a demographic variable in the analysis. The categories included in analysis were:

- White, non-Hispanic (n=967)
- White, Hispanic (n=77)
- Black (n=808)
- Unspecified, Hispanic (n=171)
- Asian (n=58)
- Multiracial (n=31)

Some race/ethnicity demographics were not used in analyses due to an insufficient number of cases. In addition, Hispanic ethnicity was divided between two race categories, “white, Hispanic” and “unspecified, Hispanic” because the majority of Hispanics were

found in the “white” race and “unspecified” race. This issue occurs at the electronic birth record level, where the people collecting birth data may not understand the necessity of entering race *and* ethnicity. For this to change, training will have to take place at birthing hospitals throughout the state.

Table 1: Sampling Scheme, Georgia, 2014		
	2013 (n)	2014 (n)
Original Sample	2,813	2,550
Ineligible	181	172
(Refused to Participate)	(20)	(12)
Eligible Sample	2,632	2,378
Unable to Locate [†]	143	135
Final Sample	2,489	2,243
Response Rate (%)	94.6	94.3

[†] Children were classified as “Unable to Locate” if every conceivable effort was made to locate and communicate with the child’s guardian and the child’s provider was either unknown or also unable to locate the guardian.

Section II

Statewide Results



State of Georgia

2014 Georgia Immunization Study Report



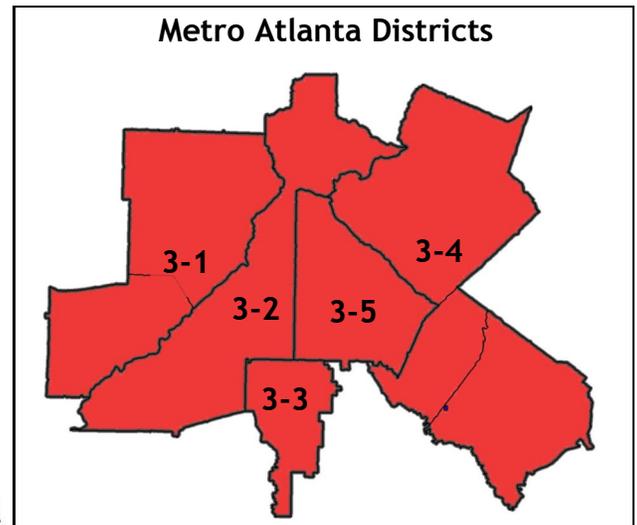
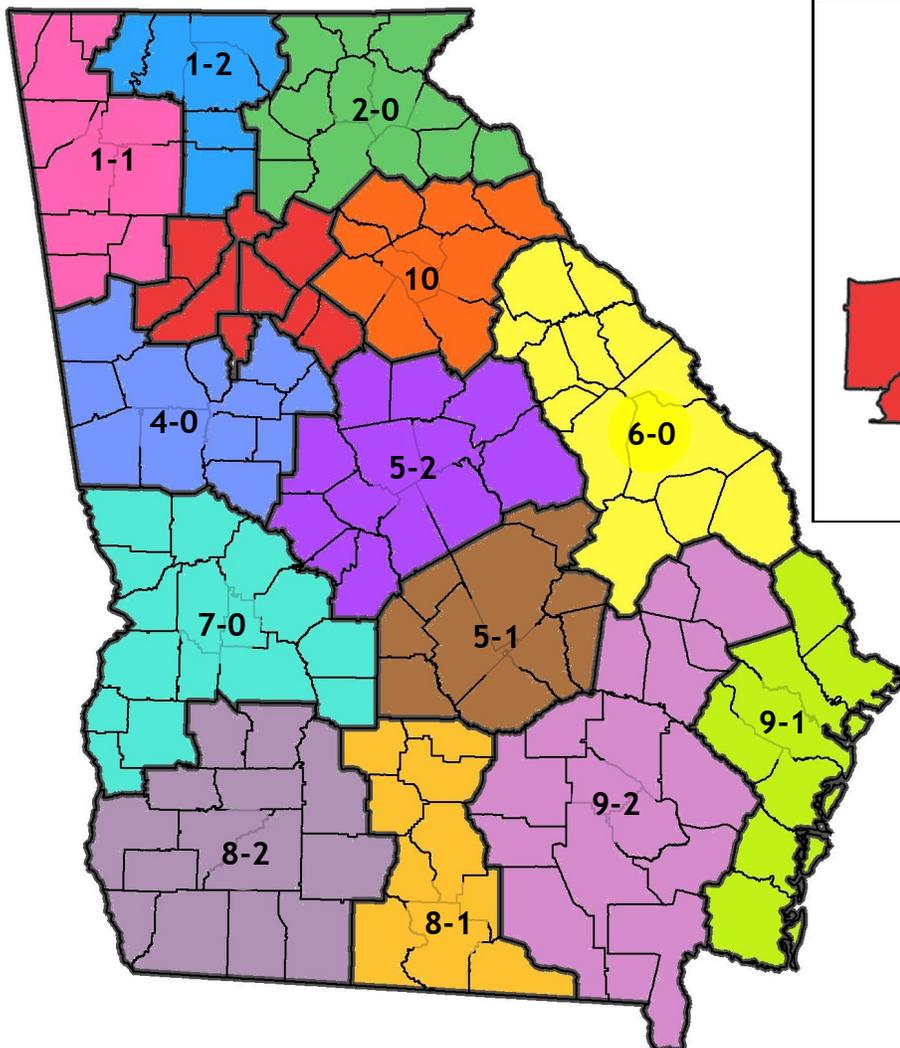
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The 2014 GIS sampled a total of 2,243 children (Table 1).

For the state sample, the up-to-date (UTD) immunization rate by 24 months of age (87.6%) was 3.1% higher than in 2013 (85.0%). The UTD immunization rate based on GRITS alone (82.3%) rose 2.6% from 2013 (80.2%). The UTD immunization rate by the end of data collection (93.6%) was 3.3% higher than in 2013 (90.6%). Immunization rates that decreased are shown in red (Table 2).

A comparison of GIS coverage rates with National Immunization Survey (NIS) results for GA and the U.S. from 2005–2014 for the 4:3:1:3:3:1:4 series is shown in Figure 1.

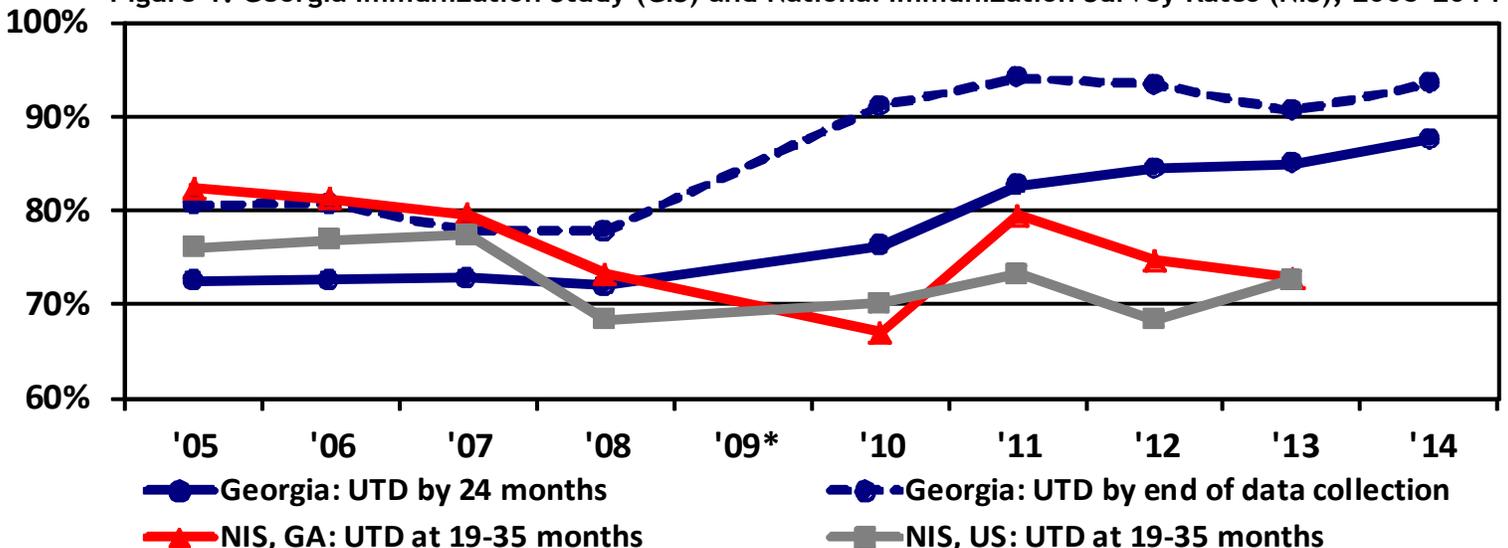
Table 1: Sampling Scheme, Georgia, 2014		
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[†] Children were classified as “Unable to Locate” if every conceivable effort was made to locate and communicate with the child’s guardian and the child’s provider was either unknown or also unable to locate the guardian.

Table 2: Immunization Summary by Series and Vaccine Antigen, Georgia, 2014		
	2013 (%)	2014 (%)
UTD immunization rate* by 24 months	85.0	87.6
UTD immunization rate* based on GRITS alone	80.2	82.3
UTD immunization rate* by end of six-month data collection†	90.6	93.6
4 DTaP by 24 months	84.6	84.6
3 DTaP by 24 months	96.6	96.9
3 IPV by 24 months	95.7	96.0
1 MMR by 24 months	92.7	92.3
UTD Hib by 24 months	96.3	96.9
3 Hep B by 24 months	95.9	96.2
1 Varicella by 24 months	93.5	93.1
UTD PCV by 24 months	84.5	97.1
2 Rotavirus by 24 months	83.5	87.2
2 Hep A by 24 months	57.3	56.6
1+ Influenza by 24 months	29.3**	63.6

[†] This value includes children who become UTD during the data collection period. This number is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
^{*} This rate includes children up-to-date by ACIP-recommended catch-up schedule.
^{**} Data collection error encountered for Influenza in 2013

Figure 1: Georgia Immunization Study (GIS) and National Immunization Survey Rates (NIS), 2005-2014



* 2009 data was not collected due to a personnel vacancy.

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Table 3: Sample Population Demographics & Immunization Rates - Georgia, 2014

Demographic Rates for All GA Births and State Sample			Immunization Rates for State Sample by Demographic		
	<i>All Georgia 2012 births</i> <i>n= 130,112</i> <i>(%)</i>	<i>State sample of Jan. 2012 births</i> <i>n=2,243</i> <i>(%)</i>	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
State Rates			82.3	87.6	93.6
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=967)	44.1	43.1	80.9	85.8	91.0
White, Hispanic (n=77)	4.4	3.4	80.5	90.9	100.0
Black (n=808)	33.2	36.0	81.6	87.3	94.3
Unspecified, Hispanic (n=171)	7.6	7.6	88.3	91.2	97.1
Asian (n=58)	3.7	2.6	91.4	94.8	100.0
Multiracial (n=31)	3.0	1.4	83.9	93.5	96.8
Maternal Age^{‡,†}					
<25 years (n=900)	35.1	40.1	81.4	85.4	93.2
25-34 years (n=1060)	51.1	47.3	83.1	89.1	94.1
35+ years (n=280)	13.9	12.5	82.1	88.9	92.9
Maternal Education^{‡,†}					
Some College+ (n=1018)	50.5	45.4	83.7	89.3	93.2
HS Diploma/GED (n=719)	29.3	32.1	82.9	87.2	94.0
9th-11th grade (n=329)	12.1	14.7	76.9	83.3	93.6
<9th grade (n=107)	4.0	4.8	82.2	87.9	95.3
Maternal Marital Status[‡]					
Married (n=1112)	54.3	49.6	83.4	88.6	92.8
Unmarried (n=1126)	44.5	50.2	81.3	86.6	94.3
WIC[⊖]					
Non-WIC (n=735)	-	32.8	83.4	88.3	92.7
WIC (n=1508)	-	67.2	81.7	87.2	94.0
Number of Providers^{‡,⊖}					
1 (n=1000)	-	44.6	83.3	88.3	92.3
2 (n=500)	-	22.3	81.4	87.8	95.4
3 (n=164)	-	7.3	84.8	87.8	96.3
Provider Type^{‡,⊖}					
Public Sector Only (n=17)	-	0.8	76.5	76.5	82.4
Private Sector Only (n=1440)	-	64.2	84.0	88.2	93.7
Both (n=207)	-	9.2	75.8	88.4	96.1

⊖ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

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Demographic Findings: The statewide results suggest that the following groups are the least often up-to-date on their immunizations by 24 months of age and may be reasonable recipients for targeted educational and outreach efforts:

- Children of white, non-Hispanic and black mothers
- Children of mothers under 25 years of age
- Children of less educated mothers
- Children of unmarried mothers
- Children who received immunizations in the public sector only

Please refer to Section III for Health District specific rates and trends.

Figure 2: Immunizations Administered in Private VS Public Sector, Georgia, 2014 (n=33,798)

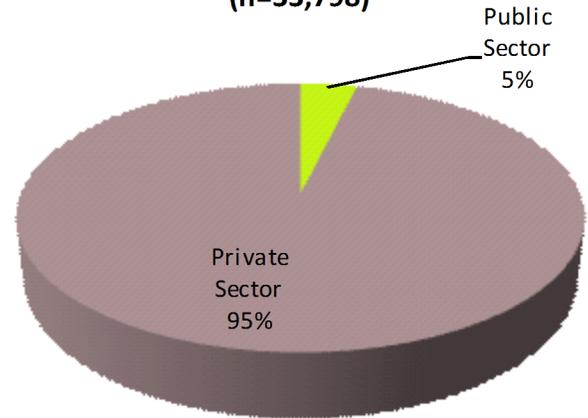


Table 4: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, Georgia, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	84.5	85.8	87.0	84.6	84.6
3 Polio by 24 months	95.1	96.7	96.0	95.7	96.0
1 MMR by 24 months	91.5	93.0	93.2	92.7	92.3
UTD Hib by 24 months	90.0	95.1	96.1	96.3	96.9
3 Hepatitis B by 24 months	94.8	96.5	96.1	95.9	96.2
1 Varicella by 24 months	92.9	93.9	94.2	93.5	93.1
UTD PCV by 24 months	90.5	96.7	92.2	84.5	97.1
2 Rotavirus*	72.6	83.8	70.6	83.5	87.2
1 Influenza**† by 24 months	58.2	60.1	57.1	29.3 ^α	63.6
2 Hepatitis A* by 24 months	—	53.1	55.1	57.3	56.6
Hepatitis B birth dose*	76.2	83.4	82.7	83.6	85.6

* This vaccine is not included in the 4:3:1:3:3:1:4 vaccine series, which is the series routinely measured for this age group.

† The first year of receiving the influenza vaccine requires 2 doses to be protected for that year; measuring 1 dose is a way to measure general interest in receiving the influenza vaccine, not completion or protection against influenza illness.

α There was a data collection error in 2013 with the rate of Influenza

Vaccines in the red font decreased from 2013 to 2014.

State of Georgia Immunization Study Report, p5

Incomplete status and Medicaid status: In the 2014 GIS, the relationship between Medicaid status in the second year of life and incomplete immunization status at 24 months of age was examined to determine if a discontinuation of Medicaid in the second year of life contributed to lower immunization rates, particularly for second year immunizations such as fourth DTaP dose. Children covered under Medicaid during the first year of life must have coverage renewed annually for it to be continued. Information on Medicaid status was collected through a series of questions added to the 2014 GIS.

longer on Medicaid in the second year. Data collectors attempted to determine, via parental interview, why these children were no longer on Medicaid (Figure 4). Several children were no longer enrolled because they were insured elsewhere, but the majority were not contactable after the initial interview and were therefore listed as reason “indeterminate”. Efforts will be taken to improve data collection methods to re-examine this relationship in 2015. These results indicate that discontinuation of Medicaid status in the second year of life did NOT contribute significantly to incomplete status at 24 months of age.

A total of 279 children were identified as incomplete at 24 months of age (Figure 3). Of these children, it was determined that 132 (47.3%) had immunizations covered by Medicaid during their first year of life. Of those incomplete at 24 months of age, 104 (37.3%) remained on Medicaid during the second year of life; only 25 (9.0%) of the children incomplete at 24 months of age were no

Figure 3: Children who were incomplete at 24 months of age and their Medicaid status during 1st & 2nd years of life

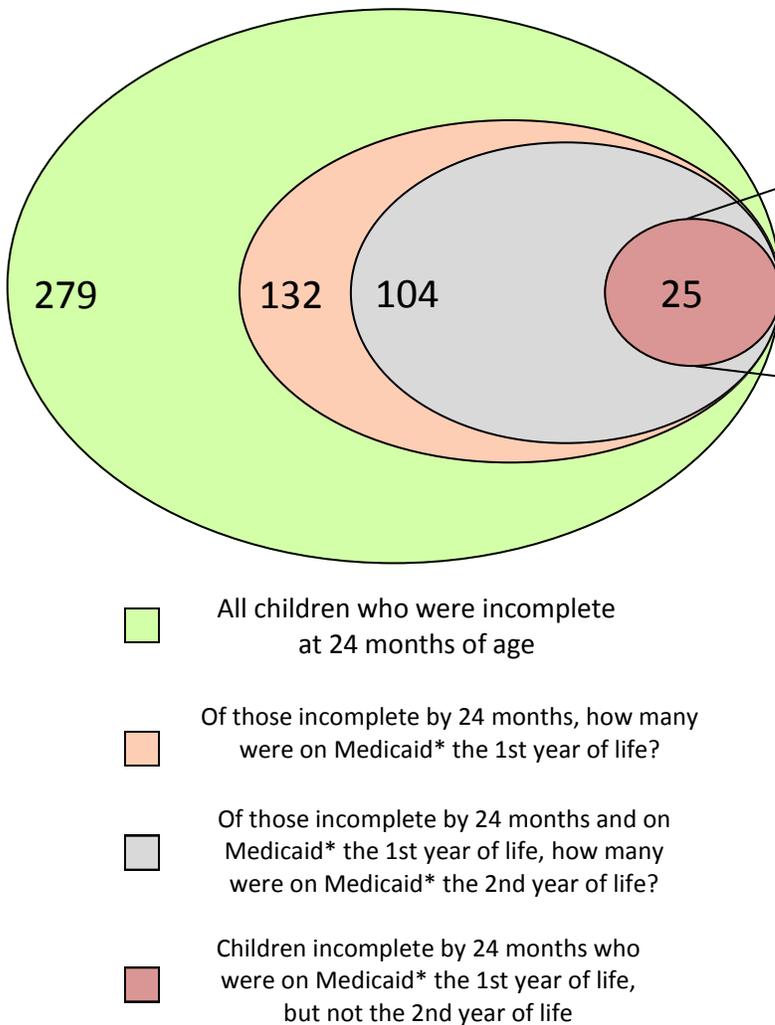
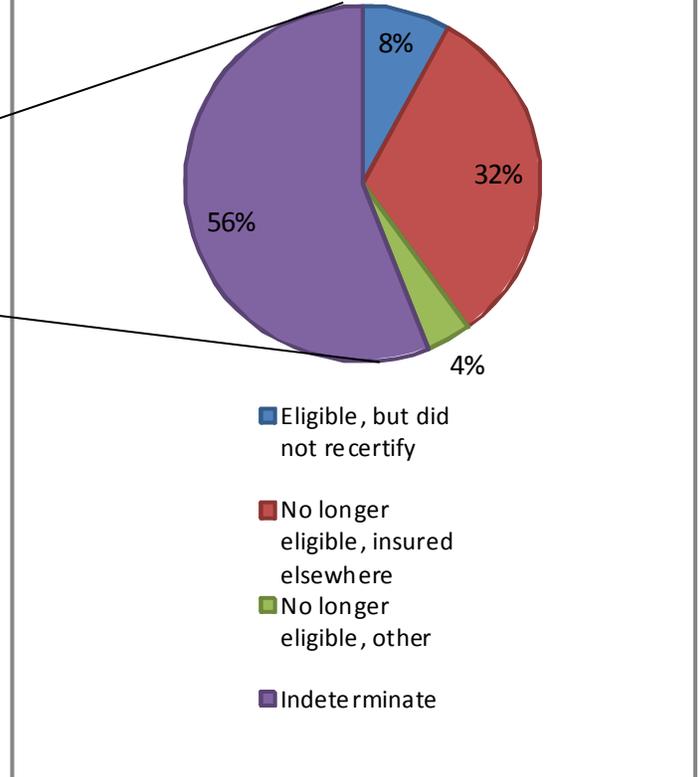


Figure 4: Reasons for discontinuation of Medicaid coverage, 2nd year



*Those labeled as on Medicaid were defined as having ALL their vaccinations given in either the 1st year and/or 2nd year of life, excluding the Hepatitis B birth dose, covered by Medicaid.

State of Georgia Immunization Study Report, p6

District Immunization Rates: While the statewide UTD immunization coverage rate by 24 months was 87.6%, variation was seen between Districts. The Districts with the highest UTD immunization rates by 24 months are shown in green, while the Districts with the lowest UTD immunization rates by 24 months are shown in orange (Figure 5 and Table 5).

Response rates for each District are included on the second page of all District reports (Section III). Caution should be taken when interpreting immunization rates for a District with a low response rate because children who were classified as unable-to-locate could also be the least UTD, but must be excluded.

Note that the difference between coverage rates based on GRITS alone and up-to-date at 24 months of age is an indicator of how accurate GRITS records reflect these rates. Physician practices should be encouraged to utilize GRITS for immunization documentation to maintain its accuracy and thereby decrease this difference.

Figure 5: UTD by 24 months Immunization Rates by District, Georgia, 2014

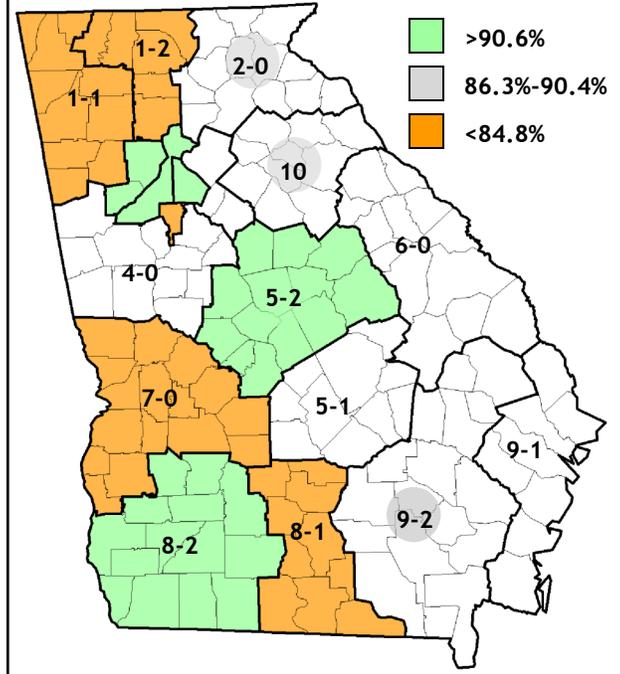


Table 5: District UTD Immunization Rates by 24 months and by End of Data Collection, Georgia, 2014

District	UTD by 24 months, GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)	Final Sample Size (n)
1-1 Northwest (Rome)	80.7	84.8	91.7	145
1-2 North Georgia (Dalton)	78.4	84.5	91.8	97
2-0 North (Gainesville)	78.0	87.2	90.8	141
3-1 Cobb-Douglas	88.0	92.2	97.6	167
3-2 Fulton	87.5	90.6	94.4	160
3-3 Clayton	79.0	79.0	86.0	157
3-4 Gwinnett, Newton, Rockdale	77.1	86.3	92.2	153
3-5 DeKalb	88.7	91.8	97.9	97
4-0 LaGrange	84.7	86.6	92.4	157
5-1 South Central (Dublin)	81.5	87.7	90.1	81
5-2 North Central (Macon)*	67.3	93.9	95.9	98
6-0 East Central (Augusta)	83.8	90.0	96.2	130
7-0 West Central (Columbus)	71.7	78.8	92.9	99
8-1 South (Valdosta)	80.2	84.2	97.0	101
8-2 Southwest (Albany)	86.9	91.6	96.3	107
9-1 Coastal (Savannah)	85.7	88.3	92.2	154
9-2 Southeast (Waycross)	90.4	90.4	97.4	115
10-0 Northeast (Athens)	85.7	89.3	95.2	84
Georgia	82.3	87.6	93.6	2243

*District with a >10% difference between their GRITS alone rate and UTD by 24 months.

State of Georgia Immunization Study Report, p7

Immunization Success Measures by Health District:
Data analyses for this study were done on the state level, allowing for uniform data analysis covering all of the 18 Health Districts in Georgia. However, there are key measures that can be very telling of a Health District's success in keeping their children up-to-date on all of their immunizations by 24 months of age.

Please refer to Table 6 for a list of these success measures and the first-, second-, and third-placing Health Districts as applicable to each measure. The top portion of the table addresses the Districts

who had the highest immunization coverage rates and response rates as well as one-year increases. Some of these measures represent an average over a five-year span and some are only relative to 2014 results.

The lower portion of the table addresses the vaccine antigen-specific coverage by 24 months and only includes 2014 results.

Congratulations to all of the Districts Immunization Champions - those ranking in the top three for any of the categories!

Table 6: District Immunization Champions, Georgia, 2010-2014

Category	1st Place	2nd Place	3rd Place	State
Highest Response Rate, 2014	Augusta District (6-0) 100.0%	Albany District (8-2) & Waycross District (9-2) 99.1%	LaGrange District (4-0) 98.1%	94.3%
Highest UTD by 24 months in 2014	Macon District (5-2) 93.9%	Cobb District (3-1) 92.2%	DeKalb District (3-5) 91.8%	87.6%
Highest UTD by 24 months, based on GRITS alone 2014	Waycross District (9-2) 90.4%	DeKalb District (3-5) 88.7%	Cobb District (3-1) 88.0%	82.3%
Highest UTD by end of data collection, 2014	DeKalb District (3-5) 97.9%	Cobb District (3-1) 97.6%	Waycross District (9-2) 97.4%	93.6%
Greatest Increase in UTD by 24 months from 2013 to 2014	Cobb District (3-1) 16.7%	Clayton District (3-3) 16.3%	Coastal District (9-1) 11.1%	3.1%
Greatest Increase in UTD from 24 months to end of data collection, 2014	Columbus District (7-0) 17.9%	Valdosta District (8-1) 15.2%	Clayton District (3-3) 8.9%	6.8%
Highest Coverage*: 4+ DTaP Doses, 2014	Macon District (5-2) 89.8%	Waycross District (9-2) 89.6%	Albany District (8-2) 88.8%	84.6%
Highest Coverage*: 3+ Polio Doses, 2014	Athens District (10-0) 98.8%	Waycross District (9-2) 98.3%	Cobb District (3-1) 98.2%	96.0%
Highest Coverage*: 1 MMR Dose, 2014	DeKalb District (3-5) 96.9%	Albany District (5-1) 95.3%	Cobb District (3-1) & Athens District (10-0) 95.2%	92.3%
Highest Coverage*: UTD Hib, 2014	Cobb District (3-1) & Athens District (10-0) 100.0%	DeKalb District (3-5) 99.0%	Augusta District (6-0) 98.5%	96.9%
Highest Coverage**: Hepatitis B Birth Dose, 2014	Columbus District (7-0) 98.0%	Macon District (5-2) 96.9%	Dublin District (5-1) 95.1%	85.6%
Highest Coverage*: 3+ Hepatitis B Doses, 2014	Waycross District (9-2) 99.1%	Albany District (8-2) 98.1%	Columbus District (7-0) & Valdosta District (8-1) 99.2%	96.2%
Highest Coverage*: 1 Varicella Dose, 2014	DeKalb District (3-5) 97.9%	Athens District (10-0) 96.4%	Macon District (5-2) 95.9%	93.1%
Highest Coverage*: UTD PCV, 2014	DeKalb District (3-5) & Athens District (10-0) 100.0%	Cobb District (3-1) 99.4%	Albany District (8-2) & Waycross District (9-2) 99.1%	97.1%
Highest Coverage*: 1+ Hepatitis A Doses, 2014	Waycross District (9-2) 68.7%	Albany District (8-2) 66.4%	Gainesville District (2-0) 63.1%	56.6%
Highest Coverage*: 1+ Influenza Doses, 2014	Dalton District (1-2) 75.3%	Augusta District (6-0) 72.3%	DeKalb District (3-5) 72.2%	63.6%

*Highest immunization coverage by 24 months of age.

**Highest percentage of children who received the first dose of Hepatitis B within their first 3 days of life.

State of Georgia Immunization Study Report, p8

Findings Related to WIC Enrollment: Statewide results for the difference in UTD Immunization rate by 24 months between WIC-enrolled children and those not enrolled in WIC are shown in Table 7. No disparity is evident statewide or at the district level in most cases. Only District's 5-1 and 9-2 had a significantly lower immunization rate by 24 months of age.

Immunization campaigns will vary by district based on demographic differences. Findings from this report may be useful in generating ideas for effective strategies.

Figure 6: Immunization Rates among WIC and Non-WIC Enrolled Children, Georgia, 2014

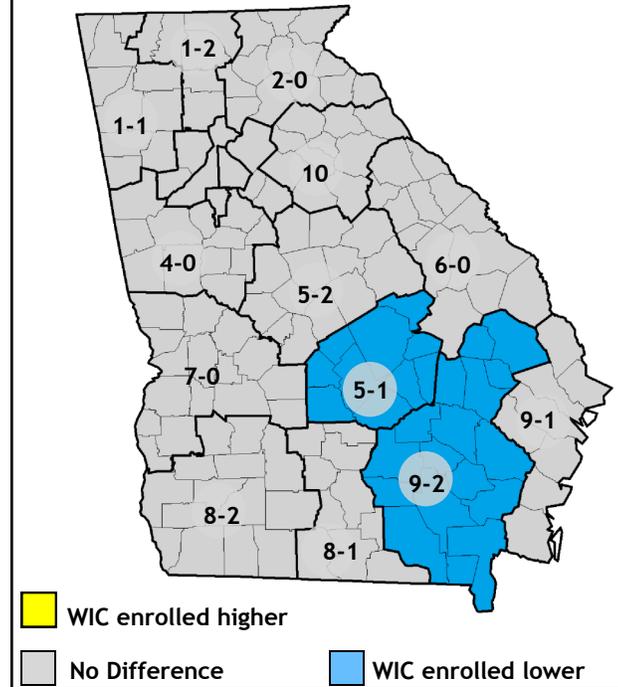


Table 7: Difference in UTD Immunization Rate by 24 months between WIC Enrollment Groups, Georgia, 2014

District	Immunization Rate for children enrolled in WIC (%)	Immunization Rate for children <i>not</i> enrolled in WIC (%)	Disparity (WIC Rate-Non-WIC Rate) (%)	95% Confidence Interval of Difference (% - %)*
1-1 Northwest (Rome)	86.0	82.2	3.8	-9.3 - 16.9
1-2 North Georgia (Dalton)	81.8	90.3	-8.5	-22.5 - 5.5
2-0 North (Gainesville)	87.9	86.0	1.9	-9.8 - 13.6
3-1 Cobb-Douglas	91.2	93.4	-2.2	-10.3 - 5.9
3-2 Fulton	88.8	92.5	-3.7	-12.7 - 5.3
3-3 Clayton	79.5	77.5	2.0	-12.9 - 16.9
3-4 Gwinnett, Newton, Rockdale	84.7	88.2	-3.5	-14.3 - 7.3
3-5 DeKalb	92.4	90.3	2.1	-10.1 - 14.3
4-0 LaGrange	87.6	85.3	2.3	-8.6 - 13.2
5-1 South Central (Dublin)	85.7	100.0	-14.3	-22.5 - -6.1
5-2 North Central (Macon)	94.7	90.9	3.8	-9.2 - 16.8
6-0 East Central (Augusta)	89.0	92.3	-3.3	-13.9 - 7.3
7-0 West Central (Columbus)	80.2	72.2	8.0	-14.4 - 30.4
8-1 South (Valdosta)	83.1	87.5	-4.4	-20.1 - 11.3
8-2 Southwest (Albany)	92.9	86.4	6.5	-8.8 - 21.8
9-1 Coastal (Savannah)	89.0	87.3	1.7	-8.7 - 12.1
9-2 Southeast (Waycross)	88.4	100.0	-11.6	-18.0 - -5.2
10-0 Northeast (Athens)	89.5	88.9	0.6	-13.7 - 14.9
Georgia	87.2	88.3	-1.1	-4.0 - 1.8

*If the confidence interval overlaps zero, then the difference between groups is not statistically significant.

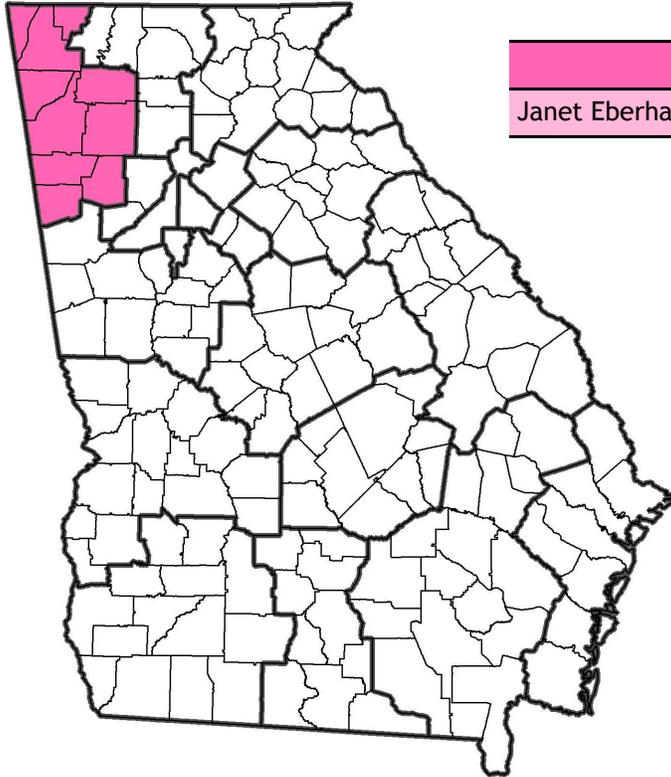
Section III

Health District Immunization Reports



District 1-1

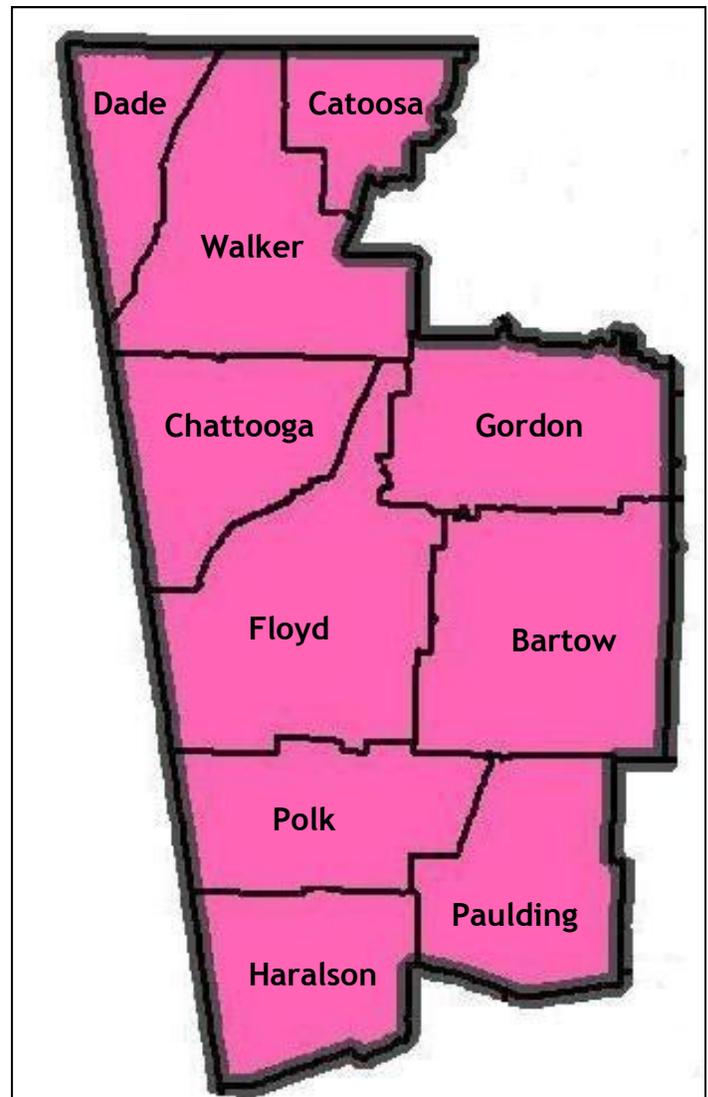
2014 Georgia Immunization Study Report



District 1-1 Data Collection Team

Janet Eberhart, RN, BSN | District Immunization Coordinator

County	Number in Sample
Bartow	31
Catoosa	5
Chattooga	6
Dade	3
Floyd	30
Gordon	11
Haralson	6
Paulding	34
Polk	12
Walker	7
District 1-1	145
District UTD by 24 months Immunization Rate	84.8%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 1-1

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 145 children in District 1-1 (Table 1-1-A).

For the District 1-1 sample, the up-to-date (UTD) immunization rate by 24 months of age (84.8%) was 0.5% higher than in 2013 (84.4%). The UTD immunization rate based on GRITS alone (80.7%) fell 4.4% from 2013 (84.4%). The UTD immunization rate by the end of data collection (91.7%) was 0.7% higher than in 2013 (91.1%) Immunization rates that decreased are shown in red (Table 1-1-B).

A comparison of District 1-1 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 1-1-A.

Table 1-1-A: GIS Sampling Scheme, District 1-1, 2014

	District 1-1 (n)	State (n)
Original Sample	161	2,550
Ineligible	12	172
(Refused to Participate)	(0)	(12)
Eligible Sample	149	2,378
Unable to Locate [†]	4	135
Final Sample	145	2,243
Response Rate (%)	97.3	94.3

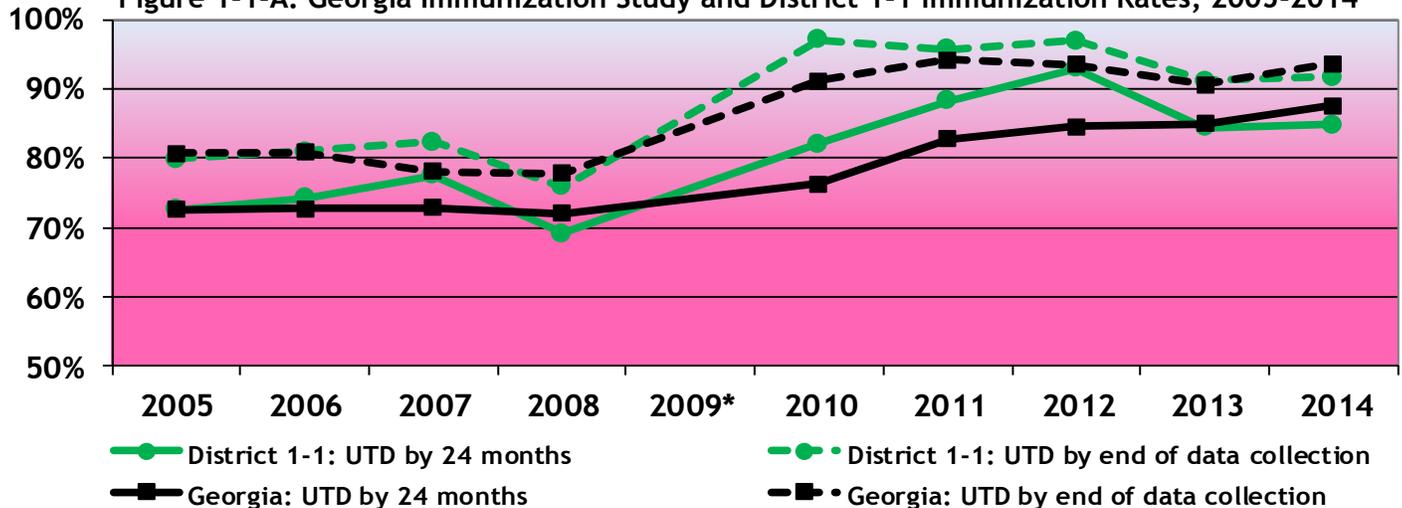
[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 1-1-B: Immunization Summary by Series & Vaccine Antigen, District 1-1, 2014

	District 1-1 (%)	State Average (%)
UTD immunization rate** by 24 months	84.8	87.6
UTD immunization rate** Based on GRITS alone	80.7	82.3
UTD immunization rate** by end of data collection ^{††}	91.7	93.6
4 DTaP by 24 months	84.1	84.6
3 DTaP by 24 months	95.9	96.9
3 IPV by 24 months	95.2	96.0
1 MMR by 24 months	92.4	92.3
UTD Hib by 24 months	95.9	96.9
3 Hep B by 24 months	95.2	96.2
1 Varicella by 24 months	92.4	93.1
UTD PCV by 24 months	95.9	97.1
2 Rotavirus by 24 months	86.2	87.2
2 Hep A by 24 months	55.9	56.6
1+ Influenza by 24 months	58.6	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.

Figure 1-1-A: Georgia Immunization Study and District 1-1 Immunization Rates, 2005-2014



* 2009 data was not collected due to a personnel vacancy.

District 1-1, Georgia Immunization Study Report, p3

Table 1-1-C: District 1-1 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 1-1 Sample		Immunization Rates for District 1-1 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 1-1 sample of births n=145 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 1-1 Rates			80.7	84.8	91.7
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=104)	43.1	71.7	76.9	81.7	89.4
White, Hispanic (n=3)	3.4	2.1	100.0	100.0	100.0
Black (n=21)	36.0	14.5	81.0	85.7	95.2
Unspecified, Hispanic (n=5)	7.6	3.4	100.0	100.0	100.0
Asian (n=5)	2.6	3.4	100.0	100.0	100.0
Multiracial (n=2)	1.4	1.4	100.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=66)	40.1	45.5	81.8	86.4	95.5
25-34 years (n=64)	47.3	44.1	81.3	85.9	90.6
35+ years (n=15)	12.5	10.3	73.3	73.3	80.0
Maternal Education^{‡,†}					
Some College+ (n=61)	45.4	42.1	78.7	82.0	86.9
HS Diploma/GED (n=57)	32.1	39.3	82.5	87.7	94.7
9th-11th grade (n=21)	14.7	14.5	81.0	85.7	100.0
<9th grade (n=5)	4.8	3.4	80.0	80.0	80.0
Maternal Marital Status[‡]					
Married (n=85)	49.6	58.6	82.4	88.2	89.4
Unmarried (n=60)	50.2	41.4	78.3	80.0	95.0
WIC^Ø					
Non-WIC (n=45)	32.8	31.0	75.6	82.2	82.2
WIC (n=100)	67.2	69.0	83.0	86.0	96.0
Number of Providers^{†,Ø}					
1 (n=61)	44.6	42.1	82.0	85.2	93.4
2 (n=37)	22.3	25.2	86.5	91.9	97.3
3 (n=8)	7.3	5.5	87.5	87.5	100.0
Provider Type^{†,Ø}					
Public Sector Only (n=0)	0.8	0.0	N/A	N/A	N/A
Private Sector Only (n=94)	64.2	64.8	85.1	87.2	94.7
Both (n=12)	9.2	8.3	75.0	91.7	100.0

Ø Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 1-1, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 1-1 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic mothers
- Children of mothers 35+ years of age
- Children of mothers with some college education
- Children of unmarried mothers

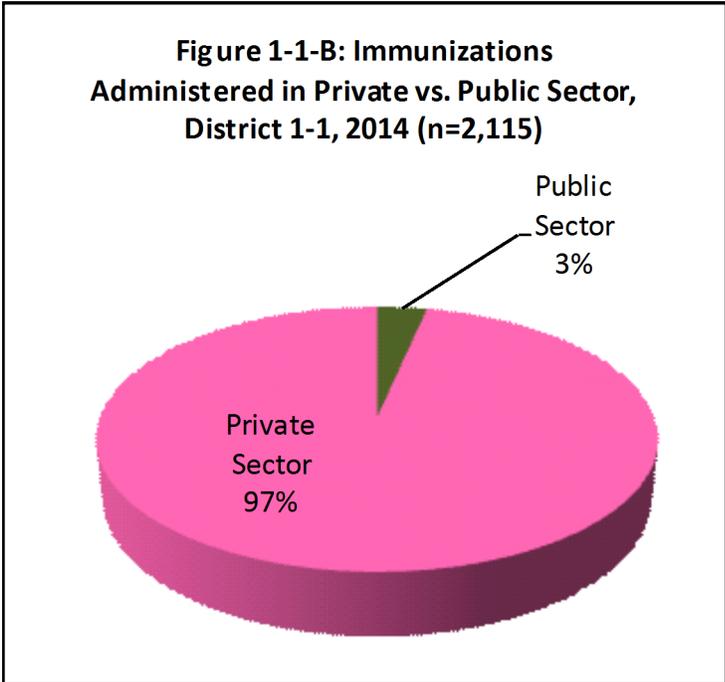


Table 1-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 1-1, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	88.6	88.3	95.3	85.6	84.1
3 Polio by 24 months	98.6	96.8	97.6	97.8	95.2
1 MMR by 24 months	95.0	92.6	96.9	93.3	92.4
UTD Hib by 24 months	92.9	95.7	98.4	96.7	95.9
3 Hepatitis B by 24 months	96.4	96.8	97.6	96.7	95.2
1 Varicella by 24 months	95.7	92.6	98.4	94.4	92.4
UTD PCV by 24 months	95.0	95.7	96.9	87.8	95.9
2 Rotavirus	67.9	87.2	78.7	91.1	86.2
1 Influenza by 24 months	61.4	70.2	64.6	32.2	58.6
Hepatitis B birth dose	-	-	85.8	80.0	87.6

Immunization Rates by Vaccine Antigen: In District 1-1, the UTD immunization rate by 24 months for most vaccine antigens decreased in 2014 (shown in red) when compared to 2013 (Table 1-1-D).

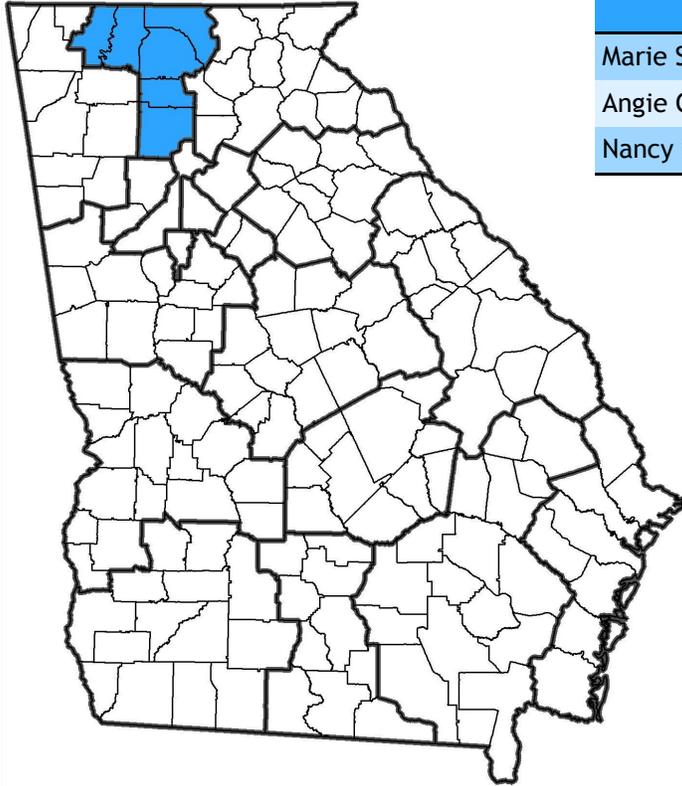
In District 1-1, the UTD immunization rate for Polio showed the largest decline, decreasing from 97.8% in 2013 to 95.2% in 2014. UTD immunization rates for the remaining vaccines either remained constant or slightly decreased from 2013 to 2014.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the fourth dose of DTaP, MMR, varicella and PCV vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



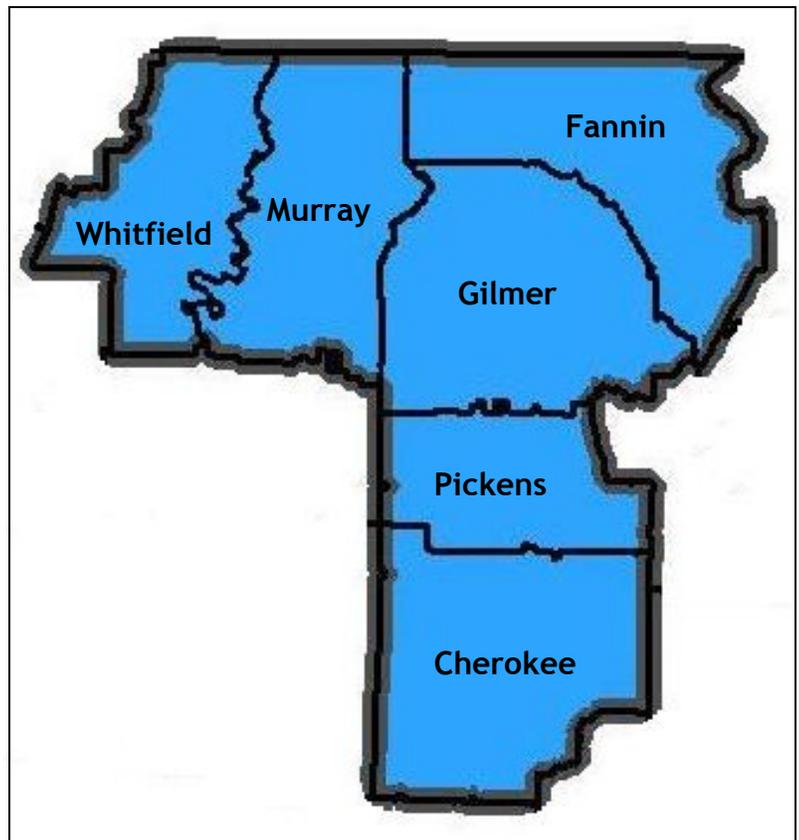
District 1-2

2014 Georgia Immunization Study Report



District 1-2 Data Collection Team	
Marie Smith, RN	District Immunization Coordinator
Angie Callaway, RN	Secondary Data Collector
Nancy Stackhouse, LPN	Secondary Data Collector

County	Number in Sample
Cherokee	45
Fannin	2
Gilmer	3
Murray	16
Pickens	5
Whitfield	26
District 1-2	97
District UTD by 24 months Immunization Rate	84.5%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 1-2

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 97 children in District 1-2 (Table 1-2-A).

For the District 1-2 sample, the up-to-date (UTD) immunization rate by 24 months of age (84.5%) was 4.3% lower than in 2013 (88.3%). The UTD immunization rate based on GRITS alone (78.4%) fell 8.4% from 2013 (85.6%). The UTD immunization rate by the end of data collection (91.8%) was 1.1% lower than in 2013 (92.8%) Immunization rates that decreased are shown in red (Table 1-2-B).

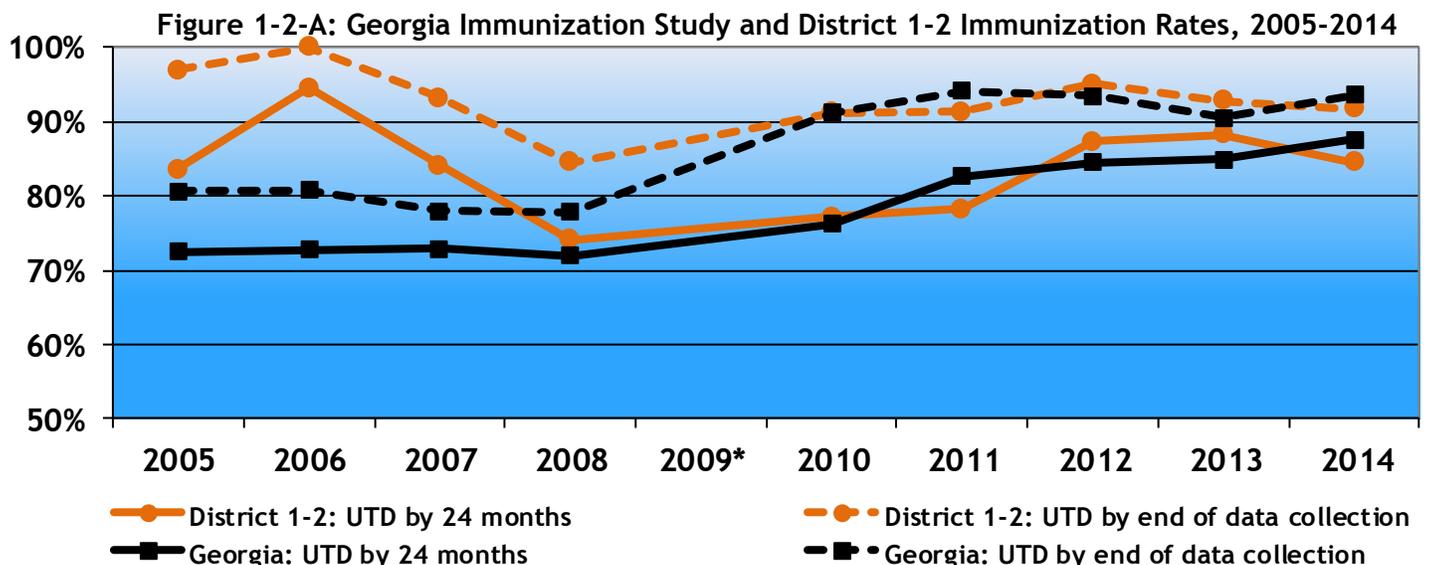
A comparison of District 1-2 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 1-2-A.

	District 1-2 (n)	State (n)
Original Sample	110	2,550
Ineligible	11	172
(Refused to Participate)	(4)	(12)
Eligible Sample	99	2,378
Unable to Locate [†]	2	135
Final Sample	97	2,243
Response Rate (%)	98.0	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 1-2 (%)	State Average (%)
UTD immunization rate** by 24 months	84.5	87.6
UTD immunization rate** Based on GRITS alone	78.4	82.3
UTD immunization rate** by end of data collection ^{††}	91.8	93.6
4 DTaP by 24 months	82.5	84.6
3 DTaP by 24 months	99.0	96.9
3 IPV by 24 months	97.9	96.0
1 MMR by 24 months	91.8	92.3
UTD Hib by 24 months	97.9	96.9
3 Hep B by 24 months	95.9	96.2
1 Varicella by 24 months	92.8	93.1
UTD PCV by 24 months	100.0	97.1
2 Rotavirus by 24 months	90.7	87.2
2 Hep A by 24 months	55.7	56.6
1+ Influenza by 24 months	75.3	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 1-2, Georgia Immunization Study Report, p3

Table 1-2-C: District 1-2 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 1-2 Sample		Immunization Rates for District 1-2 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 1-2 sample of births n=97 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 1-2 Rates			78.4	84.5	91.8
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=62)	43.1	63.9	72.6	79.0	88.7
White, Hispanic (n=1)	3.4	1.0	100.0	100.0	100.0
Black (n=7)	36.0	7.2	85.7	85.7	100.0
Unspecified, Hispanic (n=19)	7.6	19.6	89.5	100.0	100.0
Asian (n=3)	2.6	3.1	100.0	100.0	100.0
Multiracial (n=0)	1.4	0.0	N/A	N/A	N/A
Maternal Age^{‡,†}					
<25 years (n=34)	40.1	35.1	70.6	76.5	91.2
25-34 years (n=50)	47.3	51.5	84.0	86.0	90.0
35+ years (n=13)	12.5	13.4	76.9	100.0	100.0
Maternal Education^{‡,†}					
Some College+ (n=39)	45.4	40.2	82.1	89.7	94.9
HS Diploma/GED (n=21)	32.1	21.6	61.9	66.7	81.0
9th-11th grade (n=23)	14.7	23.7	82.6	87.0	95.7
<9th grade (n=5)	4.8	5.2	80.0	100.0	100.0
Maternal Marital Status[‡]					
Married (n=63)	49.6	64.9	76.2	85.7	90.5
Unmarried (n=34)	50.2	35.1	82.4	82.4	94.1
WIC[⊖]					
Non-WIC (n=31)	32.8	32.0	87.1	90.3	93.5
WIC (n=66)	67.2	68.0	74.2	81.8	90.9
Number of Providers^{‡,⊖}					
1 (n=39)	44.6	40.2	71.8	82.1	87.2
2 (n=17)	22.3	17.5	88.2	88.2	94.1
3 (n=7)	7.3	7.2	57.1	57.1	85.7
Provider Type^{‡,⊖}					
Public Sector Only (n=0)	0.8	0.0	N/A	N/A	N/A
Private Sector Only (n=61)	64.2	62.9	75.4	82.0	90.2
Both (n=2)	9.2	2.1	50.0	50.0	50.0

⊖ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 1-2, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 1-2 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic mothers
- Children of mothers under 25 years of age
- Children of mothers have a high school graduate level of education only
- Children of unmarried mothers
- Children enrolled in the WIC program
- Children receiving immunizations from three or more providers

Figure 1-2-B: Immunizations Administered in Private vs. Public Sector, District 1-2, 2014 (n=1,328)

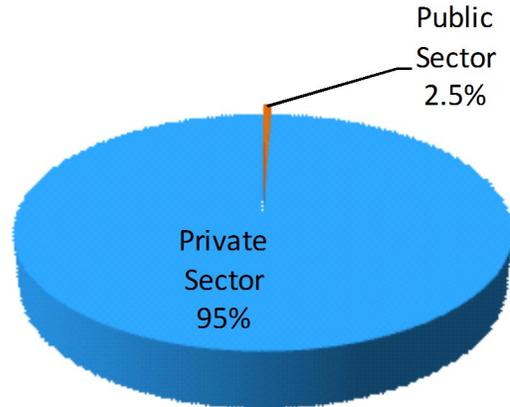


Table 1-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 1-2, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	86.8	81.7	90.2	87.4	82.5
3 Polio by 24 months	96.5	93.9	97.9	94.6	97.9
1 MMR by 24 months	91.2	90.4	95.8	94.6	91.8
UTD Hib by 24 months	85.1	91.3	97.9	97.3	97.9
3 Hepatitis B by 24 months	96.5	95.7	98.6	96.4	95.9
1 Varicella by 24 months	94.7	93.0	97.9	95.5	92.8
UTD PCV by 24 months	93.9	93.0	93.0	90.1	100.0
2 Rotavirus	77.2	82.6	69.9	88.3	90.7
1 Influenza by 24 months	60.5	60.0	71.3	76.6	75.3
Hepatitis B birth dose	-	-	76.9	79.3	85.6

Immunization Rates by Vaccine Antigen: In District 1-2, the UTD immunization rates by 24 months for most vaccine antigens decreased between 2013 and 2014 (shown in red) (Table 1-2-D).

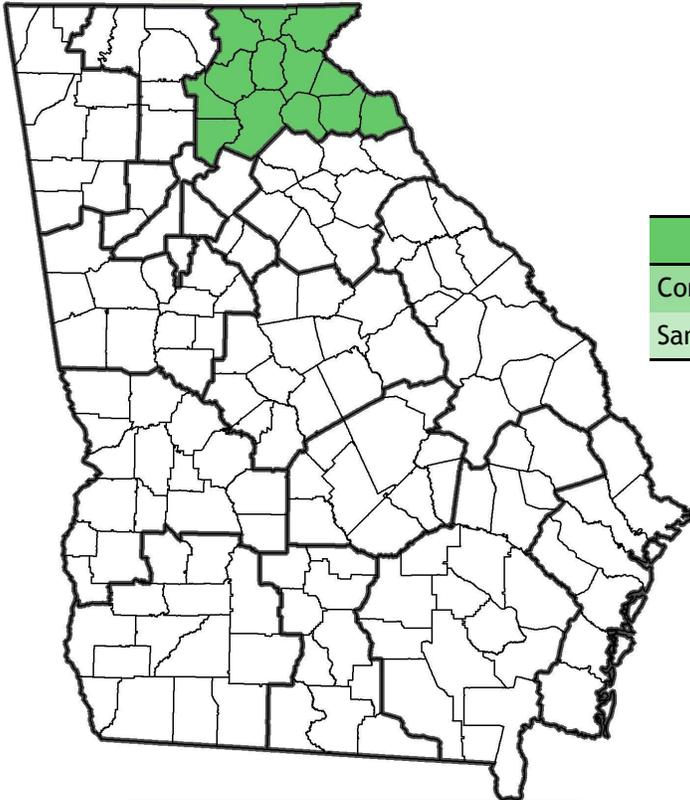
In District 1-2, the largest decrease in UTD immunization rates was for DTaP and MMR vaccines. The UTD immunization rate for DTaP showed a decrease from 87.4% in 2013 to 82.5% in 2014. The UTD immunization rate for MMR decreased from 94.6% in 2013 to 91.8% in 2014.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP, MMR and varicella vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



District 2-0

2014 Georgia Immunization Study Report



District 2-0 Data Collection Team	
Constance Martin RN, BSN	District Immunization Coordinator
Sandy T. Moore, LPN	Primary Data Collector

County	Number in Sample
Banks	6
Dawson	3
Forsyth	41
Franklin	4
Habersham	13
Hall	47
Hart	5
Lumpkin	3
Rabun	2
Stephens	4
Towns	3
Union	4
White	6
District 2-0	141
District UTD by 24 months Immunization Rate	87.2%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 2-0

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 141 children in District 2-0 (Table 2-0-A).

For the District 2-0 sample, the up-to-date (UTD) immunization rate by 24 months of age (87.2%) was 6.2% higher than in 2013 (82.1%). The UTD immunization rate based on GRITS alone (78.0%) rose 16.2% from 2013 (67.1%). The UTD immunization rate by the end of data collection (90.8%) was 6.8% higher than in 2013 (85.0%) Immunization rates that decreased are shown in red (Table 2-0-B).

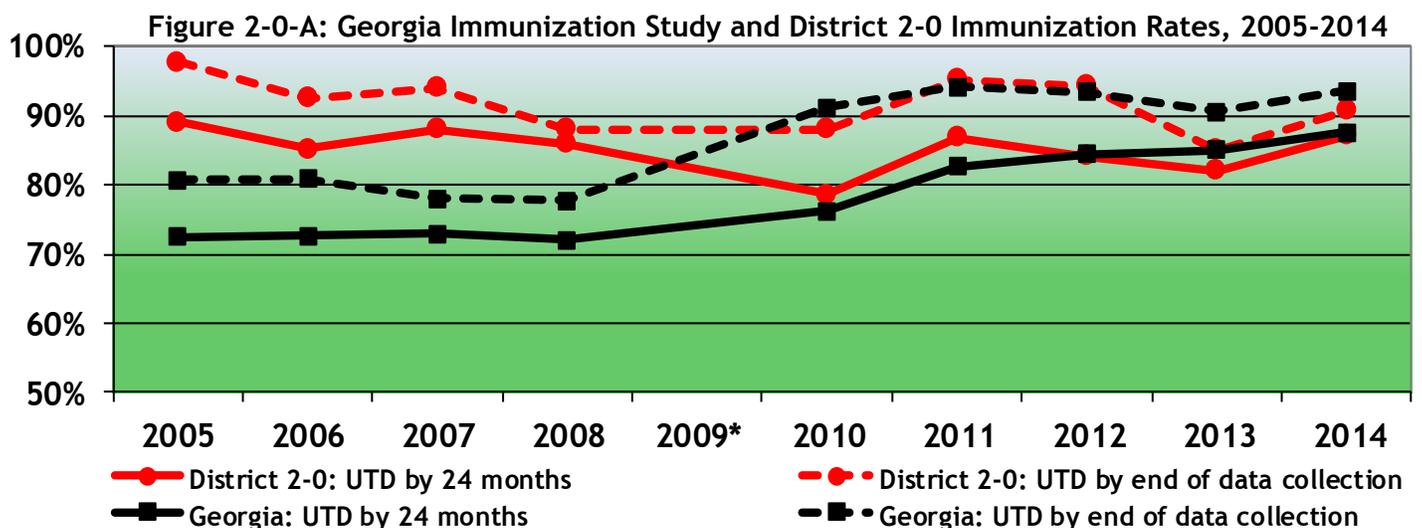
A comparison of District 2-0 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 2-0-A.

	District 2-0 (n)	State (n)
Original Sample	167	2,550
Ineligible	23	172
(Refused to Participate)	(2)	(12)
Eligible Sample	144	2,378
Unable to Locate [†]	3	135
Final Sample	141	2,243
Response Rate (%)	97.9	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 2-0 (%)	State Average (%)
UTD immunization rate** by 24 months	87.2	87.6
UTD immunization rate** Based on GRITS alone	78.0	82.3
UTD immunization rate** by end of data collection ^{††}	90.8	93.6
4 DTaP by 24 months	85.1	84.6
3 DTaP by 24 months	96.5	96.9
3 IPV by 24 months	95.0	96.0
1 MMR by 24 months	90.1	92.3
UTD Hib by 24 months	96.5	96.9
3 Hep B by 24 months	93.6	96.2
1 Varicella by 24 months	92.9	93.1
UTD PCV by 24 months	96.5	97.1
2 Rotavirus by 24 months	90.1	87.2
2 Hep A by 24 months	63.1	56.6
1+ Influenza by 24 months	64.5	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 2-0, Georgia Immunization Study Report, p3

Table 2-0-C: District 2-0 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 2-0 Sample		Immunization Rates for District 2-0 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 2-0 sample of births n=141 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 2-0 Rates			78.0	87.2	90.8
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=96)	43.1	68.1	79.2	85.4	88.5
White, Hispanic (n=18)	3.4	12.8	66.7	94.4	100.0
Black (n=9)	36.0	6.4	88.9	88.9	100.0
Unspecified, Hispanic (n=6)	7.6	4.3	100.0	100.0	100.0
Asian (n=1)	2.6	0.7	100.0	100.0	100.0
Multiracial (n=2)	1.4	1.4	50.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=48)	40.1	34.0	79.2	83.3	93.8
25-34 years (n=72)	47.3	51.1	79.2	88.9	88.9
35+ years (n=20)	12.5	14.2	75.0	90.0	90.0
Maternal Education^{‡,†}					
Some College+ (n=64)	45.4	45.4	82.8	87.5	89.1
HS Diploma/GED (n=45)	32.1	31.9	77.8	86.7	91.1
9th-11th grade (n=18)	14.7	12.8	88.9	94.4	100.0
<9th grade (n=8)	4.8	5.7	50.0	87.5	87.5
Maternal Marital Status[‡]					
Married (n=88)	49.6	62.4	80.7	86.4	88.6
Unmarried (n=51)	50.2	36.2	74.5	88.2	94.1
WIC^Ø					
Non-WIC (n=50)	32.8	35.5	78.0	86.0	86.0
WIC (n=91)	67.2	64.5	78.0	87.9	93.4
Number of Providers^{‡,Ø}					
1 (n=77)	44.6	54.6	84.4	85.7	90.9
2 (n=30)	22.3	21.3	53.3	90.0	93.3
3 (n=7)	7.3	5.0	100.0	100.0	100.0
Provider Type^{‡,Ø}					
Public Sector Only (n=0)	0.8	0.0	N/A	N/A	N/A
Private Sector Only (n=93)	64.2	66.0	86.0	87.1	91.4
Both (n=21)	9.2	14.9	38.1	90.5	95.2

Ø Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 2-0, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 2-0 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic mothers
- Children of mothers under 25 years of age
- Children of married mothers

Figure 2-0-B: Immunizations Administered in Private vs. Public Sector, District 2-0, 2014 (n=2,304)

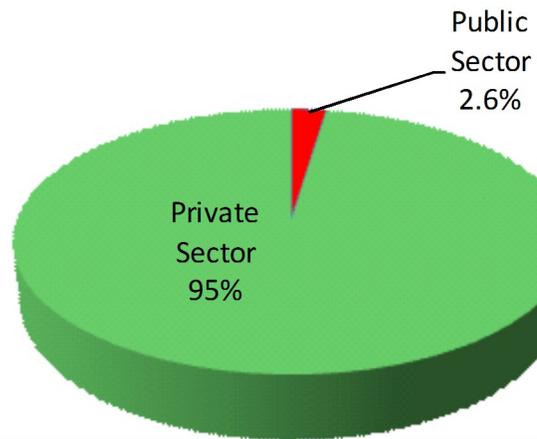


Table 2-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 2-0, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	86.9	90.3	86.5	87.1	85.1
3 Polio by 24 months	95.2	97.9	96.8	94.3	95.0
1 MMR by 24 months	92.9	94.5	96.0	91.4	90.1
UTD Hib by 24 months	91.7	97.2	96.8	95.0	96.5
3 Hepatitis B by 24 months	96.4	97.9	93.7	91.4	93.6
1 Varicella by 24 months	91.7	95.2	95.2	90.7	92.9
UTD PCV by 24 months	90.5	97.2	90.5	87.1	96.5
2 Rotavirus	79.8	92.4	89.7	87.9	90.1
1 Influenza by 24 months	65.5	66.2	69.1	41.4	64.5
Hepatitis B birth dose	-	-	69.8	78.6	83.0

Immunization Rates by Vaccine Antigen: In District 2-0, the UTD immunization rates for most vaccine antigens increased between 2013 and 2014. Vaccines that decreased from 2013 to 2014 are labeled in red (Table 2-0-D).

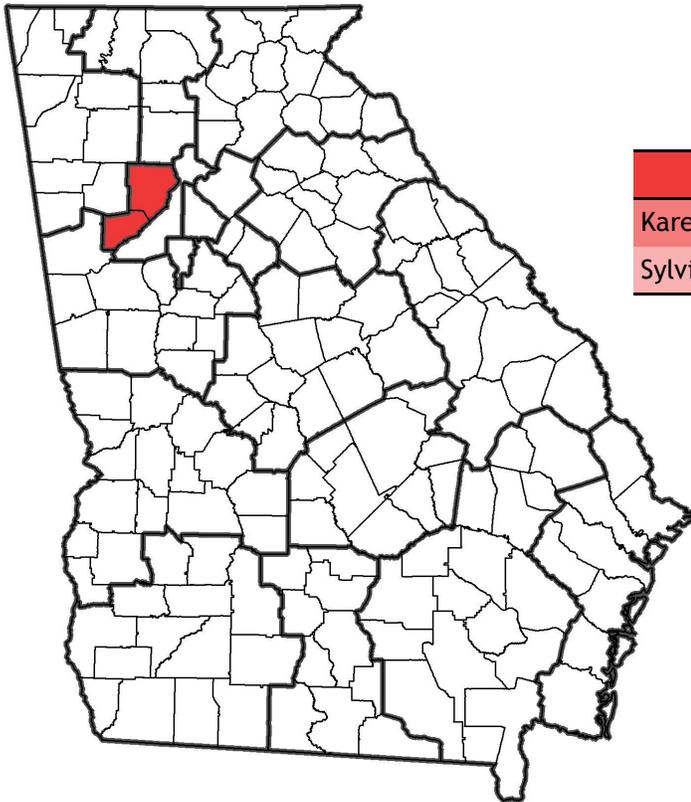
Among District 2-0 immunization rates by vaccine antigen in 2014, the UTD immunization rate for DTaP was the lowest at 85.1%, down from 87.1% in 2013. The UTD immunization rate for MMR also decreased from 91.4% in 2013 to 90.1% in 2014.

Vaccine Antigen-Specific Conclusions: The antigen specific data suggest that the DTaP and PCV vaccine should be the primary focus of District and County-level immunization campaigns.



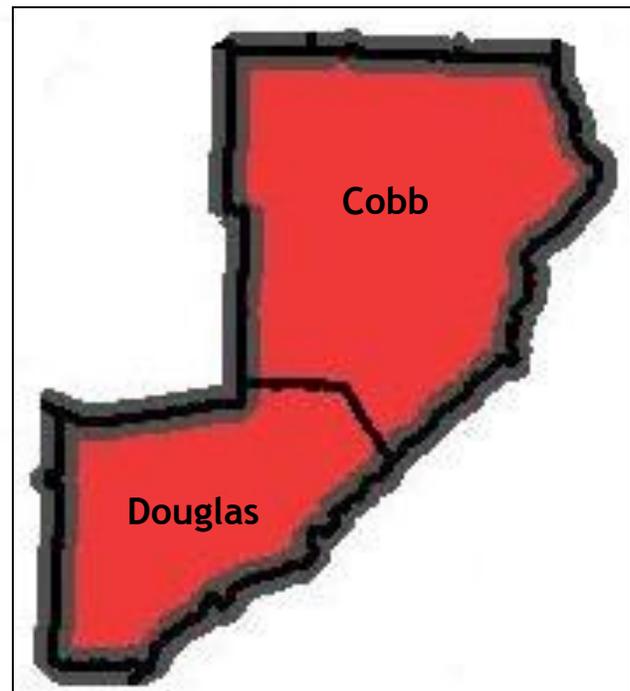
District 3-1

2014 Georgia Immunization Study Report



District 3-1 Data Collection Team	
Karen Thomas, RN	District Immunization Coordinator
Sylvia Frausto	Data Collector

County	Number in Sample
Cobb	145
Douglas	22
District 3-1	167
District UTD by 24 months Immunization Rate	92.2%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 3-1

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 167 children in District 3-1 (Table 3-1-A).

For the District sample, the up-to-date (UTD) immunization rate by 24 months of age (92.2%) was 16.7% higher than in 2013 (79.0%). The UTD immunization rate based on GRITS alone (88.0%) rose 25.9% from 2013 (69.9%). The UTD immunization rate by the end of data collection (97.6%) was 7.4% higher than in 2013 (90.9%) Immunization rates that decreased are shown in red (Table 3-1-B).

A comparison of District 3-1 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 3-1-A.

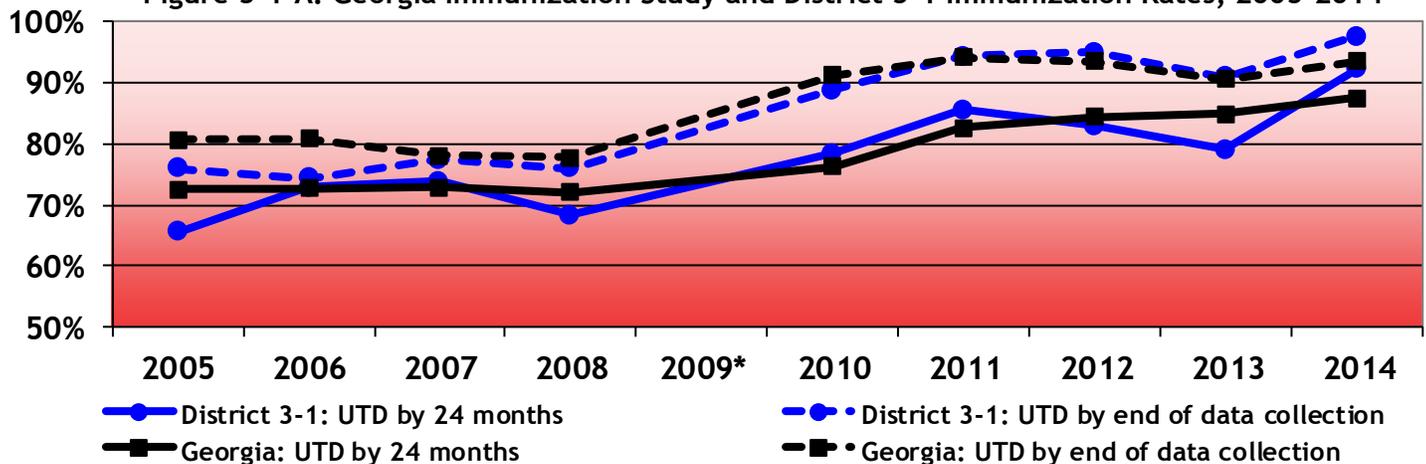
	District 3-1 (n)	State (n)
Original Sample	201	2,550
Ineligible	17	172
(Refused to Participate)	(1)	(12)
Eligible Sample	184	2,378
Unable to Locate [†]	17	135
Final Sample	167	2,243
Response Rate (%)	90.8	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 3-1 (%)	State Average (%)
UTD immunization rate** by 24 months	92.2	87.6
UTD immunization rate** Based on GRITS alone	88.0	82.3
UTD immunization rate** by end of data collection ^{††}	97.6	93.6
4 DTaP by 24 months	88.6	84.6
3 DTaP by 24 months	98.8	96.9
3 IPV by 24 months	98.2	96.0
1 MMR by 24 months	95.2	92.3
UTD Hib by 24 months	100.0	96.9
3 Hep B by 24 months	97.0	96.2
1 Varicella by 24 months	94.6	93.1
UTD PCV by 24 months	99.4	97.1
2 Rotavirus by 24 months	92.2	87.2
2 Hep A by 24 months	55.7	56.6
1+ Influenza by 24 months	69.5	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.

Figure 3-1-A: Georgia Immunization Study and District 3-1 Immunization Rates, 2005-2014



* 2009 data was not collected due to a personnel vacancy.

District 3-1, Georgia Immunization Study Report, p3

Table 3-1-C: District 3-1 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 3-1 Sample		Immunization Rates for District 3-1 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 3-1 sample of births n=167 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 3-1 Rates			88.0	92.2	97.6
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=67)	43.1	40.1	95.5	97.0	98.5
White, Hispanic (n=13)	3.4	7.8	76.9	76.9	100.0
Black (n=50)	36.0	29.9	84.0	90.0	96.0
Unspecified, Hispanic (n=22)	7.6	13.2	90.9	90.9	95.5
Asian (n=4)	2.6	2.4	50.0	75.0	100.0
Multiracial (n=2)	1.4	1.2	100.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=47)	40.1	28.1	89.4	91.5	95.7
25-34 years (n=88)	47.3	52.7	92.0	95.5	98.9
35+ years (n=32)	12.5	19.2	75.0	84.4	96.9
Maternal Education^{‡,†}					
Some College+ (n=94)	45.4	56.3	92.6	94.7	97.9
HS Diploma/GED (n=42)	32.1	25.1	76.2	85.7	95.2
9th-11th grade (n=13)	14.7	7.8	84.6	92.3	100.0
<9th grade (n=12)	4.8	7.2	91.6	91.6	100.0
Maternal Marital Status[‡]					
Married (n=95)	49.6	56.9	86.3	90.5	97.9
Unmarried (n=72)	50.2	43.1	90.3	94.4	97.2
WIC^Ø					
Non-WIC (n=76)	32.8	45.5	90.8	93.4	98.7
WIC (n=91)	67.2	54.5	85.7	91.2	96.7
Number of Providers^{†,Ø}					
1 (n=71)	44.6	42.5	88.7	93.0	97.2
2 (n=41)	22.3	24.6	87.8	87.8	97.6
3 (n=16)	7.3	9.6	93.8	93.8	93.8
Provider Type^{†,Ø}					
Public Sector Only (n=1)	0.8	0.6	100.0	100.0	100.0
Private Sector Only (n=117)	64.2	70.1	88.0	90.6	96.6
Both (n=10)	9.2	6.0	100.0	100.0	100.0

Ø Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 3-1, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 3-1 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, Hispanic mothers
- Children of mothers under 25 years of age
- Children whose mothers have a high school graduate level of education only
- Children receiving immunizations from two different providers

Figure 3-1-B: Immunizations Administered in Private vs. Public Sector, District 3-1, 2014 (n=2,671)

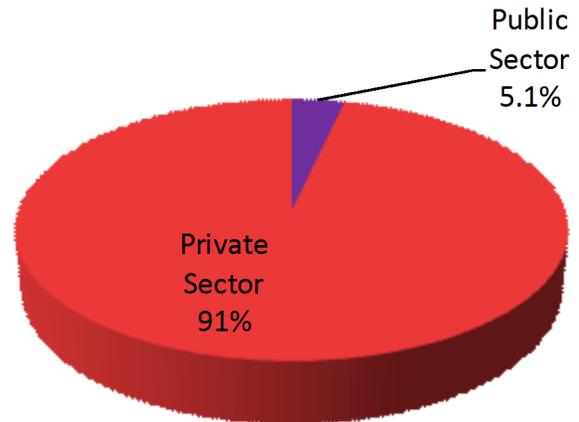


Table 3-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-1, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	88.8	89.7	85.7	79.5	88.6
3 Polio by 24 months	94.0	98.3	94.3	95.5	98.2
1 MMR by 24 months	94.0	94.8	90.7	93.8	95.2
UTD Hib by 24 months	90.3	97.7	93.6	95.5	100.0
3 Hepatitis B by 24 months	94.0	96.6	95.0	96.0	97.0
1 Varicella by 24 months	93.3	95.4	91.4	92.6	94.6
UTD PCV by 24 months	91.0	98.3	92.1	81.3	99.4
2 Rotavirus	79.9	87.4	75.7	86.4	92.2
1 Influenza by 24 months	61.9	74.7	60.0	38.1	69.5
Hepatitis B birth dose	-	-	70.0	72.7	77.8

Immunization Rates by Vaccine Antigen: In District 3-1, the UTD immunization rates by 24 months for all vaccine antigens increased between 2013 and 2014. (Table 3-1-D).

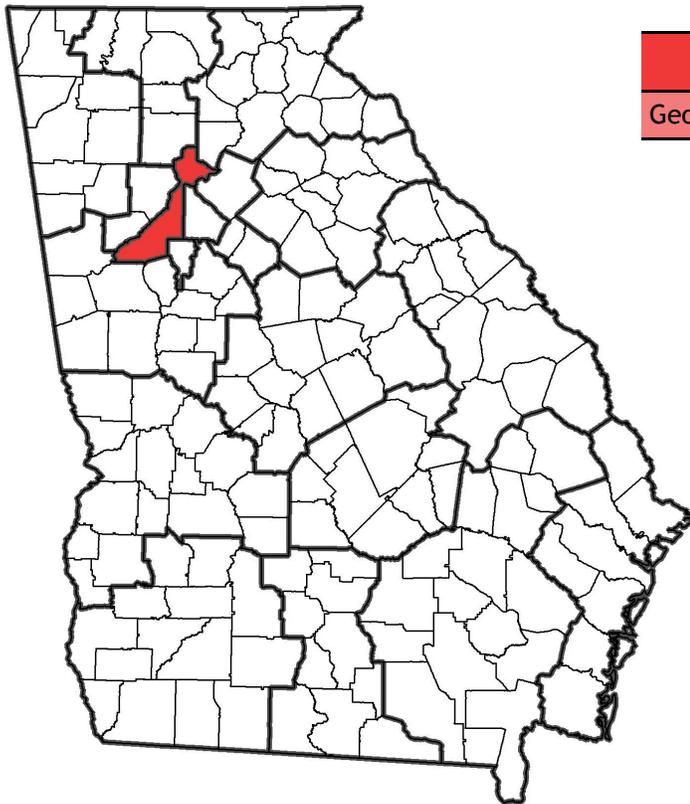
In District 3-1, the UTD immunization rate for DTaP was lowest, as it has been over the last 5 years, at 88.6%.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP vaccine could reasonably be the primary focus of District and County-level immunization campaigns.



District 3-2

2014 Georgia Immunization Study Report



District 3-2 Data Collection Team

Georgia Goseer, RN | District Immunization Coordinator

County	Number in Sample
Fulton	160
District 3-2	160
District UTD by 24 months Immunization Rate	90.6%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 3-2

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 160 children in District 3-2 (Table 3-2-A).

For the District 3-1 sample, the up-to-date (UTD) immunization rate by 24 months of age (90.6%) was 8.0% higher than in 2013 (83.9%). The UTD immunization rate based on GRITS alone (87.5%) rose 8.7% from 2013 (80.5%). The UTD immunization rate by the end of data collection (94.4%) was 7.5% higher than in 2013 (87.8%) Immunization rates that decreased are shown in red (Table 3-2-B).

A comparison of District 3-2 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 3-2-A.

Table 3-2-B: Immunization Summary by Series & Vaccine Antigen, District 3-2, 2014

	District 3-2 (%)	State Average (%)
UTD immunization rate** by 24 months	90.6	87.6
UTD immunization rate** Based on GRITS alone	87.5	82.3
UTD immunization rate** by end of data collection††	94.4	93.6
4 DTaP by 24 months	87.5	84.6
3 DTaP by 24 months	96.3	96.9
3 IPV by 24 months	96.9	96.0
1 MMR by 24 months	91.9	92.3
UTD Hib by 24 months	97.5	96.9
3 Hep B by 24 months	96.3	96.2
1 Varicella by 24 months	93.8	93.1
UTD PCV by 24 months	96.9	97.1
2 Rotavirus by 24 months	85.6	87.2
2 Hep A by 24 months	55.0	56.6
1+ Influenza by 24 months	51.2	63.6

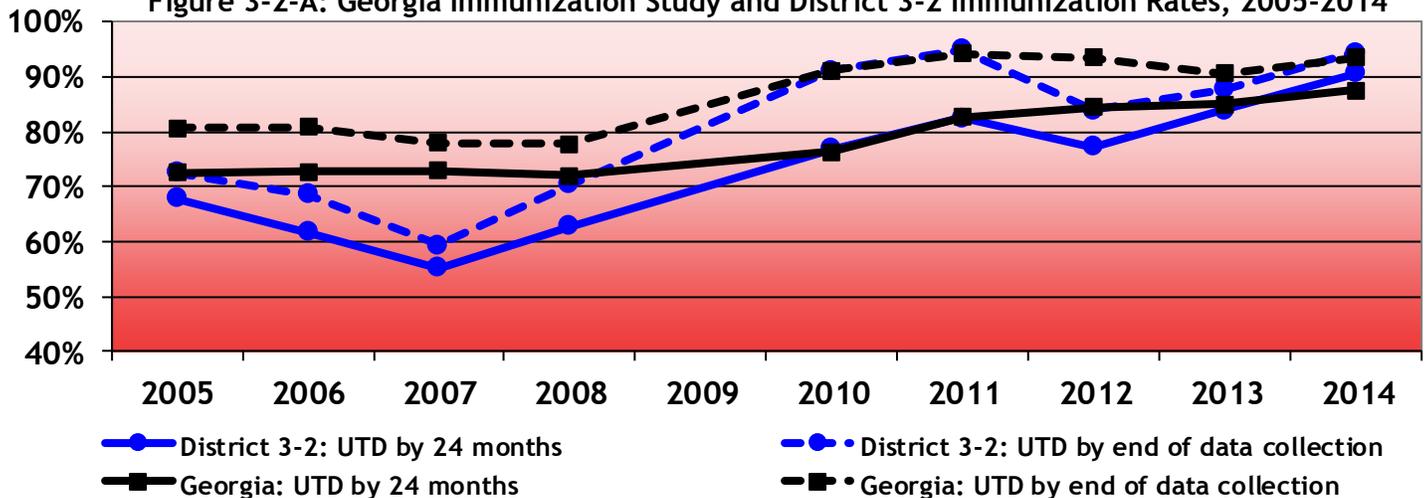
†† This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.

Table 3-2-A: GIS Sampling Scheme, District 3-2, 2014

	District 3-2 (n)	State (n)
Original Sample	181	2,550
Ineligible	11	172
(Refused to Participate)	(2)	(12)
Eligible Sample	170	2,378
Unable to Locate†	10	135
Final Sample	160	2,243
Response Rate (%)	94.1	94.3

† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Figure 3-2-A: Georgia Immunization Study and District 3-2 Immunization Rates, 2005-2014



* 2009 data was not collected due to a personnel vacancy.

District 3-2, Georgia Immunization Study Report, p3

Table 3-2-C: District 3-2 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 3-2 Sample		Immunization Rates for District 3-2 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 3-2 sample of births n=160 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 3-2 Rates			87.5	90.6	94.4
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=39)	43.1	24.4	89.7	92.3	92.3
White, Hispanic (n=6)	3.4	3.8	100.0	100.0	100.0
Black (n=83)	36.0	51.9	83.1	89.0	94.0
Unspecified, Hispanic (n=14)	7.6	8.8	85.7	92.9	100.0
Asian (n=9)	2.6	5.7	100.0	100.0	100.0
Multiracial (n=5)	1.4	3.1	100.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=45)	40.1	28.1	91.1	93.3	97.8
25-34 years (n=81)	47.3	50.6	87.7	91.4	93.8
35+ years (n=33)	12.5	20.6	84.8	87.9	90.9
Maternal Education^{‡,†}					
Some College+ (n=83)	45.4	51.9	90.4	92.8	95.2
HS Diploma/GED (n=47)	32.1	29.4	80.9	87.2	89.4
9th-11th grade (n=16)	14.7	10.0	93.8	93.8	100.0
<9th grade (n=7)	4.8	4.4	85.7	85.7	100.0
Maternal Marital Status[‡]					
Married (n=78)	49.6	48.8	91.0	93.6	94.9
Unmarried (n=81)	50.2	50.6	85.2	88.9	93.8
WIC[⊖]					
Non-WIC (n=80)	32.8	50.0	90.0	92.5	96.3
WIC (n=80)	67.2	50.0	85.0	88.8	92.5
Number of Providers^{†,⊖}					
1 (n=63)	44.6	39.4	85.7	90.5	93.7
2 (n=23)	22.3	14.4	95.7	95.7	100.0
3 (n=15)	7.3	9.4	100.0	100.0	100.0
Provider Type^{†,⊖}					
Public Sector Only (n=1)	0.8	0.6	0.0	0.0	0.0
Private Sector Only (n=90)	64.2	56.3	90.0	93.3	96.7
Both (n=10)	9.2	6.3	100.0	100.0	100.0

⊖ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 3-2, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 3-2 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of black mothers
- Children whose mothers are 35+ years of age
- Children whose mothers have a high school graduate level of education only
- Children of unmarried mothers
- Children enrolled in the WIC program

Figure 3-2-B: Immunizations Administered in Private vs. Public Sector, District 3-2, 2014 (n=2,072)

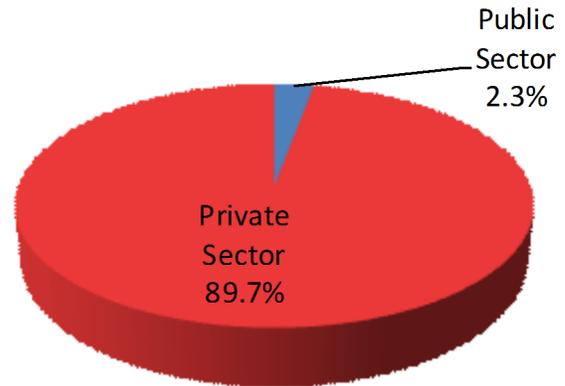


Table 3-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-2, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	84.3	86.3	83.0	83.4	87.5
3 Polio by 24 months	94.0	96.3	91.2	92.7	96.9
1 MMR by 24 months	91.7	93.8	87.1	92.7	91.9
UTD Hib by 24 months	89.8	95.0	93.8	95.6	97.5
3 Hepatitis B by 24 months	94.0	96.3	93.3	95.1	96.3
1 Varicella by 24 months	93.1	91.9	88.7	95.6	93.8
UTD PCV by 24 months	89.8	96.9	86.6	81.5	96.9
2 Rotavirus	72.7	86.9	73.2	81.5	85.6
1 Influenza by 24 months	61.1	58.8	57.2	30.7	51.2
Hepatitis B birth dose	-	-	84.0	78.0	84.4

Immunization Rates by Vaccine Antigen: In District 3-2, UTD immunization rates by 24 months increased for most vaccine antigens increased in 2014, with the exception of MMR (92.7% to 91.9%) and varicella (95.6% to 93.8%) (shown in red) (Table 3-2-D).

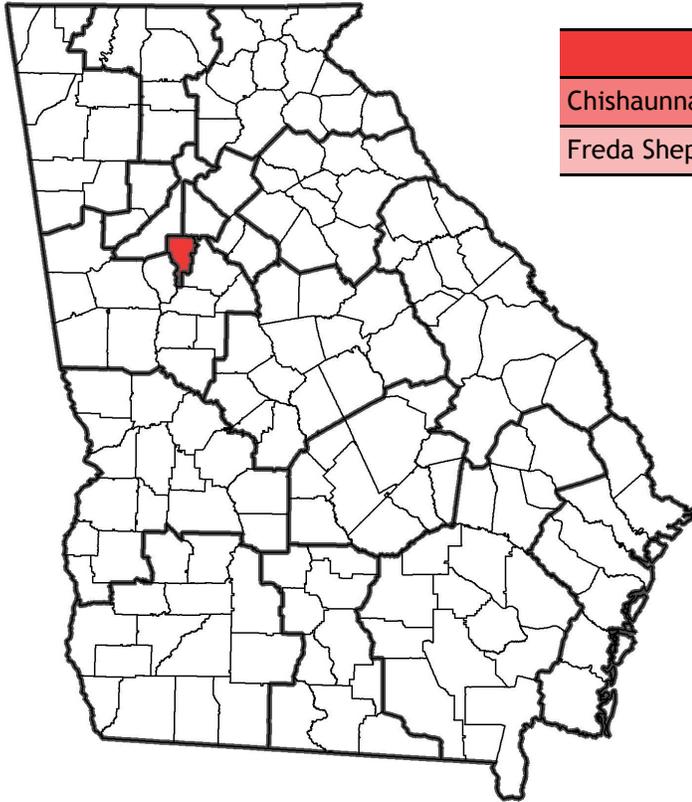
Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that DTaP, MMR and varicella vaccines could reasonably be the primary focus of District immunization campaigns.

In District 3-2, the UTD immunization rate for DTaP was lowest at 87.5%. The MMR UTD immunization rate was second-lowest at 91.9%.



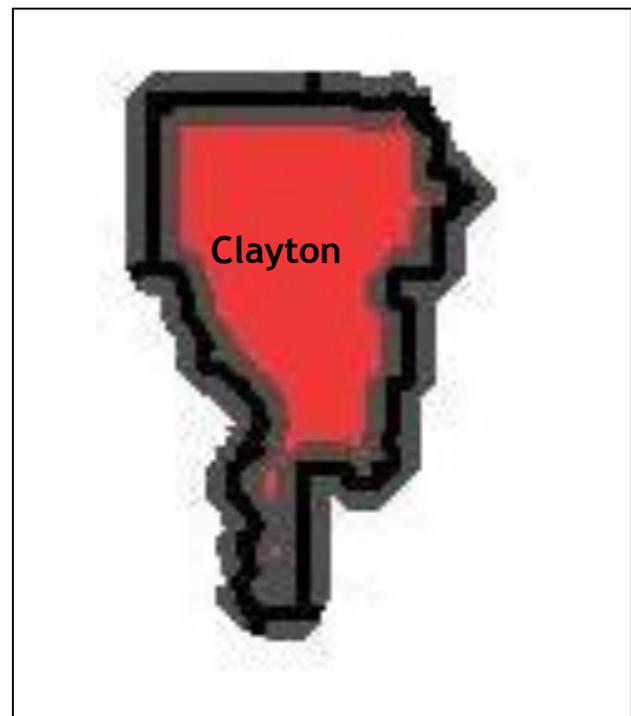
District 3-3

2014 Georgia Immunization Study Report



District 3-3 Data Collection Team	
Chishaunna Calhoun	District Immunization Coordinator
Freda Sheppard, LPN	Immunization Program Associate

County	Number in Sample
Clayton	157
District 3-3	157
District UTD by 24 months Immunization Rate	79.0%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 3-3

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 157 children in District 3-3 (Table 3-3-A).

For the District 3-3 sample, the up-to-date (UTD) immunization rate by 24 months of age (79.0%) was 16.3% higher than in 2013 (67.9%). The UTD immunization rate based on GRITS alone (79.0%) rose 25.8% from 2013 (62.8%). The UTD immunization rate by the end of data collection (86.0%) was 18.9% higher than in 2013 (72.3%) Immunization rates that decreased are shown in red (Table 3-3-B).

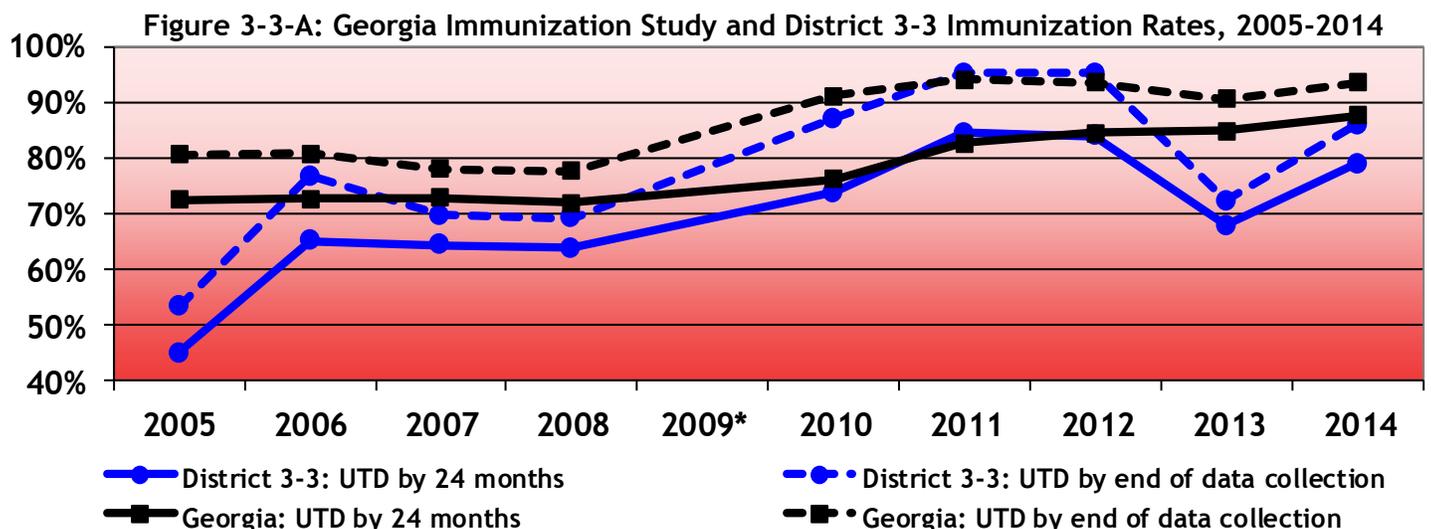
A comparison of District 3-3 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 3-3-A.

Table 3-3-A: GIS Sampling Scheme, District 3-3, 2014		
	District 3-3 (n)	State (n)
Original Sample	185	2,550
Ineligible	8	172
(Refused to Participate)	(0)	(12)
Eligible Sample	177	2,378
Unable to Locate [†]	20	135
Final Sample	157	2,243
Response Rate (%)	88.7	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 3-3-B: Immunization Summary by Series & Vaccine Antigen, District 3-3, 2014		
	District 3-3 (%)	State Average (%)
UTD immunization rate** by 24 months	79.0	87.6
UTD immunization rate** Based on GRITS alone	79.0	82.3
UTD immunization rate** by end of data collection ^{††}	86.0	93.6
4 DTaP by 24 months	73.9	84.6
3 DTaP by 24 months	89.8	96.9
3 IPV by 24 months	89.2	96.0
1 MMR by 24 months	84.1	92.3
UTD Hib by 24 months	94.9	96.9
3 Hep B by 24 months	93.0	96.2
1 Varicella by 24 months	84.7	93.1
UTD PCV by 24 months	95.5	97.1
2 Rotavirus by 24 months	83.4	87.2
2 Hep A by 24 months	47.8	56.6
1+ Influenza by 24 months	56.1	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 3-3, Georgia Immunization Study Report, p3

Table 3-3-C: District 3-3 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 3-3 Sample		Immunization Rates for District 3-3 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 3-3 sample of births n=157 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 3-3 Rates			79.0	79.0	86.0
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=16)	43.1	10.2	81.3	81.3	81.3
White, Hispanic (n=2)	3.4	1.3	100.0	100.0	100.0
Black (n=104)	36.0	66.2	76.0	76.0	84.6
Unspecified, Hispanic (n=23)	7.6	14.6	87.0	87.0	91.3
Asian (n=4)	2.6	2.5	100.0	100.0	100.0
Multiracial (n=1)	1.4	0.6	100.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=73)	40.1	46.5	79.5	79.5	84.9
25-34 years (n=62)	47.3	39.5	75.8	75.8	85.5
35+ years (n=22)	12.5	14.0	86.4	86.4	90.9
Maternal Education^{‡,†}					
Some College+ (n=52)	45.4	33.1	82.7	82.7	88.5
HS Diploma/GED (n=60)	32.1	38.2	83.3	83.3	93.3
9th-11th grade (n=29)	14.7	18.5	72.4	75.9	79.3
<9th grade (n=9)	4.8	5.7	66.7	66.7	77.8
Maternal Marital Status[‡]					
Married (n=44)	49.6	28.0	86.4	86.4	90.9
Unmarried (n=113)	50.2	72.0	76.1	76.1	84.1
WIC^Ø					
Non-WIC (n=40)	32.8	25.5	77.5	77.5	82.5
WIC (n=117)	67.2	74.5	79.5	79.5	87.2
Number of Providers^{‡,Ø}					
1 (n=64)	44.6	40.8	78.1	78.1	82.8
2 (n=47)	22.3	29.9	85.1	85.1	93.6
3 (n=13)	7.3	8.3	61.5	61.5	92.3
Provider Type^{‡,Ø}					
Public Sector Only (n=0)	0.8	0.0	N/A	N/A	N/A
Private Sector Only (n=119)	64.2	77.3	79.0	79.0	87.4
Both (n=5)	9.2	3.2	80.0	80.0	100.0

Ø Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 3-3, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 3-3 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of black mothers
- Children whose mothers were between 25-34 years of age
- Children of mothers who are still in high school
- Children of unmarried mothers
- Children who are not enrolled in the WIC program
- Children receiving immunizations from three or more different providers

Figure 3-3-B: Immunizations Administered in Private vs. Public Sector, District 3-3, 2014 (n=2,390)

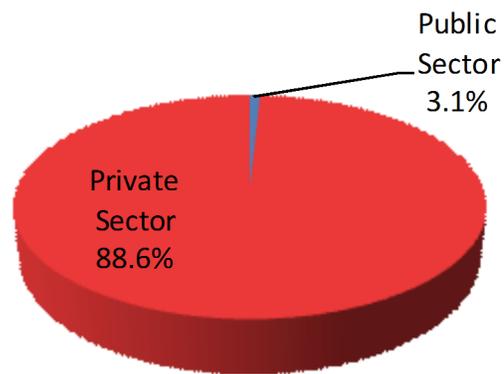


Table 3-3-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-3, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	78.7	88.5	84.7	67.2	73.9
3 Polio by 24 months	92.9	97.1	95.2	86.1	89.2
1 MMR by 24 months	90.8	93.3	94.4	82.5	84.1
UTD Hib by 24 months	91.5	94.2	93.6	88.3	94.9
3 Hepatitis B by 24 months	92.9	97.1	96.0	85.4	93.0
1 Varicella by 24 months	90.1	94.2	96.0	83.2	84.7
UTD PCV by 24 months	85.8	98.1	91.9	65.0	95.5
2 Rotavirus	61.7	81.7	62.9	75.9	83.4
1 Influenza by 24 months	48.9	47.2	41.9	13.1	56.1
Hepatitis B birth dose	-	-	89.5	82.5	87.9

Immunization Rates by Vaccine Antigen: In District 3-3, the UTD immunization rates by 24 months for all vaccine antigens increased from 2013 to 2014 (Table 3-2-D).

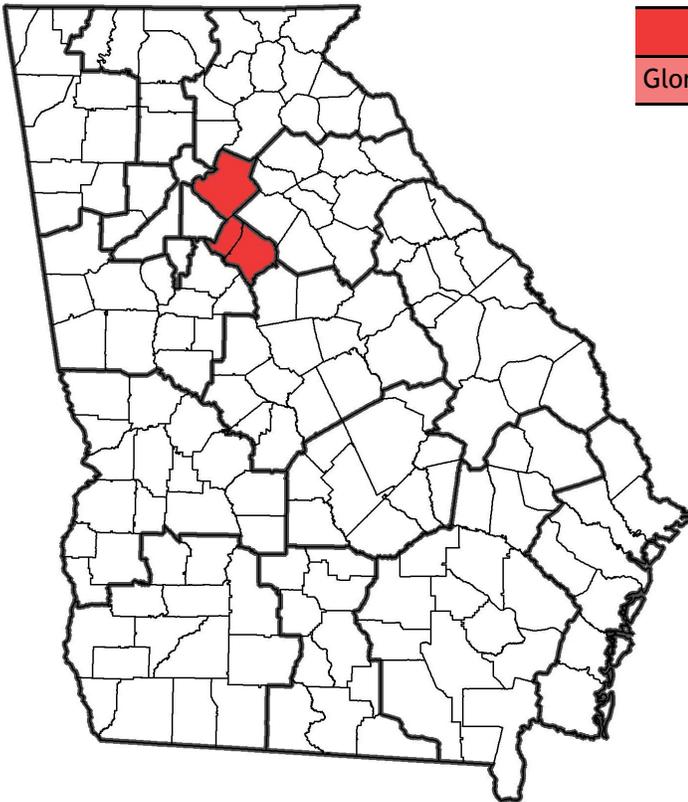
In District 3-3, the UTD immunization rate for DTaP was lowest at 73.9%, up from 67.2% in 2013. The UTD immunization rate for MMR was the second-lowest at 84.1%.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP and MMR vaccines could reasonably be the primary focus of District immunization campaigns.

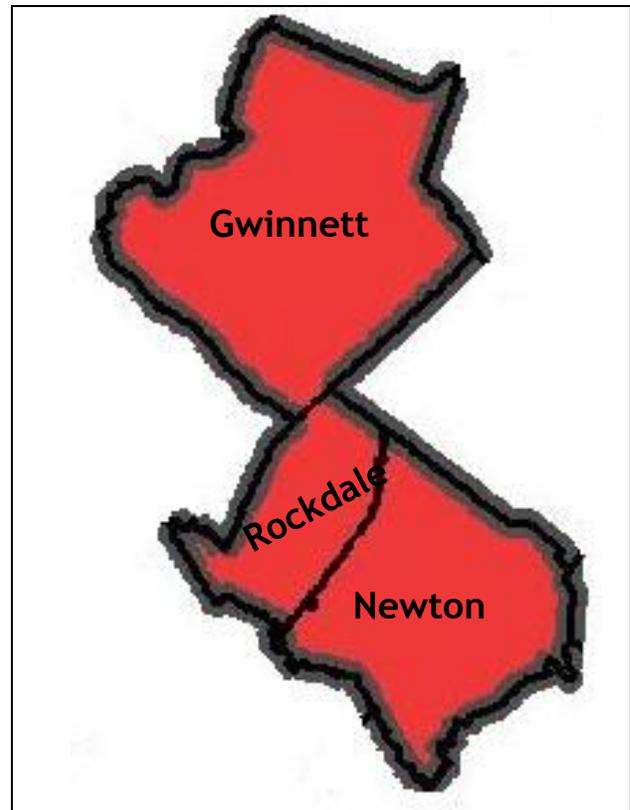


District 3-4

2014 Georgia Immunization Study Report



District 3-4 Data Collection Team	
Gloria Melvin	District Immunization Coordinator



County	Number in Sample
Gwinnett	124
Newton	17
Rockdale	12
District 3-4	153
District UTD by 24 months Immunization Rate	86.3%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%



District 3-4

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 153 children in District 3-4 (Table 3-4-A).

For the District 3-4 sample, the up-to-date (UTD) immunization rate by 24 months of age (86.3%) was no different than in 2013 (86.3%). The UTD immunization rate based on GRITS alone (77.1%) fell 0.6% from 2013 (77.6%). The UTD immunization rate by the end of data collection (92.2%) was 1.0% higher than in 2013 (91.3%) Immunization rates that decreased are shown in red (Table 3-4-B).

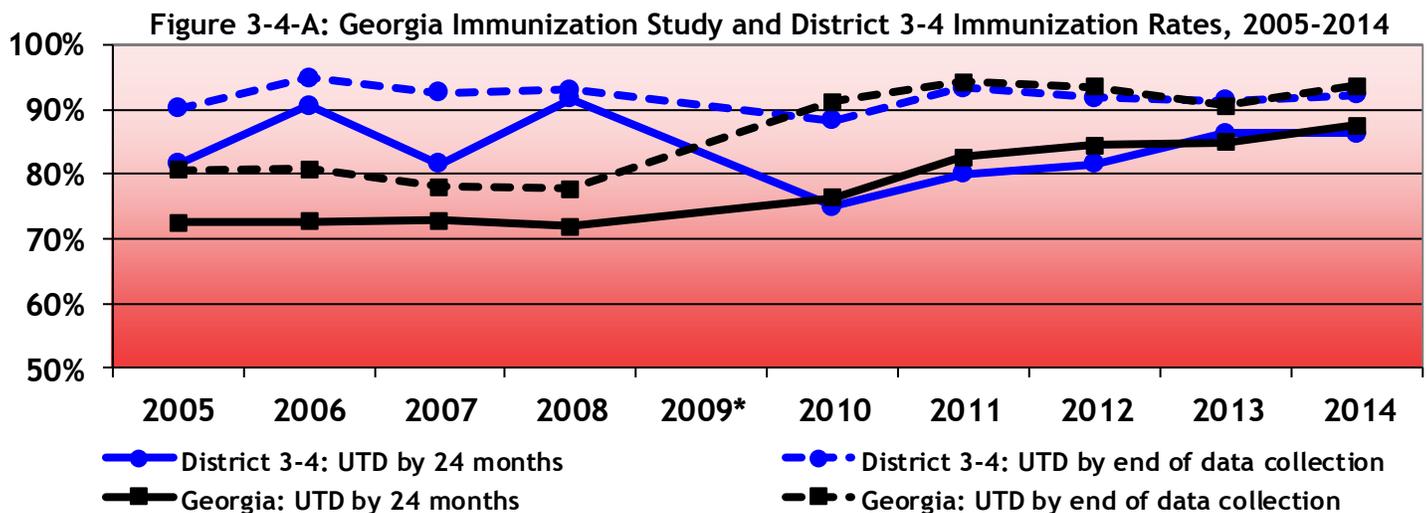
A comparison of District 3-4 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 3-4-A.

	District 3-4 (n)	State (n)
Original Sample	171	2,550
Ineligible	8	172
(Refused to Participate)	(0)	(12)
Eligible Sample	163	2,378
Unable to Locate [†]	10	135
Final Sample	153	2,243
Response Rate (%)	93.9	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 3-4 (%)	State Average (%)
UTD immunization rate** by 24 months	86.3	87.6
UTD immunization rate** Based on GRITS alone	77.1	82.3
UTD immunization rate** by end of data collection ^{††}	92.2	93.6
4 DTaP by 24 months	83.7	84.6
3 DTaP by 24 months	96.7	96.9
3 IPV by 24 months	96.1	96.0
1 MMR by 24 months	91.5	92.3
UTD Hib by 24 months	94.8	96.9
3 Hep B by 24 months	95.4	96.2
1 Varicella by 24 months	92.2	93.1
UTD PCV by 24 months	94.8	97.1
2 Rotavirus by 24 months	92.2	87.2
2 Hep A by 24 months	54.2	56.6
1+ Influenza by 24 months	64.7	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 3-4, Georgia Immunization Study Report, p3

Table 3-4-C: District 3-4 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 3-4 Sample		Immunization Rates for District 3-4 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 3-4 sample of births n=153 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 3-4 Rates			77.1	86.3	92.2
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=56)	43.1	36.6	71.4	82.1	87.5
White, Hispanic (n=9)	3.4	5.9	66.7	77.8	100.0
Black (n=38)	36.0	24.8	78.9	86.8	89.5
Unspecified, Hispanic (n=17)	7.6	11.1	82.4	88.2	100.0
Asian (n=11)	2.6	7.2	90.9	100.0	100.0
Multiracial (n=3)	1.4	2.0	33.3	33.3	66.7
Maternal Age^{‡,†}					
<25 years (n=37)	40.1	24.2	78.4	83.8	89.2
25-34 years (n=86)	47.3	56.2	77.9	88.4	94.2
35+ years (n=30)	12.5	19.6	73.3	83.3	90.0
Maternal Education^{‡,†}					
Some College+ (n=80)	45.4	52.3	75.0	86.3	91.3
HS Diploma/GED (n=37)	32.1	24.2	75.7	81.1	86.5
9th-11th grade (n=13)	14.7	8.5	76.9	92.3	100.0
<9th grade (n=11)	4.8	7.2	81.8	90.9	100.0
Maternal Marital Status[‡]					
Married (n=95)	49.6	62.1	78.9	87.4	90.5
Unmarried (n=58)	50.2	37.9	74.1	84.5	94.8
WIC[⊖]					
Non-WIC (n=68)	32.8	44.4	77.9	88.2	91.2
WIC (n=85)	67.2	55.6	76.5	84.7	92.9
Number of Providers^{‡,⊖}					
1 (n=68)	44.6	44.4	76.5	83.8	88.2
2 (n=40)	22.3	26.1	75.0	90.0	97.5
3 (n=12)	7.3	7.8	66.7	83.3	100.0
Provider Type^{‡,⊖}					
Public Sector Only (n=0)	0.8	0.0	N/A	N/A	N/A
Private Sector Only (n=109)	64.2	71.2	77.1	84.4	91.7
Both (n=11)	9.2	7.2	54.5	100.0	100.0

⊖ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 3-4, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 3-4 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic and black mothers
- Children of mothers <25 and 35+ years of age
- Children whose mothers have a high school diploma/GED
- Children of unmarried mothers
- Children who are enrolled in the WIC program
- Children receiving immunizations from one or three or more providers

Figure 3-4-B: Immunizations Administered in Private vs. Public Sector, District 3-4, 2014 (n=2,462)

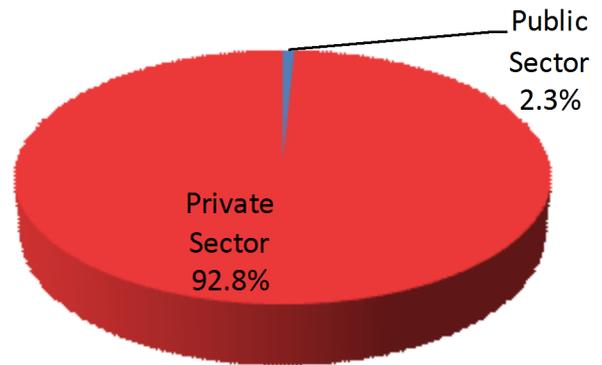


Table 3-4-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-4, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	81.7	83.9	83.6	88.0	83.7
3 Polio by 24 months	88.3	96.1	95.9	95.1	96.1
1 MMR by 24 months	86.7	90.6	91.8	93.4	91.5
UTD Hib by 24 months	85.0	97.2	96.9	94.5	94.8
3 Hepatitis B by 24 months	90.0	93.3	92.8	95.6	95.4
1 Varicella by 24 months	90.0	91.7	91.8	95.1	92.2
UTD PCV by 24 months	88.3	97.8	91.3	88.0	94.8
2 Rotavirus	75.0	91.7	81.0	87.4	92.2
1 Influenza by 24 months	61.7	60.6	59.0	26.8	64.7
Hepatitis B birth dose	-	-	77.9	80.9	73.9

Immunization Rates by Vaccine Antigen: In District 3-4, the UTD immunization rates by 24 months for most vaccine antigens decreased from 2013 to 2014 (shown in red) (Table 3-4-D).

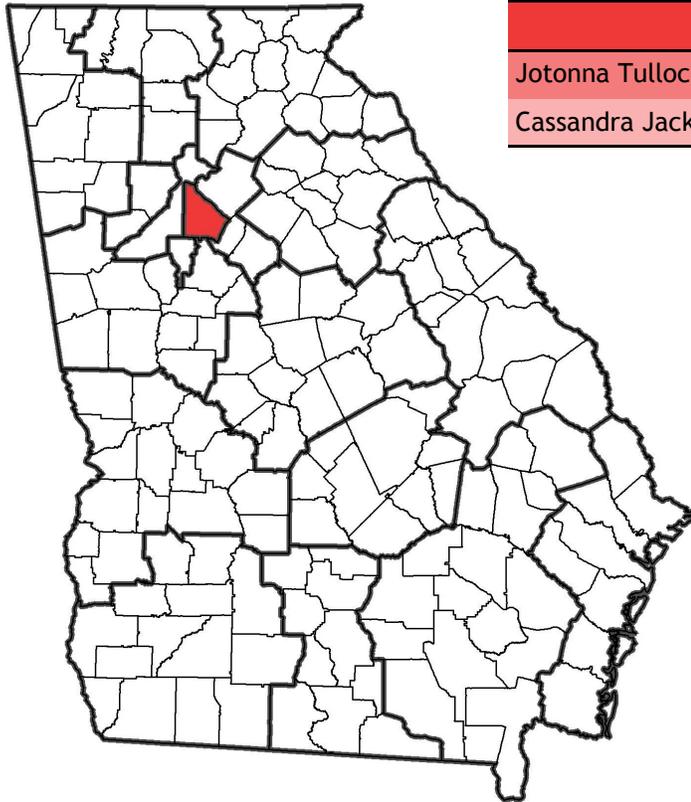
In District 3-4, the UTD immunization rate for DTaP was lowest at 83.7%, down from 88.0% in 2013. The UTD immunization rate for MMR was the second-lowest at 91.5%.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP, MMR and varicella vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



District 3-5

2014 Georgia Immunization Study Report



District 3-5 Data Collection Team	
Jotonna Tulloch, BS	District Immunization Coordinator
Cassandra Jackson, LPN, BS.Ed	Primary Data Collector

County	Number in Sample
DeKalb	97
District 3-5	97
District UTD by 24 months Immunization Rate	91.8%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 3-5

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 97 children in District 3-5 (Table 3-5-A).

For the District 3-5 sample, the up-to-date (UTD) immunization rate by 24 months of age (91.8%) was 0.4% higher than in 2013 (91.4%). The UTD immunization rate based on GRITS alone (88.7%) rose 1.1% from 2013 (87.7%). The UTD immunization rate by the end of data collection (97.9%) was 4.4% higher than in 2013 (93.8%) Immunization rates that decreased are shown in red (Table 3-5-B).

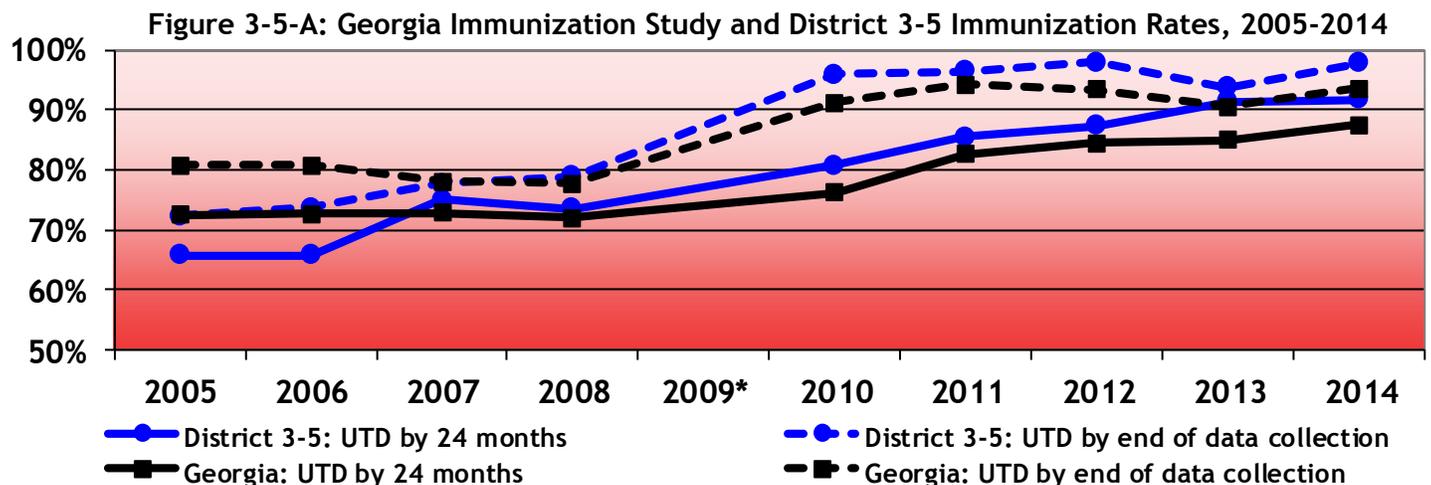
A comparison of District 3-5 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 3-5-A.

	District 3-5 (n)	State (n)
Original Sample	122	2,550
Ineligible	0	172
(Refused to Participate)	(0)	(12)
Eligible Sample	122	2,378
Unable to Locate [†]	25	135
Final Sample	97	2,243
Response Rate (%)	79.5	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 3-5 (%)	State Average (%)
UTD immunization rate** by 24 months	91.8	87.6
UTD immunization rate** Based on GRITS alone	88.7	82.3
UTD immunization rate** by end of data collection ^{††}	97.9	93.6
4 DTaP by 24 months	88.7	84.6
3 DTaP by 24 months	99.0	96.9
3 IPV by 24 months	96.9	96.0
1 MMR by 24 months	96.9	92.3
UTD Hib by 24 months	99.0	96.9
3 Hep B by 24 months	96.9	96.2
1 Varicella by 24 months	97.9	93.1
UTD PCV by 24 months	100.0	97.1
2 Rotavirus by 24 months	85.6	87.2
2 Hep A by 24 months	61.9	56.6
1+ Influenza by 24 months	72.2	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 3-5, Georgia Immunization Study Report, p3

Table 3-5-C: District 3-5 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 3-5 Sample		Immunization Rates for District 3-5 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 3-5 sample of births n=97(%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 3-5 Rates			88.7	91.8	97.9
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=15)	43.1	15.5	93.3	93.3	100.0
White, Hispanic (n=2)	3.4	2.1	100.0	100.0	100.0
Black (n=49)	36.0	50.5	81.6	85.7	95.9
Unspecified, Hispanic (n=9)	7.6	9.3	88.9	100.0	100.0
Asian (n=9)	2.6	9.3	100.0	100.0	100.0
Multiracial (n=2)	1.4	2.1	100.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=30)	40.1	30.9	83.3	90.0	100.0
25-34 years (n=53)	47.3	54.6	92.5	92.5	96.2
35+ years (n=14)	12.5	14.4	85.7	92.9	100.0
Maternal Education^{‡,†}					
Some College+ (n=43)	45.4	44.3	90.7	95.3	97.7
HS Diploma/GED (n=30)	32.1	30.9	93.3	93.3	96.7
9th-11th grade (n=11)	14.7	11.3	54.5	63.6	100.0
<9th grade (n=9)	4.8	9.3	100.0	100.0	100.0
Maternal Marital Status[†]					
Married (n=49)	49.6	50.5	89.8	93.9	95.9
Unmarried (n=48)	50.2	49.5	87.5	89.6	100.0
WIC[⊖]					
Non-WIC (n=31)	32.8	32.0	87.1	90.3	100.0
WIC (n=66)	67.2	68.0	89.4	92.4	97.0
Number of Providers^{†,⊖}					
1 (n=39)	44.6	40.2	94.9	94.9	94.9
2 (n=15)	22.3	15.5	100.0	100.0	100.0
3 (n=11)	7.3	11.3	81.1	100.0	100.0
Provider Type^{†,⊖}					
Public Sector Only (n=1)	0.8	1.0	100.0	100.0	100.0
Private Sector Only (n=56)	64.2	57.7	96.4	96.4	96.4
Both (n=8)	9.2	8.2	75.0	100.0	100.0

⊖ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 3-5, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 3-5 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of black mothers
- Children of mothers under 25 years of age
- Children of mothers still in high school
- Children of unmarried mothers

Figure 3-5-B: Immunizations Administered in Private vs. Public Sector, District 3-5, 2014 (n=1,428)

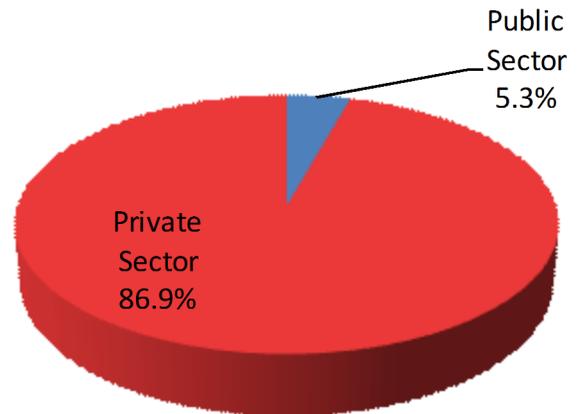


Table 3-5-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-5, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	88.0	86.2	90.0	88.3	88.7
3 Polio by 24 months	94.7	97.8	98.0	98.1	96.9
1 MMR by 24 months	94.7	92.8	96.0	94.4	96.9
UTD Hib by 24 months	93.3	96.4	97.3	96.9	99.0
3 Hepatitis B by 24 months	94.7	98.6	96.0	98.1	96.9
1 Varicella by 24 months	94.7	93.5	96.7	94.4	97.9
UTD PCV by 24 months	90.7	97.8	96.0	88.3	100.0
2 Rotavirus	76.0	91.3	75.3	85.8	85.6
1 Influenza by 24 months	64.0	64.5	64.0	29.0	72.2
Hepatitis B birth dose	-	-	82.7	79.0	82.5

Immunization Rates by Vaccine Antigen: In District 3-5, the UTD immunization rate by 24 months for most vaccine antigens increased from 2013 to 2014. Vaccines that decreased from 2013 to 2014 are labeled in red (Table 3-5-D).

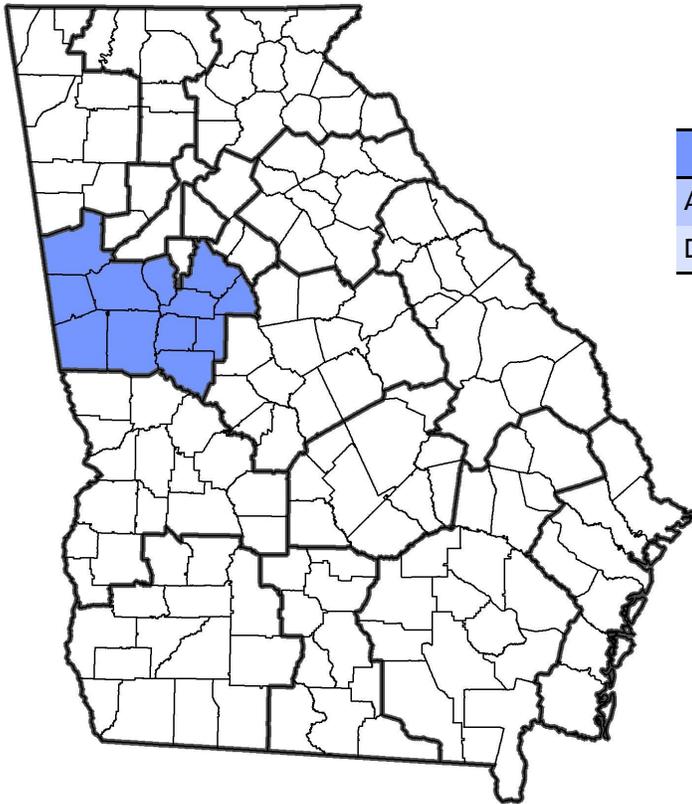
In District 3-5, the UTD immunization rate for DTaP was lowest at 88.7%, similar to 88.3% in 2012.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP vaccine could reasonably be the primary focus of District immunization campaigns.



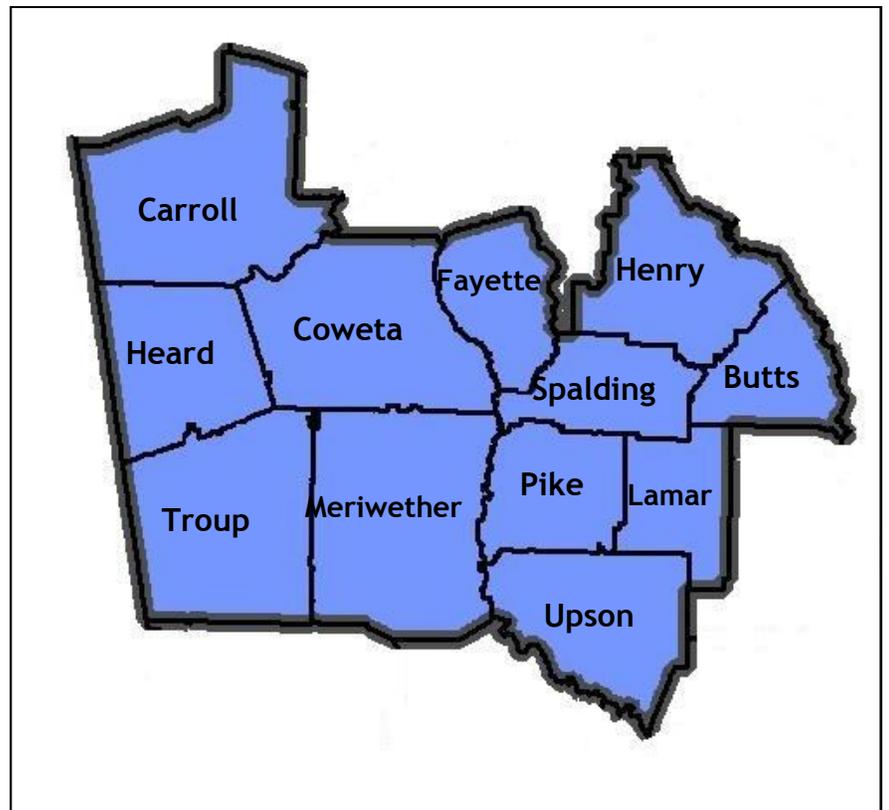
District 4-0

2014 Georgia Immunization Study Report



District 4-0 Data Collection Team	
Amy Fenn, RN	District Immunization Coordinator
Darlene Sheets	Secondary Data Collector

County	Number in Sample
Butts	4
Carroll	29
Coweta	26
Fayette	13
Heard	3
Henry	42
Lamar	3
Meriwether	3
Pike	1
Spalding	11
Troup	15
Upson	7
District 4-0	157
District UTD by 24 months Immunization Rate	86.6%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 4-0

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 157 children in District 4-0 (Table 4-0-A).

For the District 4-0 sample, the up-to-date (UTD) immunization rate by 24 months of age (86.6%) was 2.2% higher than in 2013 (84.7%). The UTD immunization rate based on GRITS alone (84.7%) rose 5.3% from 2013 (80.4%). The UTD immunization rate by the end of data collection (92.4%) was 3.8% higher than in 2013 (89.0%) Immunization rates that decreased are shown in red (Table 4-0-B).

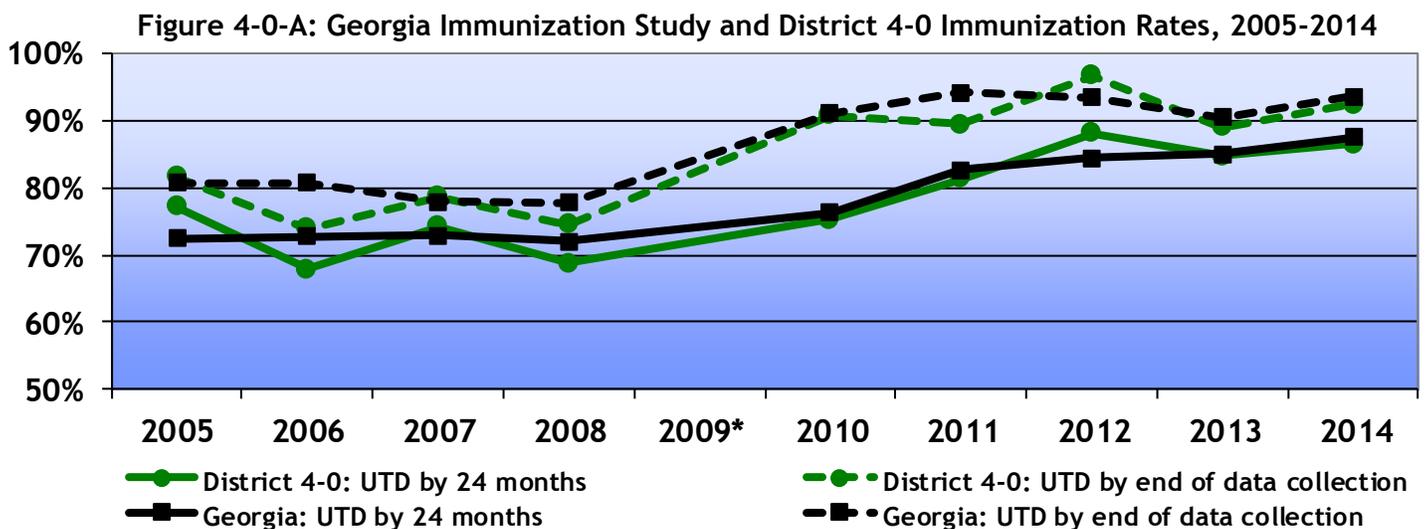
A comparison of District 4-0 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 4-0-A.

	District 4-0 (n)	State (n)
Original Sample	165	2,550
Ineligible	5	172
(Refused to Participate)	(0)	(12)
Eligible Sample	160	2,378
Unable to Locate [†]	3	135
Final Sample	157	2,243
Response Rate (%)	98.1	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 4-0 (%)	State Average (%)
UTD immunization rate** by 24 months	86.6	87.6
UTD immunization rate** Based on GRITS alone	84.7	82.3
UTD immunization rate** by end of data collection ^{††}	92.4	93.6
4 DTaP by 24 months	82.8	84.6
3 DTaP by 24 months	96.2	96.9
3 IPV by 24 months	95.5	96.0
1 MMR by 24 months	90.4	92.3
UTD Hib by 24 months	94.3	96.9
3 Hep B by 24 months	96.2	96.2
1 Varicella by 24 months	89.8	93.1
UTD PCV by 24 months	94.3	97.1
2 Rotavirus by 24 months	84.1	87.2
2 Hep A by 24 months	52.2	56.6
1+ Influenza by 24 months	68.2	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



District 4-0, Georgia Immunization Study Report, p3

Table 4-0-C: District 4-0 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 4-0 Sample		Immunization Rates for District 4-0 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 4-0 sample of births n=157 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 4-0 Rates			84.7	86.6	92.4
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=81)	43.1	51.6	81.5	81.5	86.4
White, Hispanic (n=3)	3.4	1.9	66.7	66.7	100.0
Black (n=48)	36.0	30.6	89.6	95.8	97.9
Unspecified, Hispanic (n=10)	7.6	6.4	80.0	80.0	100.0
Asian (n=3)	2.6	1.9	100.0	100.0	100.0
Multiracial (n=6)	1.4	3.8	100.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=64)	40.1	40.8	79.7	81.3	89.1
25-34 years (n=76)	47.3	48.4	86.8	89.5	94.7
35+ years (n=17)	12.5	10.8	94.1	94.1	94.1
Maternal Education^{‡,†}					
Some College+ (n=83)	45.4	52.9	84.3	86.7	91.6
HS Diploma/GED (n=47)	32.1	29.9	91.5	91.5	95.7
9th-11th grade (n=17)	14.7	10.8	82.4	88.2	88.2
<9th grade (n=7)	4.8	4.5	71.4	71.4	100.0
Maternal Marital Status[†]					
Married (n=86)	49.6	54.8	82.6	83.7	90.7
Unmarried (n=71)	50.2	45.2	87.3	90.1	94.4
WIC^Ø					
Non-WIC (n=68)	32.8	43.3	83.8	85.3	91.2
WIC (n=89)	67.2	56.7	85.4	87.6	93.3
Number of Providers^{†,Ø}					
1 (n=84)	44.6	53.5	81.0	83.3	90.5
2 (n=39)	22.3	24.8	89.7	89.7	97.4
3 (n=6)	7.3	3.8	83.3	100.0	100.0
Provider Type^{†,Ø}					
Public Sector Only (n=3)	0.8	1.9	100.0	100.0	100.0
Private Sector Only (n=118)	64.2	75.2	83.9	86.4	93.2
Both (n=8)	9.2	5.1	75.0	75.0	87.5

Ø Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 4-0, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 4-0 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic and white, Hispanic mothers
- Children of mothers under 25 years of age
- Children of married mothers
- Children not enrolled in the WIC program
- Children with one healthcare provider

Figure 4-0-B: Immunizations Administered in Private vs. Public Sector, District 4-0, 2014 (n=2,572)

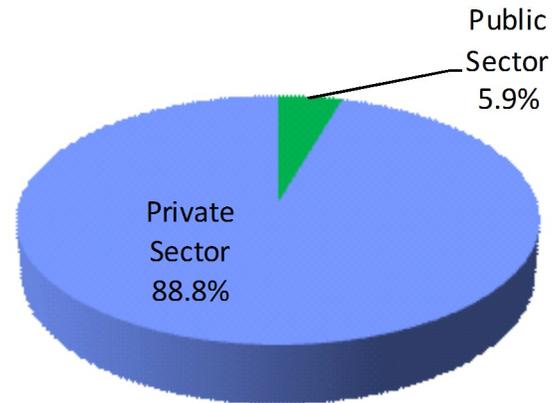


Table 4-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 4-0, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	88.5	84.2	89.4	84.7	82.8
3 Polio by 24 months	96.6	97.1	97.4	95.1	95.5
1 MMR by 24 months	87.9	92.4	96.7	89.0	90.4
UTD Hib by 24 months	87.9	94.7	98.7	97.5	94.3
3 Hepatitis B by 24 months	97.1	97.1	98.7	95.7	96.2
1 Varicella by 24 months	89.7	93.0	98.7	91.4	89.8
UTD PCV by 24 months	89.7	96.5	96.1	84.0	94.3
2 Rotavirus	69.5	79.5	66.2	84.7	84.1
1 Influenza by 24 months	56.9	57.9	51.7	23.9	68.2
Hepatitis B birth dose	-	-	82.8	89.0	85.4

Immunization Rates by Vaccine Antigen: In District 4-0, the UTD immunization rate by 24 months for most vaccine antigens increased in 2014. Vaccines that decreased from 2013 to 2014 are labeled in red (Table 4-0-D).

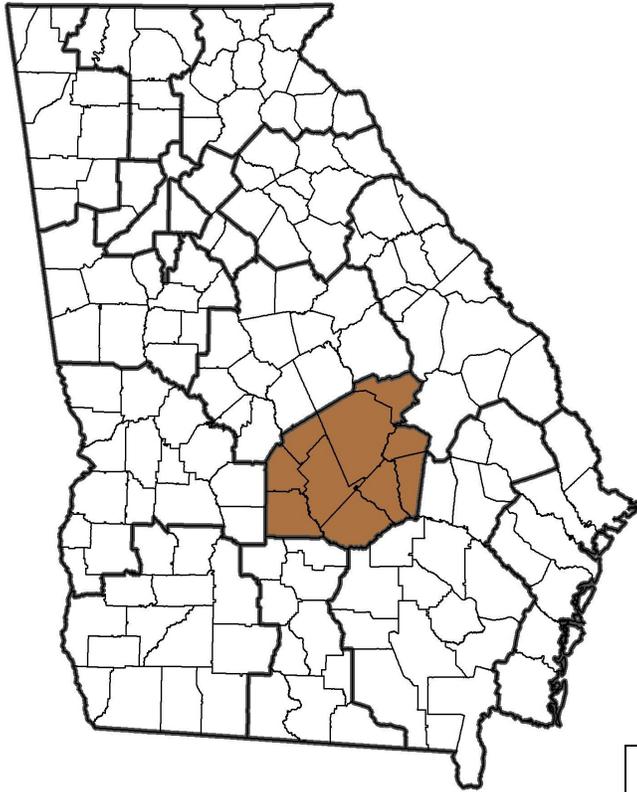
In District, the UTD immunization rate for DTaP was lowest at 82.8%, a decline from 84.7% in 2013. The rate for varicella also dropped from 91.4% to 89.8%.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP and PCV vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



District 5-1

2014 Georgia Immunization Study Report



District 5-1 Data Collection Team	
Patty Portwood, BS, Ed	District Immunization Coordinator
Additional Data Collection Staff	
Jina Adams, RN, MSN	Kristen Wilson, RN
Joni R. Wilson, RN	Donna Collins, RN
Terri Griffin, RN	Suzanne Usher, RN
Brenda Williams, RN	Daisy Haines, RN
Amy Tanner, RN	Debbie Martin, RN, NP
Wanda Moore, RN	

County	Number in Sample
Bleckley	7
Dodge	10
Johnson	3
Laurens	36
Montgomery	7
Pulaski	3
Telfair	6
Treutlen	3
Wheeler	1
Wilcox	5
District 5-1	81
District UTD by 24 months Immunization Rate	87.7%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 5-1

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 81 children in District 5-1 (Table 5-1-A).

For the District 5-1 sample, the up-to-date (UTD) immunization rate by 24 months of age (87.7%) was 1.4% higher than in 2013 (86.5%). The UTD immunization rate based on GRITS alone (81.5%) fell 1.1% from 2013 (82.4%). The UTD immunization rate by the end of data collection (90.1%) was 6.0% lower than in 2013 (95.9%) Immunization rates that decreased are shown in red (Table 5-1-B).

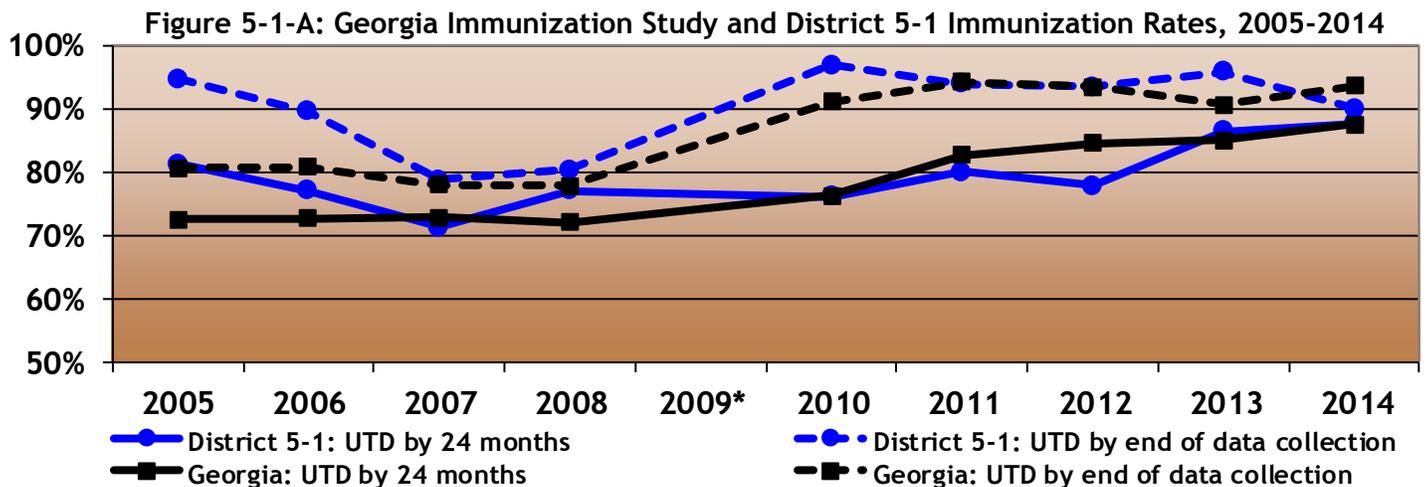
A comparison of District 5-1 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 5-1-A.

	District 5-1 (n)	State (n)
Original Sample	91	2,550
Ineligible	5	172
(Refused to Participate)	(0)	(12)
Eligible Sample	86	2,378
Unable to Locate [†]	5	135
Final Sample	81	2,243
Response Rate (%)	94.2	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 5-1 (%)	State Average (%)
UTD immunization rate** by 24 months	87.7	87.6
UTD immunization rate** Based on GRITS alone	81.5	82.3
UTD immunization rate** by end of data collection ^{††}	90.1	93.6
4 DTaP by 24 months	80.2	84.6
3 DTaP by 24 months	95.1	96.9
3 IPV by 24 months	95.1	96.0
1 MMR by 24 months	93.8	92.3
UTD Hib by 24 months	92.6	96.9
3 Hep B by 24 months	95.1	96.2
1 Varicella by 24 months	93.8	93.1
UTD PCV by 24 months	93.8	97.1
2 Rotavirus by 24 months	70.4	87.2
2 Hep A by 24 months	42.0	56.6
1+ Influenza by 24 months	44.4	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 5-1, Georgia Immunization Study Report, p3

Table 5-1-C: District 5-1 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 5-1 Sample		Immunization Rates for District 5-1 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 5-1 sample of births n=81 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 5-1 Rates			81.5	87.7	90.1
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=47)	43.1	58.0	74.5	80.9	85.1
White, Hispanic (n=0)	3.4	0.0	N/A	N/A	N/A
Black (n=30)	36.0	37.0	90.0	96.7	96.7
Unspecified, Hispanic (n=0)	7.6	0.0	N/A	N/A	N/A
Asian (n=2)	2.6	2.5	100.0	100.0	100.0
Multiracial (n=0)	1.4	0.0	N/A	N/A	N/A
Maternal Age^{‡,†}					
<25 years (n=48)	40.1	59.3	79.2	83.3	87.5
25-34 years (n=28)	47.3	34.6	85.7	96.4	96.4
35+ years (n=5)	12.5	6.2	80.0	80.0	80.0
Maternal Education^{‡,†}					
Some College+ (n=31)	45.4	38.3	80.6	87.1	90.3
HS Diploma/GED (n=39)	32.1	48.1	82.1	87.2	89.7
9th-11th grade (n=9)	14.7	11.1	77.8	88.9	88.9
<9th grade (n=0)	4.8	0.0	N/A	N/A	N/A
Maternal Marital Status[‡]					
Married (n=35)	49.6	43.2	80.0	88.6	91.4
Unmarried (n=46)	50.2	56.8	82.6	87.0	89.1
WIC^Ø					
Non-WIC (n=11)	32.8	13.6	90.9	100.0	100.0
WIC (n=70)	67.2	86.4	80.0	85.7	88.6
Number of Providers^{‡,Ø}					
1 (n=39)	44.6	48.1	79.5	84.6	87.2
2 (n=12)	22.3	14.8	83.3	100.0	100.0
3 (n=8)	7.3	9.9	100.0	100.0	100.0
Provider Type^{‡,Ø}					
Public Sector Only (n=1)	0.8	1.2	0.0	0.0	0.0
Private Sector Only (n=47)	64.2	58.0	83.0	89.4	91.5
Both (n=11)	9.2	13.6	90.9	100.0	100.0

Ø Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 5-1, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 5-1 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic mothers
- Children of mothers under 25 years of age
- Children enrolled in the WIC program
- Children with one provider administering immunizations

Figure 5-1-B: Immunizations Administered in Private vs. Public Sector, District 5-1, 2014 (n=1,112)

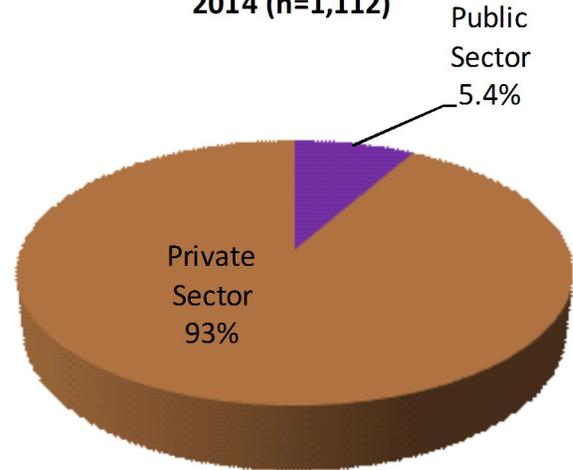


Table 5-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 5-1, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	85.1	80.0	79.2	79.7	80.2
3 Polio by 24 months	95.5	94.0	92.2	98.6	95.1
1 MMR by 24 months	92.5	94.0	85.7	95.9	93.8
UTD Hib by 24 months	89.6	90.0	90.9	98.6	92.6
3 Hepatitis B by 24 months	98.5	98.0	96.1	97.3	95.1
1 Varicella by 24 months	94.0	96.0	87.0	95.9	93.8
UTD PCV by 24 months	95.5	96.0	89.6	81.1	93.8
2 Rotavirus	50.7	66.0	45.5	70.3	70.4
1 Influenza by 24 months	46.3	44.0	46.8	18.9	44.4
Hepatitis B birth dose	-	-	88.3	89.2	95.1

Immunization Rates by Vaccine Antigen: In District 5-1, the UTD immunization rate by 24 months for most vaccine antigens decreased from 2013 to 2014 (shown in red) (Table 5-1-D).

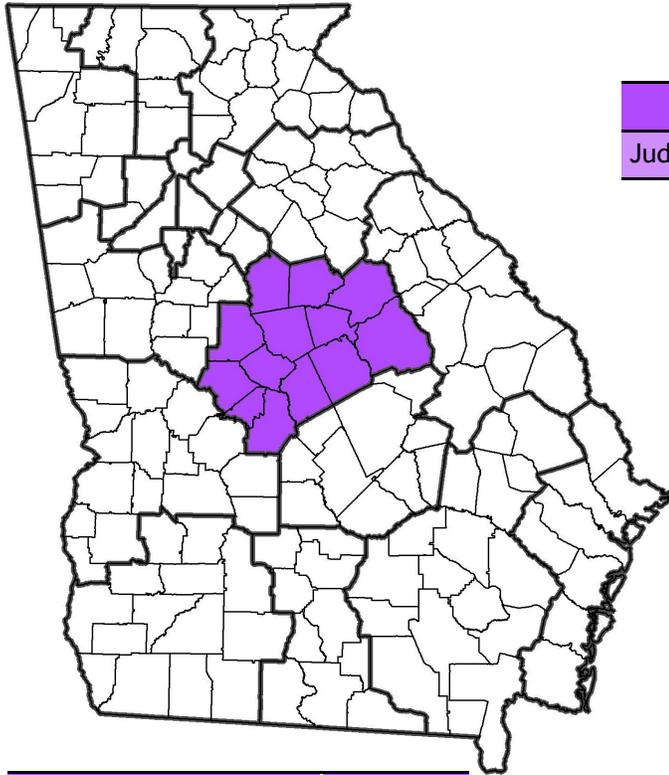
In District 5-1, the UTD by 24 months of age immunization rate for DTaP was the lowest at 80.2%, slightly up from 79.7% in 2013. The UTD immunization rate for Hib was second-lowest at 92.6%, down from 98.6% in 2013.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP, polio, MMR and varicella vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



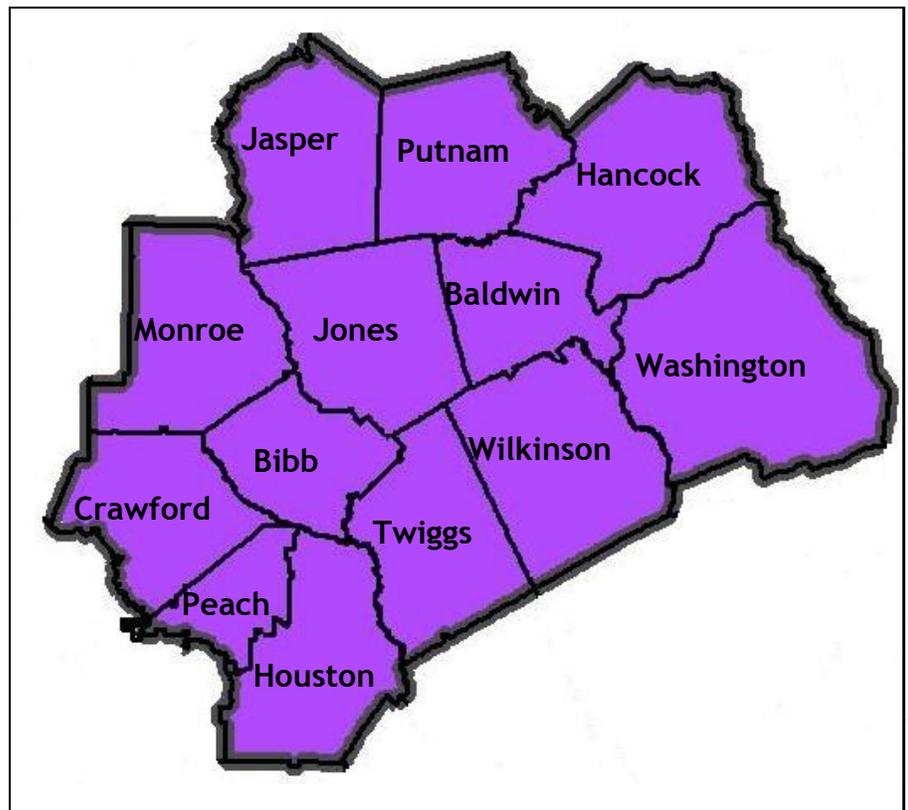
District 5-2

2014 Georgia Immunization Study Report



District 5-2 Data Collection Team	
Judy McChargue, RN	District Immunization Coordinator

County	Number in Sample
Baldwin	9
Bibb	36
Crawford	1
Hancock	1
Houston	28
Jasper	2
Jones	1
Monroe	6
Peach	7
Putnam	4
Twiggs	0
Washington	2
Wilkinson	1
District 5-2	98
District UTD by 24 months Immunization Rate	93.9%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 5-2

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 98 children in District 5-2 (Table 5-2-A).

For the District 5-2 sample, the up-to-date (UTD) immunization rate by 24 months of age (93.9%) was 3.2% higher than in 2013 (91.0%). The UTD immunization rate based on GRITS alone (67.3%) fell 24.1% from 2013 (88.7%). The UTD immunization rate by the end of data collection (95.9%) was 3.7% higher than in 2013 (92.5%) Immunization rates that decreased are shown in red (Table 5-2-B).

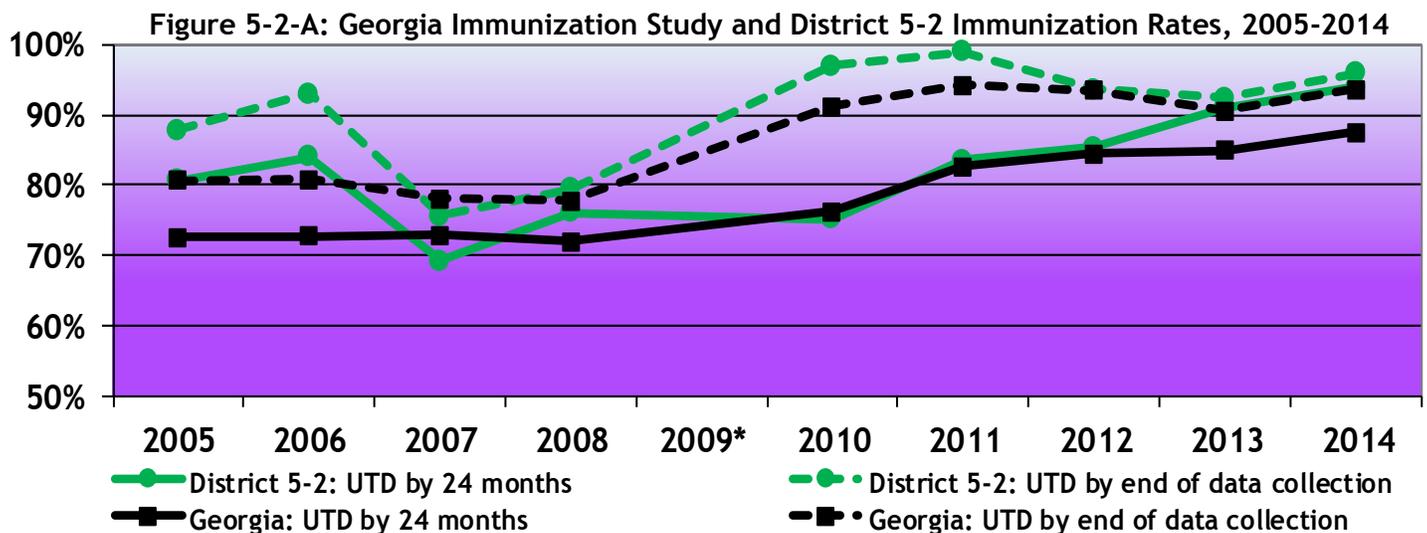
A comparison of District 5-2 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 5-2-A.

	District 5-2 (n)	State (n)
Original Sample	114	2,550
Ineligible	7	172
(Refused to Participate)	(0)	(12)
Eligible Sample	107	2,378
Unable to Locate [†]	9	135
Final Sample	98	2,243
Response Rate (%)	91.6	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 5-2 (%)	State Average (%)
UTD immunization rate** by 24 months	93.9	87.6
UTD immunization rate** Based on GRITS alone	67.3	82.3
UTD immunization rate** by end of data collection ^{††}	95.9	93.6
4 DTaP by 24 months	89.8	84.6
3 DTaP by 24 months	99.0	96.9
3 IPV by 24 months	94.9	96.0
1 MMR by 24 months	94.9	92.3
UTD Hib by 24 months	96.9	96.9
3 Hep B by 24 months	96.9	96.2
1 Varicella by 24 months	95.9	93.1
UTD PCV by 24 months	96.9	97.1
2 Rotavirus by 24 months	83.7	87.2
2 Hep A by 24 months	61.2	56.6
1+ Influenza by 24 months	62.2	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 5-2, Georgia Immunization Study Report, p3

Table 5-2-C: District 5-2 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 5-2 Sample		Immunization Rates for District 5-2 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 5-2 sample of births n=98 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 5-2 Rates			67.3	93.9	95.9
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=37)	43.1	37.8	67.6	91.9	91.9
White, Hispanic (n=2)	3.4	2.0	100.0	100.0	100.0
Black (n=55)	36.0	56.1	69.1	94.5	98.2
Unspecified, Hispanic (n=1)	7.6	1.0	0.0	100.0	100.0
Asian (n=0)	2.6	0.0	N/A	N/A	N/A
Multiracial (n=1)	1.4	1.0	0.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=38)	40.1	38.8	78.9	97.4	100.0
25-34 years (n=48)	47.3	49.0	56.3	91.7	93.8
35+ years (n=12)	12.5	12.2	75.0	91.7	91.7
Maternal Education^{‡,†}					
Some College+ (n=39)	45.4	39.8	61.5	92.3	92.3
HS Diploma/GED (n=34)	32.1	34.7	70.6	97.1	97.1
9th-11th grade (n=20)	14.7	20.4	75.0	90.0	100.0
<9th grade (n=1)	4.8	1.0	100.0	100.0	100.0
Maternal Marital Status[‡]					
Married (n=38)	49.6	38.8	63.2	86.8	89.5
Unmarried (n=59)	50.2	60.2	69.5	98.3	100.0
WIC^Ø					
Non-WIC (n=22)	32.8	22.4	72.7	90.9	90.9
WIC (n=76)	67.2	77.6	65.8	94.7	97.4
Number of Providers^{‡,Ø}					
1 (n=56)	44.6	57.1	71.4	92.9	94.6
2 (n=17)	22.3	17.3	64.7	94.1	94.1
3 (n=4)	7.3	4.1	100.0	100.0	100.0
Provider Type^{‡,Ø}					
Public Sector Only (n=1)	0.8	1.0	100.0	100.0	100.0
Private Sector Only (n=69)	64.2	70.4	69.6	92.8	94.2
Both (n=7)	9.2	7.1	85.7	100.0	100.0

Ø Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 5-2, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 5-2 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic mothers
- Children of mothers 25+ years of age
- Children of mothers with some college education
- Children of married mothers
- Children not enrolled in the WIC program

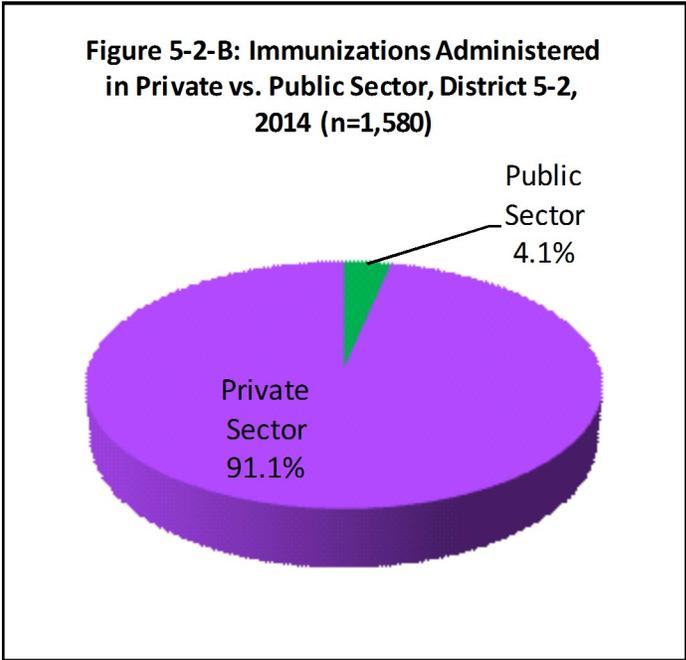


Table 5-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 5-2, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	81.2	87.6	86.1	88.7	89.8
3 Polio by 24 months	95.5	96.9	95.6	97.7	94.9
1 MMR by 24 months	93.2	96.9	93.0	94.7	94.9
UTD Hib by 24 months	90.2	94.9	95.6	97.7	96.9
3 Hepatitis B by 24 months	97.0	97.9	96.2	96.2	96.9
1 Varicella by 24 months	95.5	96.9	94.3	97.0	95.9
UTD PCV by 24 months	90.2	97.9	91.8	91.0	96.9
2 Rotavirus	65.4	68.0	52.5	64.7	83.7
1 Influenza by 24 months	49.6	53.6	50.6	22.6	62.2
Hepatitis B birth dose	-	-	90.5	91.7	96.9

Immunization Rates by Vaccine Antigen: In District 5-2, the UTD immunization rate by 24 months for most vaccine antigens increased in 2014. Vaccines that decreased from 2013 to 2014 are labeled in red (Table 5-2-D).

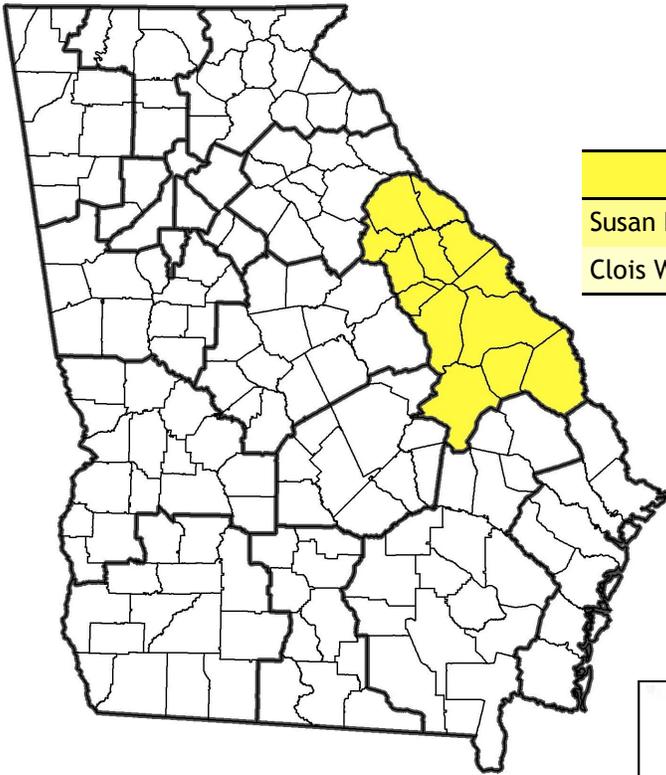
In District 5-2, the UTD immunization rate for DTaP was the lowest at 89.8%, up from 88.7% in 2013. The UTD immunization rate for Polio and MMR were second-lowest at 94.9% in 2014, similar to 94.7% in 2013.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP, polio and MMR vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



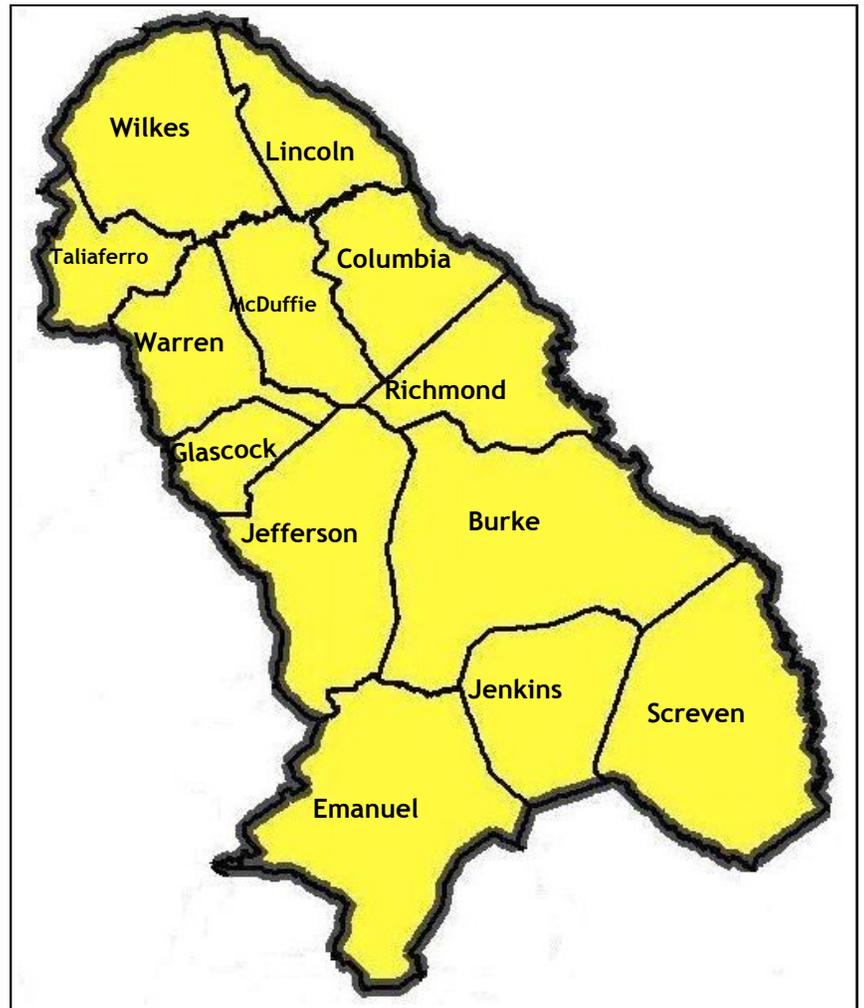
District 6-0

2014 Georgia Immunization Study Report



District 6-0 Data Collection Team	
Susan Edmunds, RN	District Immunization Coordinator
Clois Witt, RN	Primary Data Collector

County	Number in Sample
Burke	4
Columbia	25
Emanuel	10
Glasco	0
Jefferson	5
Jenkins	3
Lincoln	1
McDuffie	3
Richmond	70
Screven	3
Taliaferro	0
Warren	3
Wilkes	3
District 6-0	130
District UTD by 24 months Immunization Rate	90.0%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 6-0



Georgia Immunization Study Report, p2

The 2014 GIS sampled a total of 130 children in District 6-0 (Table 6-0-A).

For the District 6-0 sample, the up-to-date (UTD) immunization rate by 24 months of age (90.0%) was 4.4% higher than in 2013 (86.2%). The UTD immunization rate based on GRITS alone (83.8%) rose 3.8% from 2013 (80.7%). The UTD immunization rate by the end of data collection (96.2%) was 0.4% lower than in 2013 (96.6%) Immunization rates that decreased are shown in red (Table 6-0-B).

A comparison of District 6-0 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 6-0-A.

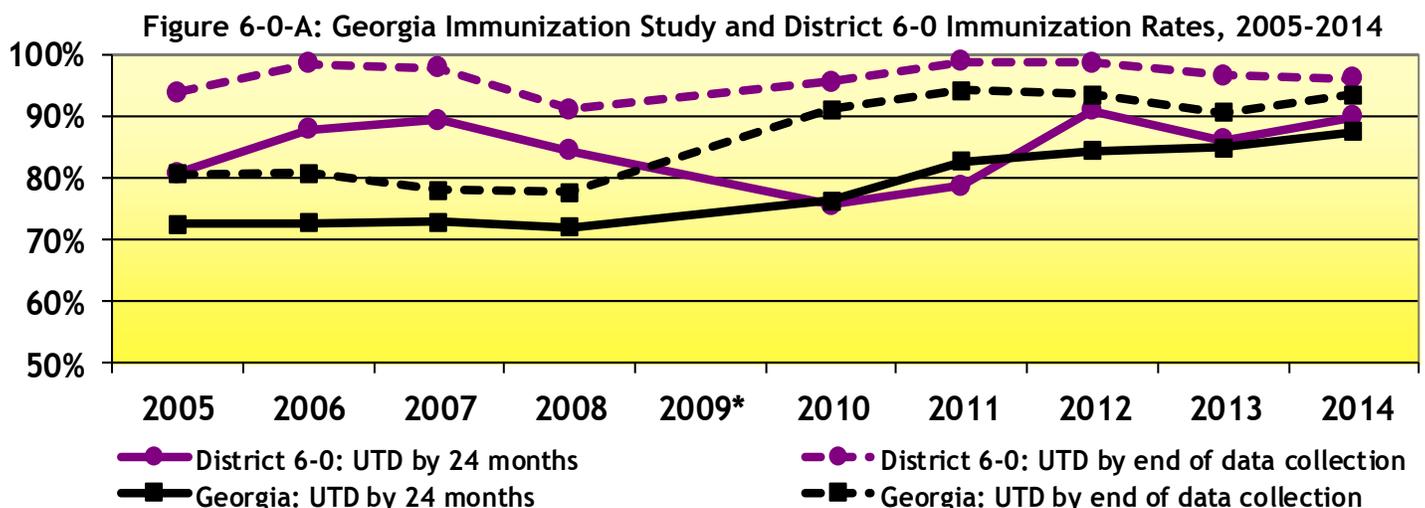
	District 6-0 (n)	State (n)
Original Sample	139	2,550
Ineligible	9	172
(Refused to Participate)	(0)	(12)
Eligible Sample	130	2,378
Unable to Locate [†]	0	135
Final Sample	130	2,243
Response Rate (%)	100.0	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 6-0-B: Immunization Summary by Series & Vaccine Antigen, District 6-0, 2014

	District 6-0 (%)	State Average (%)
UTD immunization rate** by 24 months	90.0	87.6
UTD immunization rate** Based on GRITS alone	83.8	82.3
UTD immunization rate** by end of data collection ^{††}	96.2	93.6
4 DTaP by 24 months	87.7	84.6
3 DTaP by 24 months	97.7	96.9
3 IPV by 24 months	96.9	96.0
1 MMR by 24 months	92.3	92.3
UTD Hib by 24 months	98.5	96.9
3 Hep B by 24 months	97.7	96.2
1 Varicella by 24 months	94.6	93.1
UTD PCV by 24 months	98.5	97.1
2 Rotavirus by 24 months	90.0	87.2
2 Hep A by 24 months	49.2	56.6
1+ Influenza by 24 months	72.3	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 6-0, Georgia Immunization Study Report, p3

Table 6-0-C: District 6-0 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 6-0 Sample		Immunization Rates for District 6-0 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 6-0 sample of births n=130 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 6-0 Rates			83.8	90.0	96.2
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=53)	43.1	41.1	83.0	88.7	94.3
White, Hispanic (n=8)	3.4	6.2	100.0	100.0	100.0
Black (n=61)	36.0	45.0	80.3	88.5	96.7
Unspecified, Hispanic (n=2)	7.6	1.5	100.0	100.0	100.0
Asian (n=1)	2.6	0.8	100.0	100.0	100.0
Multiracial (n=1)	1.4	1.6	100.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=52)	40.1	40.0	82.7	88.5	94.2
25-34 years (n=62)	47.3	47.7	82.3	90.3	96.8
35+ years (n=15)	12.5	11.5	93.3	93.3	100.0
Maternal Education^{‡,†}					
Some College+ (n=68)	45.4	52.3	83.8	91.2	97.1
HS Diploma/GED (n=35)	32.1	26.9	91.4	91.4	94.3
9th-11th grade (n=19)	14.7	14.6	63.2	78.9	94.7
<9th grade (n=5)	4.8	3.8	100.0	100.0	100.0
Maternal Marital Status[‡]					
Married (n=54)	49.6	41.5	88.9	94.4	98.1
Unmarried (n=75)	50.2	57.7	80.0	86.7	94.7
WIC^θ					
Non-WIC (n=39)	32.8	30.0	84.6	92.3	97.4
WIC (n=91)	67.2	70.0	83.5	89.0	95.6
Number of Providers^{‡,θ}					
1 (n=72)	44.6	55.4	86.1	91.7	97.2
2 (n=31)	22.3	23.8	80.6	87.1	93.5
3 (n=6)	7.3	4.6	83.3	83.3	100.0
Provider Type^{‡,θ}					
Public Sector Only (n=3)	0.8	2.3	100.0	100.0	100.0
Private Sector Only (n=86)	64.2	66.2	86.0	90.7	96.3
Both (n=20)	9.2	15.4	75.0	85.0	100.0

θ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 6-0, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 6-0 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic and black mothers
- Children of mothers under 25 years of age
- Children of mothers still in high school
- Children of unmarried mothers
- Children who receive immunizations from 2 or more providers

Figure 6-0-B: Immunizations Administered in Private vs. Public Sector, District 6-0, 2014 (n=2,294)

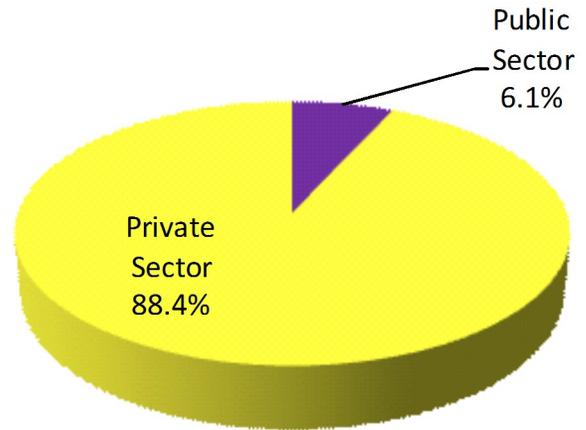


Table 6-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 6-0, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	80.0	80.0	84.3	84.1	87.7
3 Polio by 24 months	95.6	97.7	95.6	97.9	96.9
1 MMR by 24 months	93.3	91.8	89.9	97.9	92.3
UTD Hib by 24 months	91.1	95.3	93.7	98.6	98.5
3 Hepatitis B by 24 months	93.3	98.8	93.7	98.6	97.7
1 Varicella by 24 months	93.3	94.1	91.8	97.2	94.6
UTD PCV by 24 months	84.4	98.8	88.1	83.4	98.5
2 Rotavirus	60.0	75.3	62.9	82.8	90.0
1 Influenza by 24 months	53.3	61.2	52.2	23.4	72.3
Hepatitis B birth dose	-	-	83.6	88.3	83.8

Immunization Rates by Vaccine Antigen: In District 6-0, the UTD immunization rate by 24 months for most vaccine antigens decreased in 2014 (shown in red) (Table 6-0-D).

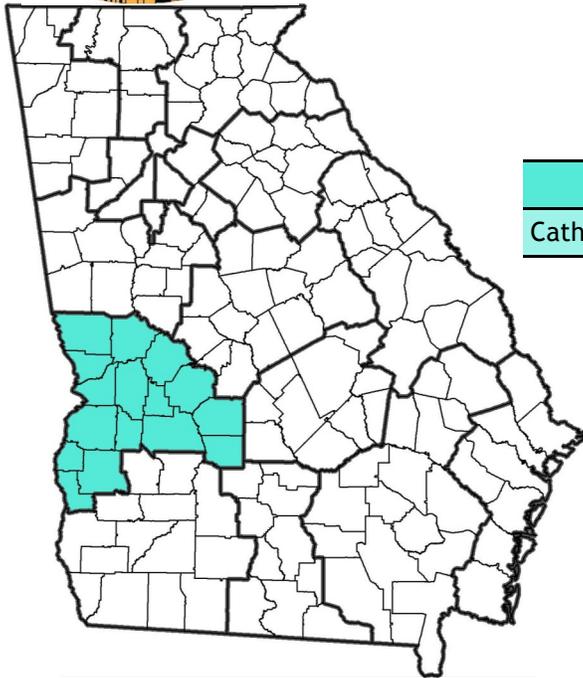
In District 6-0, the UTD immunization rate for DTaP was the lowest at 87.7%, up from 84.1% in 2013. The UTD immunization rate for MMR was second-lowest at 92.3%, down from 97.9% in 2013.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP and MMR vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



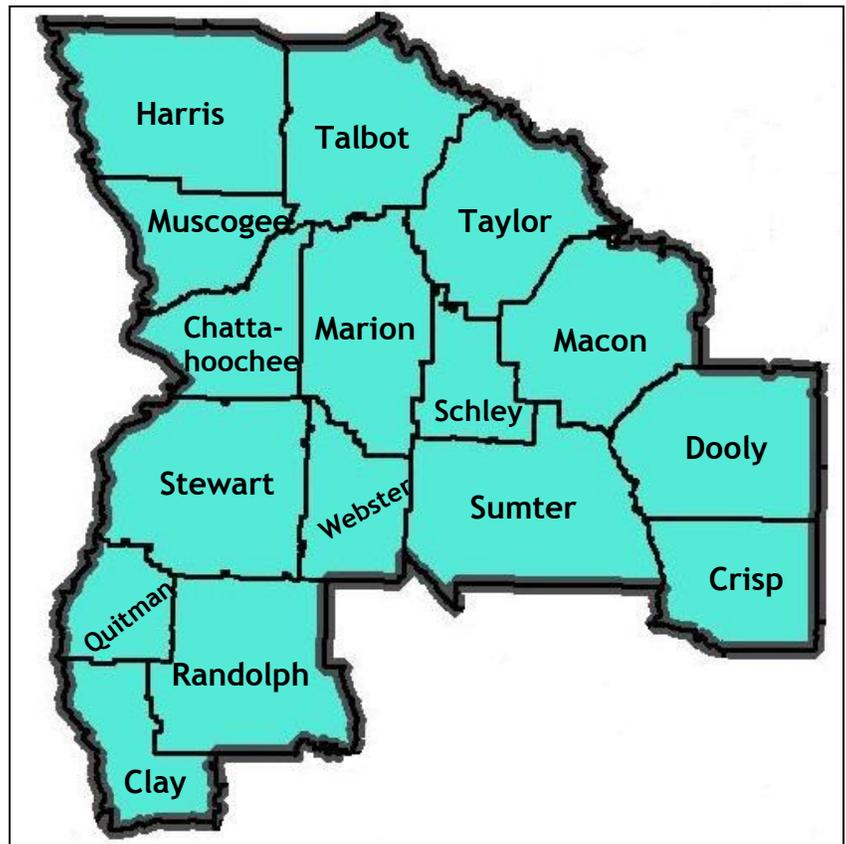
District 7-0

2014 Georgia Immunization Study Report



District 7-0 Data Collection Team	
Cathy Henderson, RN	District Immunization Coordinator

County	Number in Sample
Chattahoochee	0
Clay	0
Crisp	10
Dooly	4
Harris	4
Macon	4
Marion	2
Muscogee	60
Quitman	0
Randolph	0
Schley	1
Stewart	2
Sumter	10
Talbot	0
Taylor	2
Webster	0
District 7-0	99
District UTD by 24 months Immunization Rate	78.8%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 7-0

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 99 children in District 7-0 (Table 7-0-A).

For the District 7-0 sample, the up-to-date (UTD) immunization rate by 24 months of age (78.8%) was 12.2% lower than in 2013 (89.8%). The UTD immunization rate based on GRITS alone (71.7%) fell 13.9% from 2013 (83.3%). The UTD immunization rate by the end of data collection (92.9%) was 0.6% lower than in 2013 (93.5%) Immunization rates that decreased are shown in red (Table 7-0-B).

A comparison of District 7-0 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 7-0-A.

Table 7-0-A: GIS Sampling Scheme, District 7-0, 2014

	District 7-0 (n)	State (n)
Original Sample	108	2,550
Ineligible (Refused to Participate)	7 (0)	172 (12)
Eligible Sample	101	2,378
Unable to Locate [†]	2	135
Final Sample	99	2,243
Response Rate (%)	98.0	94.3

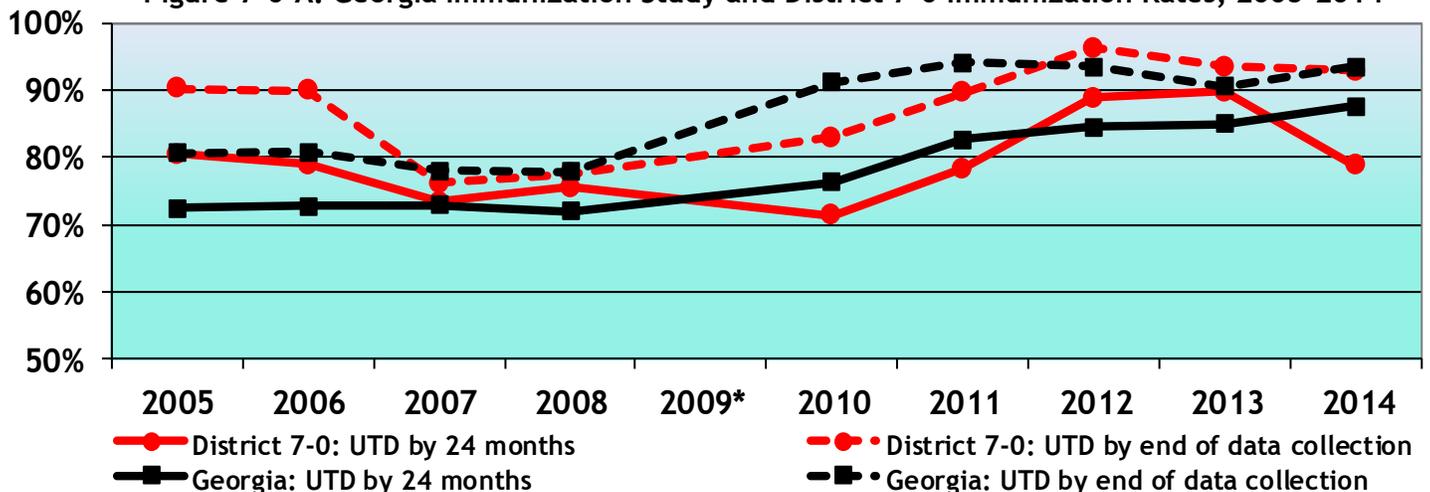
[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 7-0-B: Immunization Summary by Series & Vaccine Antigen, District 7-0, 2014

	District 7-0 (%)	State Average (%)
UTD immunization rate** by 24 months	78.8	87.6
UTD immunization rate** Based on GRITS alone	71.7	82.3
UTD immunization rate** by end of data collection ^{††}	92.9	93.6
4 DTaP by 24 months	75.8	84.6
3 DTaP by 24 months	98.0	96.9
3 IPV by 24 months	97.0	96.0
1 MMR by 24 months	89.9	92.3
UTD Hib by 24 months	96.0	96.9
3 Hep B by 24 months	98.0	96.2
1 Varicella by 24 months	89.9	93.1
UTD PCV by 24 months	96.0	97.1
2 Rotavirus by 24 months	88.9	87.2
2 Hep A by 24 months	59.6	56.6
1+ Influenza by 24 months	58.6	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.

Figure 7-0-A: Georgia Immunization Study and District 7-0 Immunization Rates, 2005-2014



* 2009 data was not collected due to a personnel vacancy.

District 7-0, Georgia Immunization Study Report, p3

Table 7-0-C: District 7-0 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 7-0 Sample		Immunization Rates for District 7-0 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 7-0 sample of births n=99 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 7-0 Rates			71.7	78.8	92.9
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=31)	43.1	31.3	74.2	83.9	93.5
White, Hispanic (n=1)	3.4	1.0	100.0	100.0	100.0
Black (n=56)	36.0	56.6	71.4	76.8	92.9
Unspecified, Hispanic (n=7)	7.6	7.1	57.1	57.1	85.7
Asian (n=0)	2.6	0.0	N/A	N/A	N/A
Multiracial (n=3)	1.4	3.0	66.7	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=55)	40.1	55.6	72.7	74.5	89.1
25-34 years (n=36)	47.3	36.4	69.4	80.6	97.2
35+ years (n=8)	12.5	8.1	75.0	100.0	100.0
Maternal Education^{‡,†}					
Some College+ (n=37)	45.4	37.4	70.3	89.2	94.6
HS Diploma/GED (n=41)	32.1	41.4	85.4	85.4	97.6
9th-11th grade (n=16)	14.7	16.2	37.5	37.5	81.3
<9th grade (n=4)	4.8	4.0	75.0	75.0	75.0
Maternal Marital Status[‡]					
Married (n=35)	49.6	35.4	74.3	85.7	94.3
Unmarried (n=64)	50.2	64.6	70.3	75.0	92.2
WIC[⊖]					
Non-WIC (n=18)	32.8	18.2	50.0	72.2	88.9
WIC (n=81)	67.2	81.8	76.5	80.2	93.8
Number of Providers^{‡,⊖}					
1 (n=55)	44.6	55.6	76.4	85.5	92.7
2 (n=23)	22.3	23.2	65.2	65.2	91.3
3 (n=3)	7.3	3.0	66.7	66.7	66.7
Provider Type^{‡,⊖}					
Public Sector Only (n=0)	0.8	0.0	N/A	N/A	N/A
Private Sector Only (n=72)	64.2	72.7	73.6	80.6	93.1
Both (n=9)	9.2	9.1	66.7	66.7	77.8

⊖ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 7-0, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 7-0 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of black and unspecified, Hispanic mothers
- Children of mothers under 25 years of age
- Children of mothers who are still in high school
- Children of unmarried mothers
- Children not enrolled in the WIC program
- Children with two or more providers administering immunizations

Figure 7-0-B: Immunizations Administered in Private vs. Public Sector, District 7-0, 2014 (n=1,625)

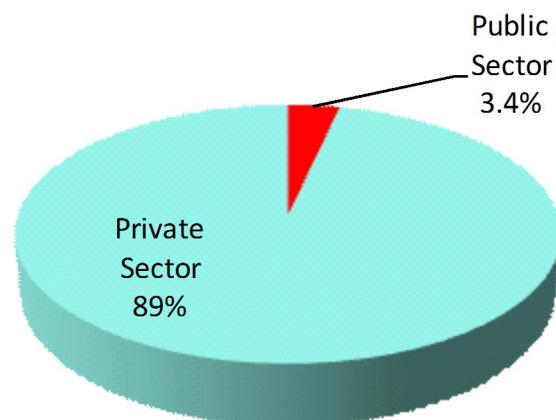


Table 7-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 7-0—2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	83.7	80.9	93.6	90.7	75.8
3 Polio by 24 months	95.4	95.7	98.7	97.2	97.0
1 MMR by 24 months	89.9	92.2	96.8	93.5	89.9
UTD Hib by 24 months	91.5	94.8	98.7	97.2	96.0
3 Hepatitis B by 24 months	93.0	98.3	99.4	98.1	98.0
1 Varicella by 24 months	93.0	93.0	96.2	92.6	89.9
UTD PCV by 24 months	86.8	95.7	95.5	88.0	96.0
2 Rotavirus	83.7	83.5	65.4	85.2	88.9
1 Influenza by 24 months	67.4	60.0	59.0	21.3	58.6
Hepatitis B birth dose	-	-	94.2	92.6	98.0

Immunization Rates by Vaccine Antigen: In District 7-0, the UTD immunization rate by 24 months for most vaccine antigens decreased from 2013 to 2014 (shown in red) (Table 7-0-D).

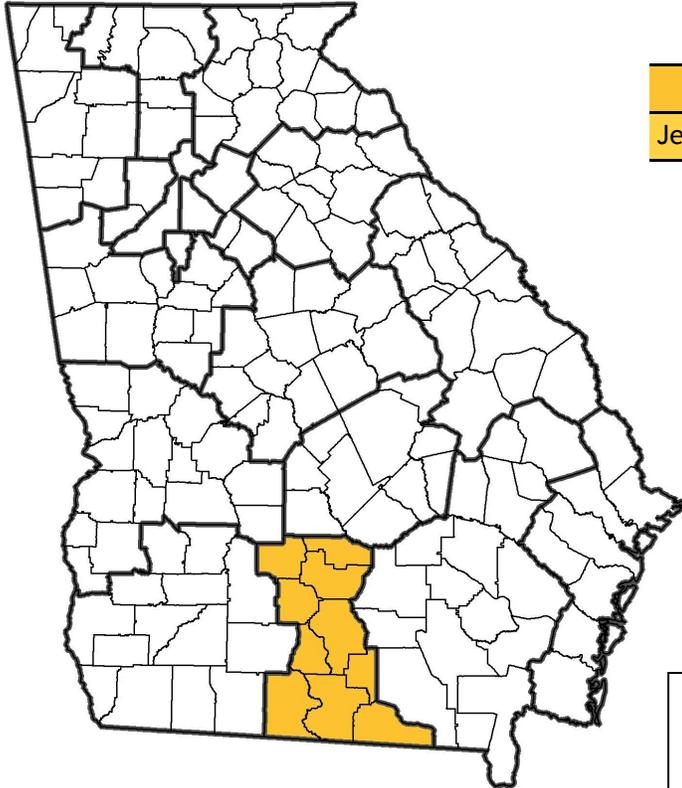
In District 7-0, the UTD immunization rate for DTaP was the lowest at 75.8% which dropped from 90.7% in 2013. The UTD immunization rate for MMR and varicella were second-lowest at 89.9%.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP, MMR and varicella vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



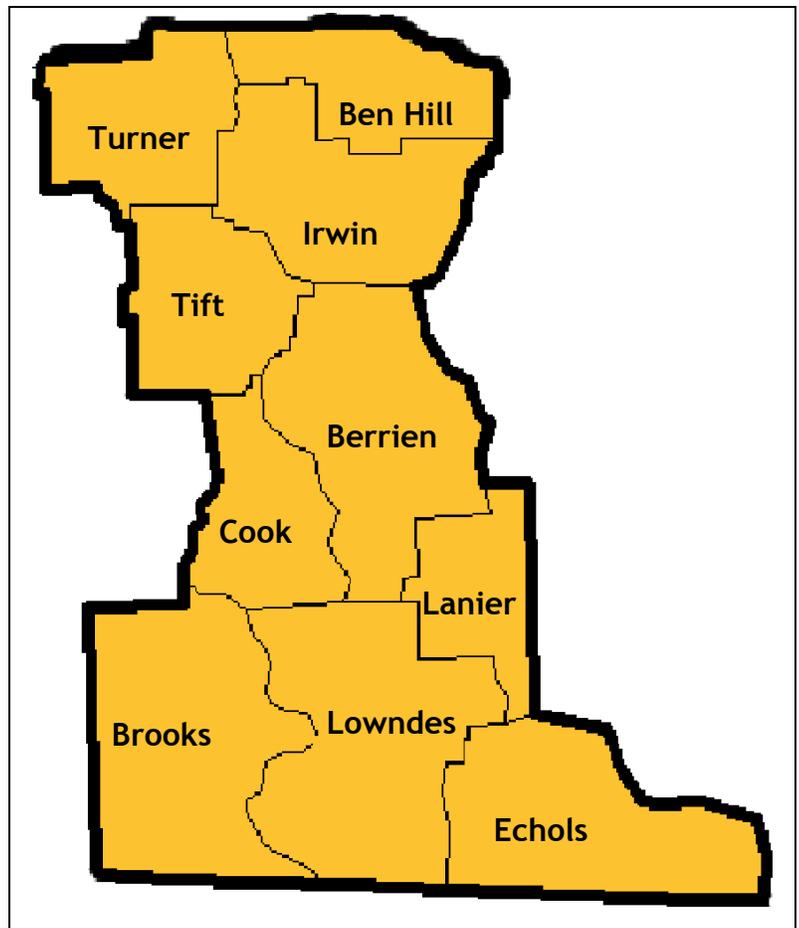
District 8-1

2014 Georgia Immunization Study Report



District 8-1 Data Collection Team	
Jessica Spells	District Immunization Coordinator

County	Number in Sample
Ben Hill	16
Berrien	6
Brooks	6
Cook	7
Echols	0
Irwin	2
Lanier	2
Lowndes	41
Tift	18
Turner	3
District 8-1	101
District UTD by 24 months Immunization Rate	84.2%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 8-1

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 101 children in District 8-1 (Table 8-1-A).

For the District 8-1 sample, the up-to-date (UTD) immunization rate by 24 months of age (84.2%) was 4.9% lower than in 2013 (88.5%). The UTD immunization rate based on GRITS alone (80.2%) fell 1.8% from 2013 (81.7%). The UTD immunization rate by the end of data collection (97.0%) was 4.0% higher than in 2013 (93.3%) Immunization rates that decreased are shown in red (Table 8-1-B).

A comparison of District 8-1 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 8-1-A.

Table 8-1-B: Immunization Summary by Series & Vaccine Antigen, District 8-1, 2014

	District 8-1 (%)	State Average (%)
UTD immunization rate** by 24 months	84.2	87.6
UTD immunization rate** Based on GRITS alone	80.2	82.3
UTD immunization rate** by end of data collection††	97.0	93.6
4 DTaP by 24 months	85.1	84.6
3 DTaP by 24 months	98.0	96.9
3 IPV by 24 months	98.0	96.0
1 MMR by 24 months	93.1	92.3
UTD Hib by 24 months	98.1	96.9
3 Hep B by 24 months	98.0	96.2
1 Varicella by 24 months	94.1	93.1
UTD PCV by 24 months	99.0	97.1
2 Rotavirus by 24 months	93.1	87.2
2 Hep A by 24 months	55.4	56.6
1+ Influenza by 24 months	68.3	63.6

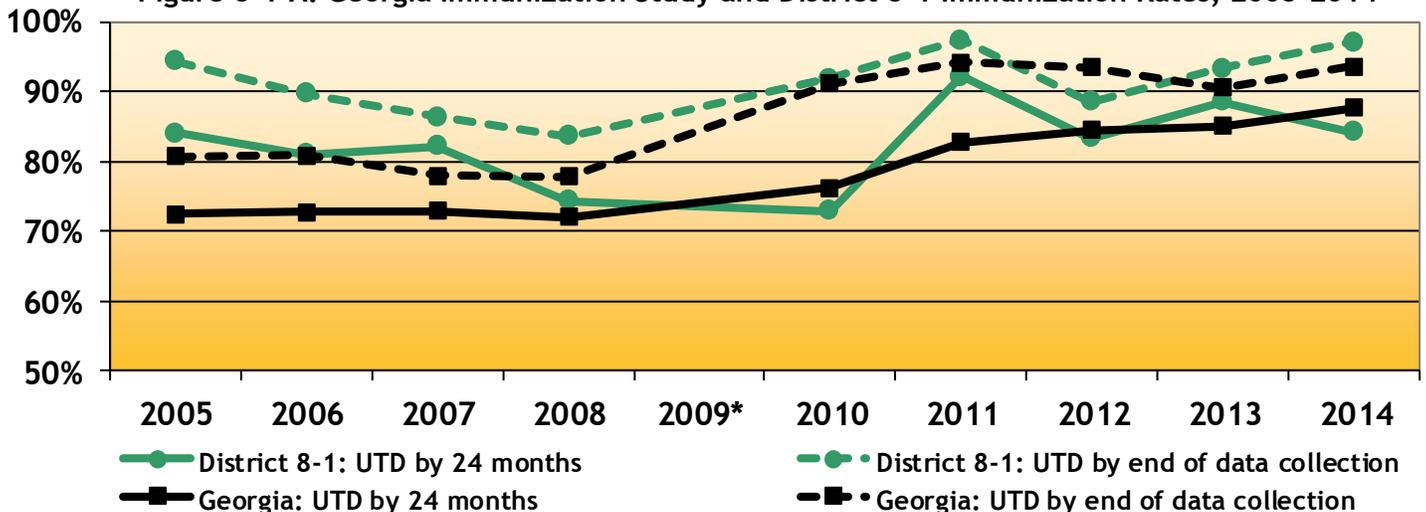
†† This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.

Table 8-1-A: GIS Sampling Scheme, District 8-1, 2014

	District 8-1 (n)	State (n)
Original Sample	106	2,550
Ineligible	1	172
(Refused to Participate)	(1)	(12)
Eligible Sample	105	2,378
Unable to Locate†	4	135
Final Sample	101	2,243
Response Rate (%)	96.2	94.3

† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Figure 8-1-A: Georgia Immunization Study and District 8-1 Immunization Rates, 2005-2014



* 2009 data was not collected due to a personnel vacancy.

District 8-1, Georgia Immunization Study Report, p3

Table 8-1-C: District 8-1 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 8-1 Sample		Immunization Rates for District 8-1 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 8-1 sample of births n=101 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 8-1 Rates			80.2	84.2	97.0
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=35)	43.1	34.7	77.1	82.9	97.1
White, Hispanic (n=2)	3.4	2.0	50.0	100.0	100.0
Black (n=33)	36.0	32.7	87.9	90.9	97.0
Unspecified, Hispanic (n=5)	7.6	5.0	80.0	80.0	100.0
Asian (n=0)	2.6	0.0	N/A	N/A	N/A
Multiracial (n=0)	1.4	0.0	N/A	N/A	N/A
Maternal Age^{‡,†}					
<25 years (n=54)	40.1	53.5	81.5	87.0	98.1
25-34 years (n=37)	47.3	36.6	73.0	75.7	94.6
35+ years (n=10)	12.5	9.9	100.0	100.0	100.0
Maternal Education^{‡,†}					
Some College+ (n=37)	45.4	36.6	83.8	83.8	94.6
HS Diploma/GED (n=32)	32.1	31.7	84.4	84.4	100.0
9th-11th grade (n=24)	14.7	23.8	70.8	83.3	95.8
<9th grade (n=6)	4.8	5.9	66.7	83.3	100.0
Maternal Marital Status[‡]					
Married (n=51)	49.6	50.5	82.4	84.3	98.0
Unmarried (n=50)	50.2	49.5	78.0	84.0	96.0
WIC^θ					
Non-WIC (n=24)	32.8	23.8	87.5	87.5	95.8
WIC (n=77)	67.2	76.2	77.9	83.1	97.4
Number of Providers^{‡,θ}					
1 (n=26)	44.6	25.7	88.5	92.3	100.0
2 (n=18)	22.3	17.8	72.2	72.2	94.4
3 (n=12)	7.3	11.9	83.3	83.3	91.7
Provider Type^{‡,θ}					
Public Sector Only (n=0)	0.8	0.0	N/A	N/A	N/A
Private Sector Only (n=54)	64.2	53.5	83.3	85.2	96.3
Both (n=2)	9.2	2.0	50.0	50.0	100.0

θ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 8-1, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 8-1 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic mothers
- Children of mothers between 25-34 years of age
- Children enrolled in the WIC program
- Children receiving immunizations from 2+ providers

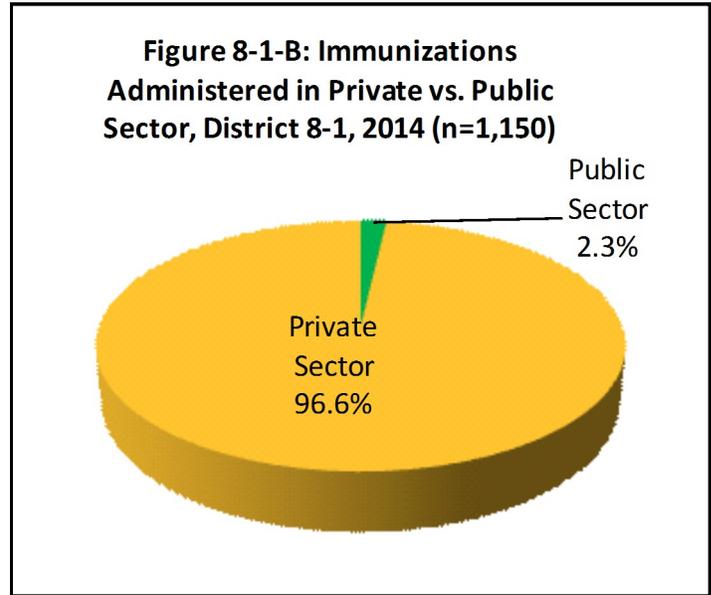


Table 8-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 8-1, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	84.7	94.8	90.1	86.5	85.1
3 Polio by 24 months	92.9	97.4	98.8	96.2	98.0
1 MMR by 24 months	88.2	96.1	95.1	93.3	93.1
UTD Hib by 24 months	92.9	96.1	95.1	98.1	98.1
3 Hepatitis B by 24 months	92.9	96.1	98.8	97.1	98.0
1 Varicella by 24 months	90.6	94.8	97.5	92.3	94.1
UTD PCV by 24 months	87.1	97.4	98.8	91.3	99.0
2 Rotavirus	83.5	92.2	84.0	83.5	93.1
1 Influenza by 24 months	60.0	61.0	58.0	20.2	68.3
Hepatitis B birth dose	-	-	91.4	92.3	91.1

Immunization Rates by Vaccine Antigen: In District 8-1, the UTD immunization rate by 24 months for most vaccine antigens increased in 2014. Vaccines that decreased from 2013 to 2014 are labeled in red (Table 8-1-D).

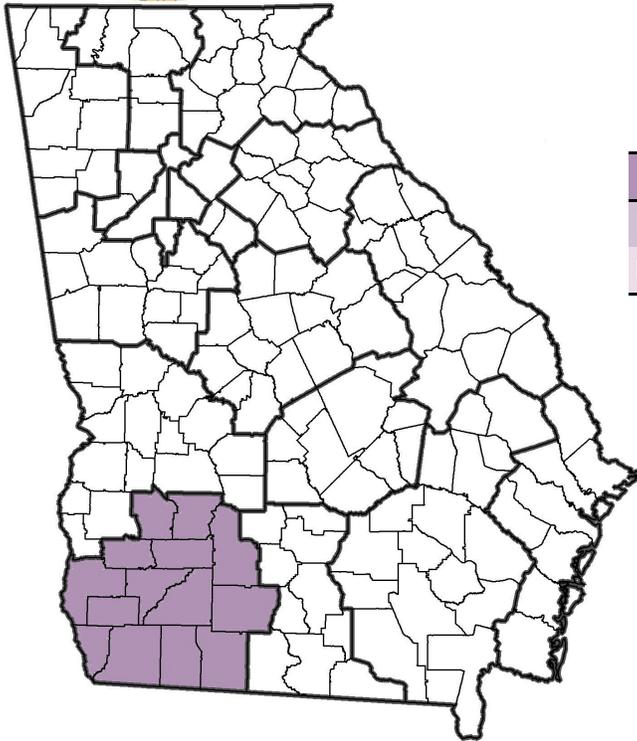
In District 8-1, the UTD immunization rate for DTaP was lowest at 85.1%, down from 86.5% in 2013. The UTD immunization rate for MMR was second-lowest at 93.1%, similar to 93.3% in 2013.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP and MMR vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



District 8-2

2014 Georgia Immunization Study Report



District 8-2 Data Collection Team	
Rebecca Snow, LPN	District Immunization Coordinator
Kelly Tillery	Immunization Program Assistant

County	Number in Sample
Baker	1
Calhoun	1
Colquitt	24
Decatur	8
Dougherty	28
Early	3
Grady	8
Lee	9
Miller	2
Mitchell	5
Seminole	1
Terrell	2
Thomas	13
Worth	2
District 8-2	107
District UTD by 24 months Immunization Rate	91.6%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 8-2

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 107 children in District 8-2 (Table 8-2-A).

For the District 8-2 sample, the up-to-date (UTD) immunization rate by 24 months of age (91.6%) was 4.7% higher than in 2013 (87.5%). The UTD immunization rate based on GRITS alone (86.9%) rose 1.0% from 2013 (86.0%). The UTD immunization rate by the end of data collection (96.3%) was 2.3% higher than in 2013 (94.1%) Immunization rates that decreased are shown in red (Table 8-2-B).

A comparison of District 8-2 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 8-2-A.

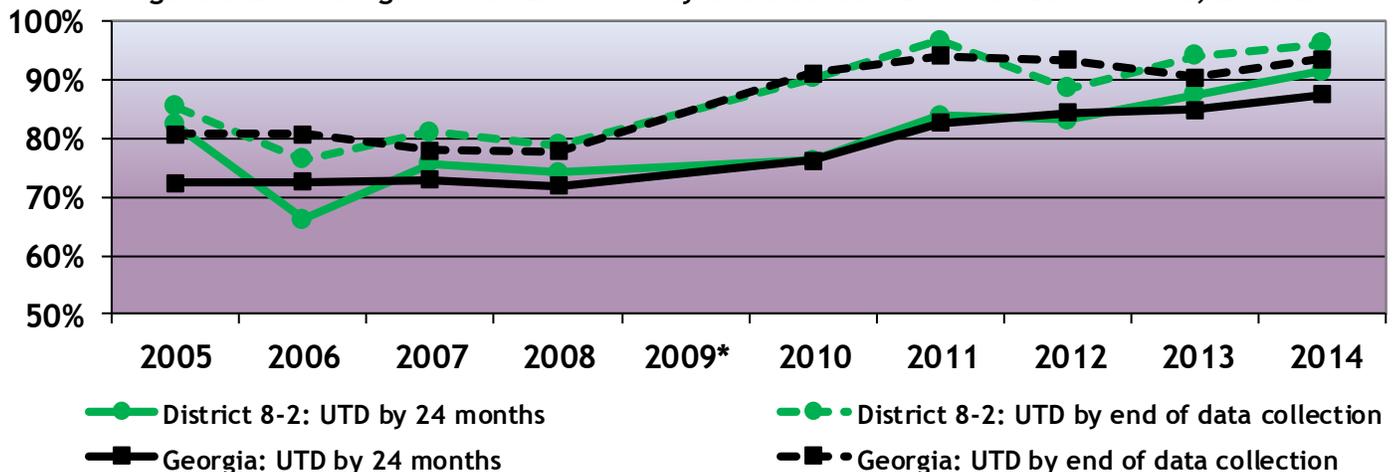
	District 8-2 (n)	State (n)
Original Sample	116	2,550
Ineligible	8	172
(Refused to Participate)	(0)	(12)
Eligible Sample	108	2,378
Unable to Locate [†]	1	135
Final Sample	107	2,243
Response Rate (%)	99.1	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 8-2 (%)	State Average (%)
UTD immunization rate** by 24 months	91.6	87.6
UTD immunization rate** Based on GRITS alone	86.9	82.3
UTD immunization rate** by end of data collection ^{††}	96.3	93.6
4 DTaP by 24 months	88.8	84.6
3 DTaP by 24 months	99.1	96.9
3 IPV by 24 months	97.2	96.0
1 MMR by 24 months	95.3	92.3
UTD Hib by 24 months	98.1	96.9
3 Hep B by 24 months	98.1	96.2
1 Varicella by 24 months	95.3	93.1
UTD PCV by 24 months	99.1	97.1
2 Rotavirus by 24 months	88.8	87.2
2 Hep A by 24 months	66.4	56.6
1+ Influenza by 24 months	67.3	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.

Figure 8-2-A: Georgia Immunization Study and District 8-2 Immunization Rates, 2005-2014



* 2009 data was not collected due to a personnel vacancy.

District 8-2, Georgia Immunization Study Report, p3

Table 8-2-C: District 8-2 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 8-2 Sample		Immunization Rates for District 8-2 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 8-2 sample of births n=107 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 8-2 Rates			86.9	91.6	96.3
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=45)	43.1	42.1	84.4	91.1	93.3
White, Hispanic (n=2)	3.4	1.9	100.0	100.0	100.0
Black (n=47)	36.0	43.9	85.1	89.4	97.9
Unspecified, Hispanic (n=6)	7.6	5.6	100.0	100.0	100.0
Asian (n=1)	2.6	0.9	100.0	100.0	100.0
Multiracial (n=2)	1.4	1.9	100.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=52)	40.1	48.6	80.8	88.5	94.2
25-34 years (n=50)	47.3	46.7	92.0	94.0	98.0
35+ years (n=5)	12.5	4.7	100.0	100.0	100.0
Maternal Education^{‡,†}					
Some College+ (n=48)	45.4	44.9	85.4	89.6	95.8
HS Diploma/GED (n=29)	32.1	27.1	96.6	100.0	100.0
9th-11th grade (n=24)	14.7	22.4	75.0	83.3	91.7
<9th grade (n=5)	4.8	4.7	100.0	100.0	100.0
Maternal Marital Status[‡]					
Married (n=41)	49.6	38.3	87.8	92.7	95.1
Unmarried (n=66)	50.2	61.7	86.4	90.9	97.0
WIC^θ					
Non-WIC (n=22)	32.8	20.6	81.8	86.4	95.5
WIC (n=85)	67.2	79.4	88.2	92.9	96.5
Number of Providers^{†,θ}					
1 (n=55)	44.6	51.4	85.5	90.9	94.5
2 (n=31)	22.3	29.0	90.3	93.5	96.8
3 (n=7)	7.3	6.5	85.7	85.7	100.0
Provider Type^{†,θ}					
Public Sector Only (n=1)	0.8	0.9	0.0	0.0	0.0
Private Sector Only (n=70)	64.2	65.4	90.0	94.3	97.1
Both (n=22)	9.2	20.6	81.8	86.4	95.5

θ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 8-2, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 8-2 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of black mothers
- Children of mothers under 25 years of age
- Children of mothers still in high school
- Children not enrolled in the WIC program
- Children receiving immunizations from 3+ providers
- Children seeing providers in both the public and private sector

Figure 8-2-B: Immunizations Administered in Private vs. Public Sector, District 8-2, 2014 (n=1,883)

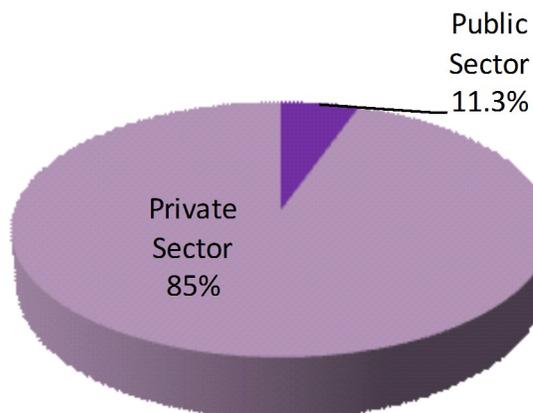


Table 8-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 8-2, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	86.8	86.0	86.4	86.0	88.8
3 Polio by 24 months	98.3	95.7	93.2	97.1	97.2
1 MMR by 24 months	92.1	94.6	91.7	91.2	95.3
UTD Hib by 24 months	90.4	93.6	95.5	98.5	98.1
3 Hepatitis B by 24 months	97.4	96.8	96.2	99.3	98.1
1 Varicella by 24 months	96.5	94.6	90.2	93.4	95.3
UTD PCV by 24 months	93.9	96.8	88.6	86.8	99.1
2 Rotavirus	83.3	90.3	78.8	91.2	88.8
1 Influenza by 24 months	62.3	58.1	56.8	32.4	67.3
Hepatitis B birth dose	-	-	87.1	89.7	77.8

Immunization Rates by Vaccine Antigen: In District 8-2, the UTD immunization rate by 24 months for most vaccine antigens increased between 2013 and 2014. Vaccines that decreased from 2013 to 2014 are labeled in red (Table 8-2-D).

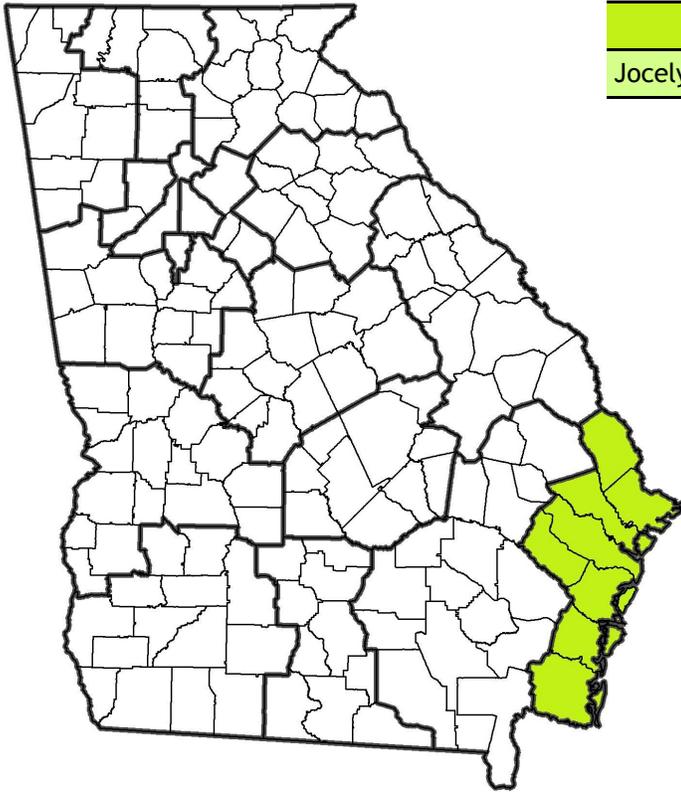
In District 8-2, the UTD immunization rate for DTaP was the lowest at 88.8%, up from 86.0% in 2013. The UTD immunization rate for MMR and varicella were second-lowest at 95.3% in 2014.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP, MMR and varicella vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



District 9-1

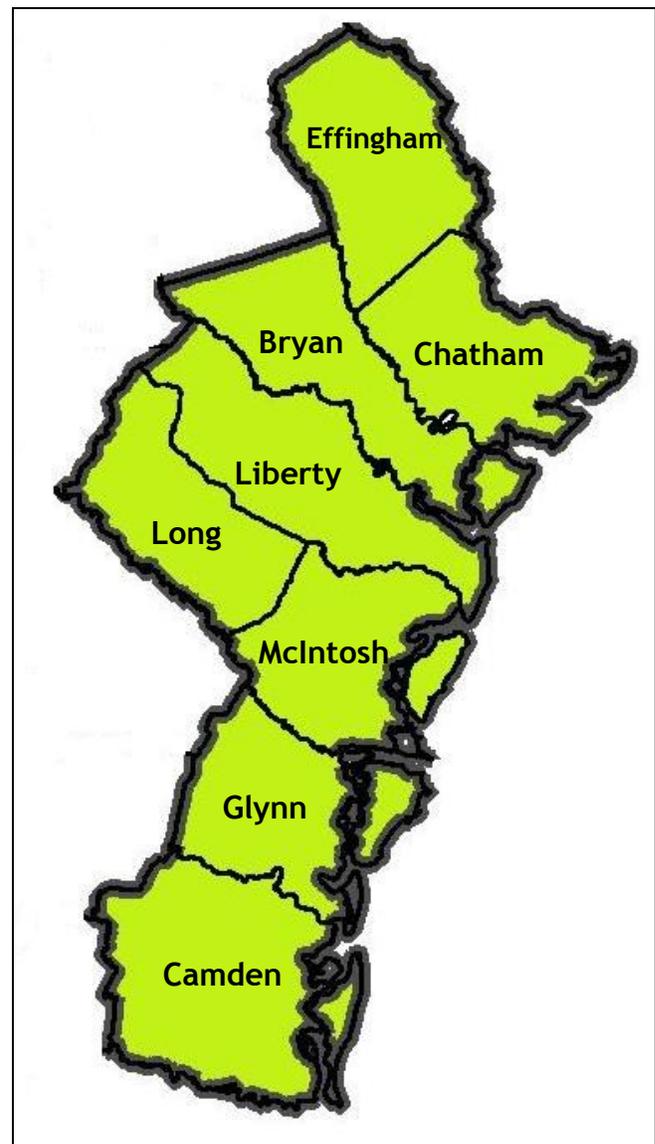
2014 Georgia Immunization Study Report



District 9-1 Data Collection Team

Jocelyn Hall, RN, BSN

District Immunization Coordinator



County	Number in Sample
Bryan	9
Camden	11
Chatham	89
Effingham	13
Glynn	24
Liberty	5
Long	2
McIntosh	1
District 9-1	154
District UTD by 24 months Immunization Rate	88.3%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%



District 9-1

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 154 children in District 9-1 (Table 9-1-A).

For the District 9-1 sample, the up-to-date (UTD) immunization rate by 24 months of age (88.3%) was 11.1% higher than in 2013 (79.5%). The UTD immunization rate based on GRITS alone (85.7%) rose 11.0% from 2013 (77.2%). The UTD immunization rate by the end of data collection (92.2%) was 5.9% higher than in 2013 (87.1%) Immunization rates that decreased are shown in red (Table 9-1-B).

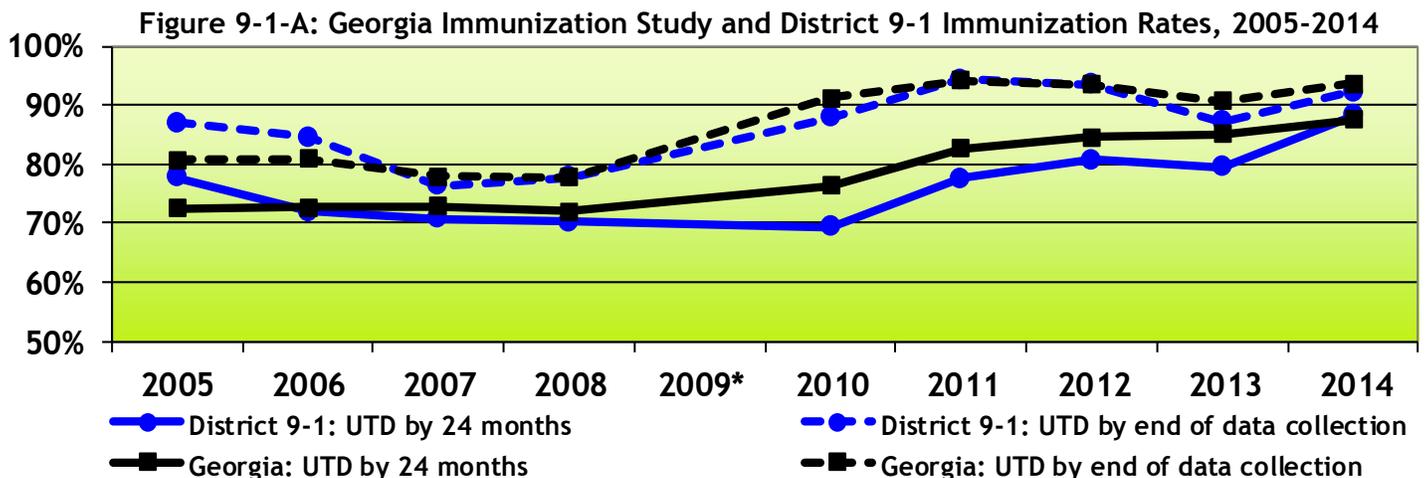
A comparison of District 9-1 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 9-1-A.

	District 9-1 (n)	State (n)
Original Sample	194	2,550
Ineligible	23	172
(Refused to Participate)	(0)	(12)
Eligible Sample	171	2,378
Unable to Locate [†]	17	135
Final Sample	154	2,243
Response Rate (%)	90.1	94.3

[†] Children were classified as “Unable to Locate” if every conceivable effort was made to locate and communicate with the child’s guardian and the child’s provider was either unknown or also unable to locate the guardian.

	District 9-1 (%)	State Average (%)
UTD immunization rate** by 24 months	88.3	87.6
UTD immunization rate** Based on GRITS alone	85.7	82.3
UTD immunization rate** by end of data collection ^{††}	92.2	93.6
4 DTaP by 24 months	84.4	84.6
3 DTaP by 24 months	95.5	96.9
3 IPV by 24 months	94.8	96.0
1 MMR by 24 months	93.5	92.3
UTD Hib by 24 months	96.1	96.9
3 Hep B by 24 months	94.8	96.2
1 Varicella by 24 months	94.2	93.1
UTD PCV by 24 months	95.5	97.1
2 Rotavirus by 24 months	79.9	87.2
2 Hep A by 24 months	62.3	56.6
1+ Influenza by 24 months	66.9	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with “by 24 months”, is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 9-1, Georgia Immunization Study Report, p3

Table 9-1-C: District 9-1 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 9-1 Sample		Immunization Rates for District 9-1 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 9-1 sample of births n=154 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 9-1 Rates			85.7	88.3	92.2
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=67)	43.1	43.5	83.6	85.1	89.6
White, Hispanic (n=1)	3.4	0.6	100.0	100.0	100.0
Black (n=71)	36.0	46.1	85.9	90.1	93.0
Unspecified, Hispanic (n=2)	7.6	1.3	100.0	100.0	100.0
Asian (n=3)	2.6	1.9	66.7	66.7	100.0
Multiracial (n=1)	1.4	0.6	100.0	100.0	100.0
Maternal Age^{‡,†}					
<25 years (n=60)	40.1	39.0	86.7	88.3	93.3
25-34 years (n=77)	47.3	50.0	85.7	89.6	93.5
35+ years (n=17)	12.5	11.0	82.4	82.4	82.4
Maternal Education^{‡,†}					
Some College+ (n=82)	45.4	53.2	85.4	87.8	89.0
HS Diploma/GED (n=43)	32.1	27.9	81.4	83.7	95.3
9th-11th grade (n=24)	14.7	15.6	91.7	95.8	95.8
<9th grade (n=3)	4.8	1.9	100.0	100.0	100.0
Maternal Marital Status[‡]					
Married (n=79)	49.6	51.3	84.8	86.1	88.6
Unmarried (n=75)	50.2	48.7	86.7	90.7	96.0
WIC[⊖]					
Non-WIC (n=63)	32.8	40.9	85.7	87.3	92.1
WIC (n=91)	67.2	59.1	85.7	89.0	92.3
Number of Providers^{‡,⊖}					
1 (n=55)	44.6	35.7	90.9	92.7	94.5
2 (n=42)	22.3	27.3	83.3	88.1	90.5
3 (n=16)	7.3	10.4	81.3	81.3	93.8
Provider Type^{‡,⊖}					
Public Sector Only (n=2)	0.8	1.3	100.0	100.0	100.0
Private Sector Only (n=88)	64.2	57.1	87.5	90.9	93.2
Both (n=23)	9.2	14.9	82.6	82.6	91.3

⊖ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 9-1, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 9-1 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic mothers
- Children of mothers 35+ years of age
- Children of mothers with a high school/GED level of education
- Children of married mothers
- Children not enrolled in the WIC program
- Children with three or more providers
- Children seeing providers in both the public and private sector

Figure 9-1-C: Immunizations Administered in Private vs. Public Sector, District 9-1, 2014 (n=2,270)

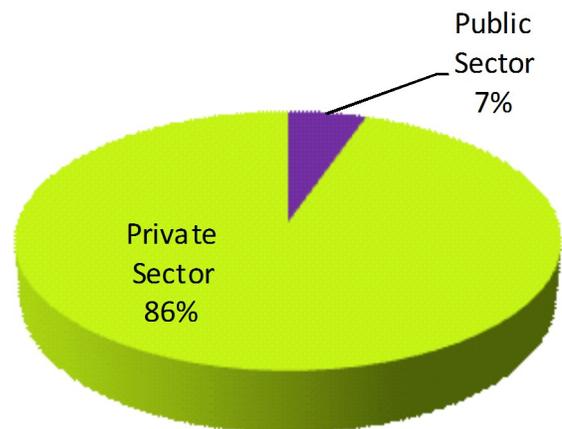


Table 9-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 9-1—2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	74.3	83.8	85.1	81.9	84.4
3 Polio by 24 months	92.1	98.6	98.3	93.6	94.8
1 MMR by 24 months	87.9	90.9	91.7	90.1	93.5
UTD Hib by 24 months	87.1	94.4	96.7	94.2	96.1
3 Hepatitis B by 24 months	91.4	94.4	98.9	92.4	94.8
1 Varicella by 24 months	90.0	93.7	94.5	90.6	94.2
UTD PCV by 24 months	89.3	94.4	90.1	77.2	95.5
2 Rotavirus	65.7	71.8	61.9	71.3	79.9
1 Influenza by 24 months	57.9	61.3	60.2	31.0	66.9
Hepatitis B birth dose	-	-	86.2	83.6	84.4

Immunization Rates by Vaccine Antigen: In District 9-1, the UTD immunization rate by 24 months for all vaccine antigens increased between 2013 and 2014. Vaccines that decreased from 2013 to 2014 are labeled in red (Table 9-1-D).

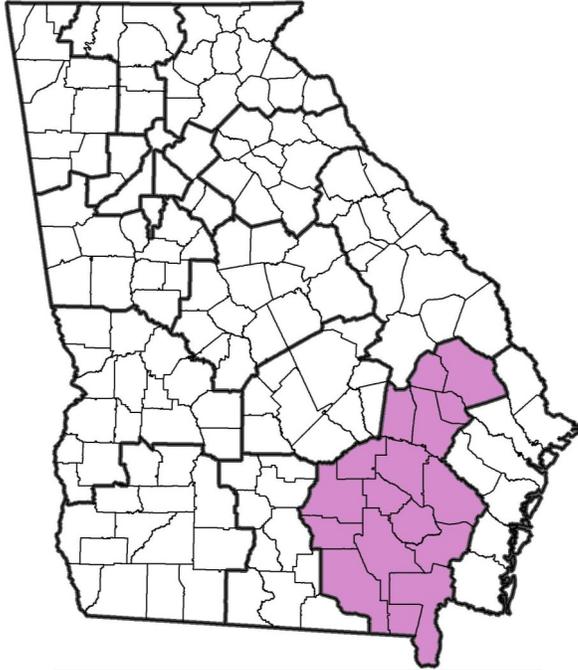
In District 9-1, the UTD immunization rate for DTaP was the lowest at 84.4%, up from 81.9% in 2013. The UTD immunization rate for MMR was second-lowest at 93.5%, up from 90.1% in 2013.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP and MMR vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



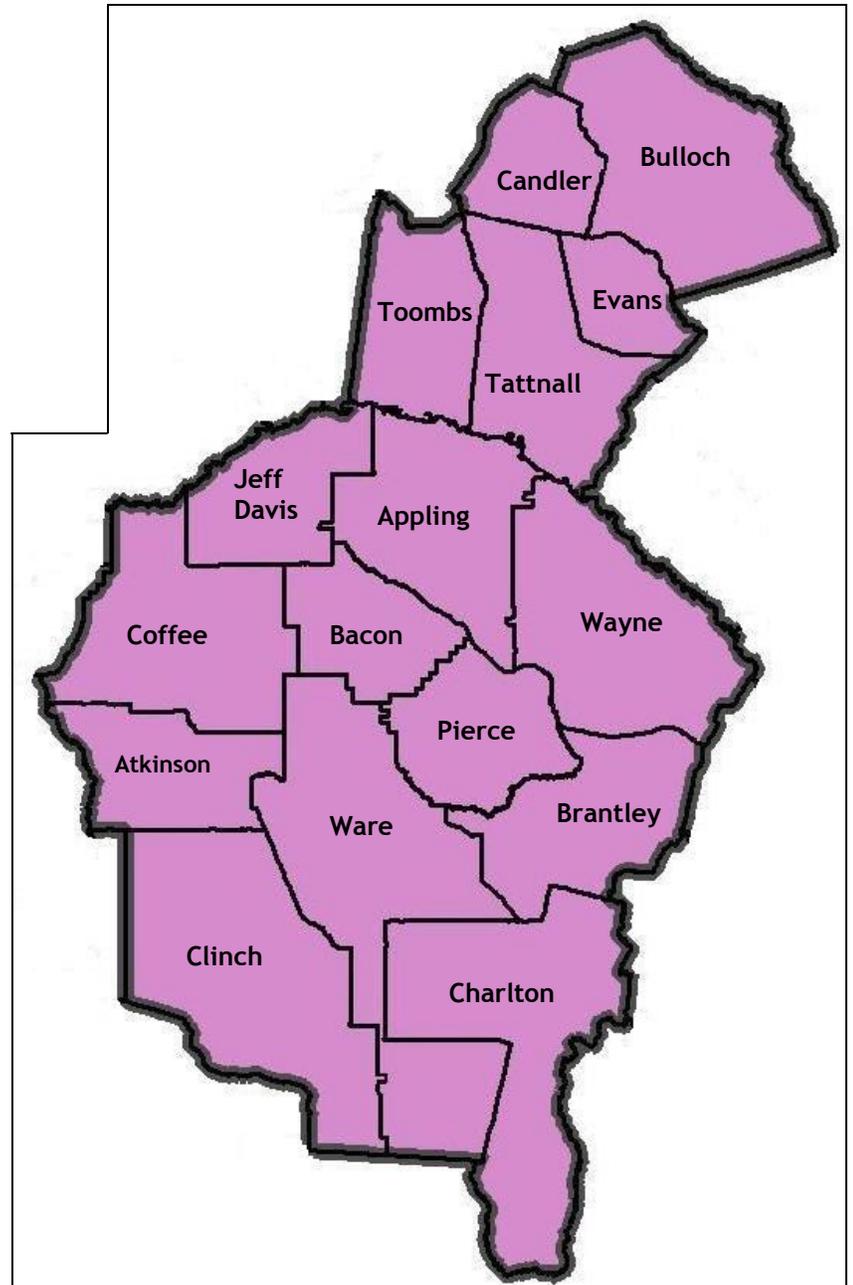
District 9-2

2014 Georgia Immunization Study Report



District 9-2 Data Collection Team	
Kay Davis, RN	District Immunization Coordinator

County	Number in Sample
Appling	3
Atkinson	1
Bacon	3
Brantley	4
Bulloch	17
Candler	3
Charlton	0
Clinch	5
Coffee	17
Evans	7
Jeff Davis	6
Pierce	3
Tattnall	9
Toombs	8
Ware	18
Wayne	11
District 9-2	115
District UTD by 24 months Immunization Rate	90.4%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 9-2

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 115 children in District 9-2 (Table 9-2-A).

For the District 9-2 sample, the up-to-date (UTD) immunization rate by 24 months of age (90.4%) was 4.9% higher than in 2013 (86.2%). The UTD immunization rate based on GRITS alone (90.4%) rose 4.9% from 2013 (86.2%). The UTD immunization rate by the end of data collection (97.4%) was 4.2% higher than in 2013 (93.5%) Immunization rates that decreased are shown in red (Table 9-2-B).

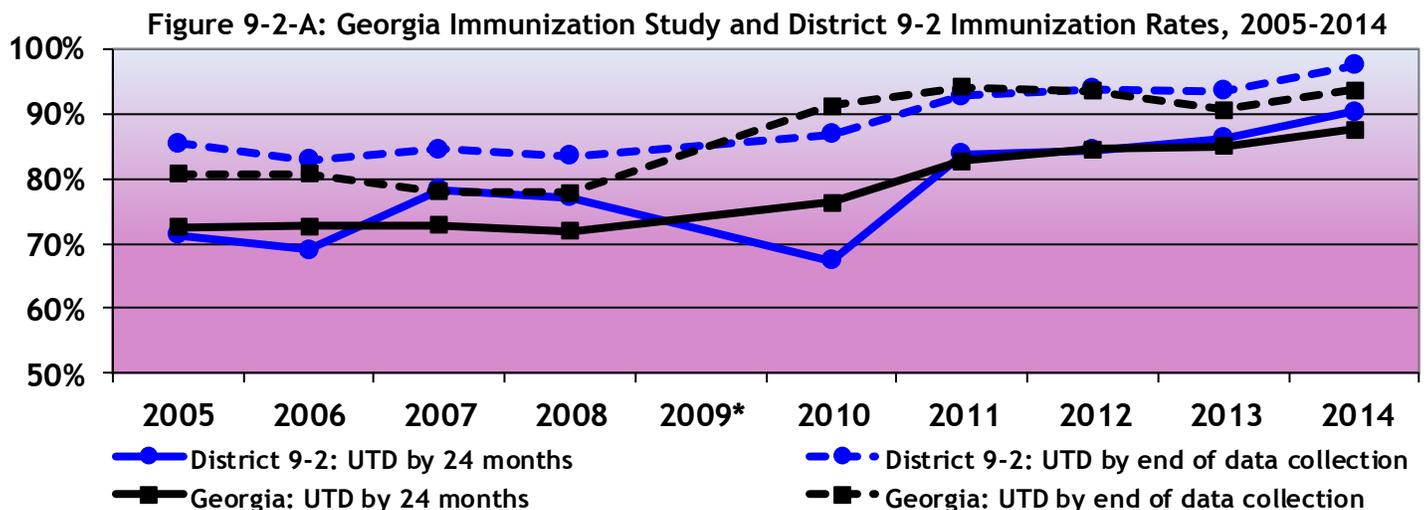
A comparison of District 9-2 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 9-2-A.

	District 9-2 (n)	State (n)
Original Sample	127	2,550
Ineligible	11	172
(Refused to Participate)	(1)	(12)
Eligible Sample	116	2,378
Unable to Locate [†]	1	135
Final Sample	115	2,243
Response Rate (%)	99.1	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 9-2 (%)	State Average (%)
UTD immunization rate** by 24 months	90.4	87.6
UTD immunization rate** Based on GRITS alone	90.4	82.3
UTD immunization rate** by end of data collection ^{††}	97.4	93.6
4 DTaP by 24 months	89.6	84.6
3 DTaP by 24 months	99.1	96.9
3 IPV by 24 months	98.3	96.0
1 MMR by 24 months	93.9	92.3
UTD Hib by 24 months	98.3	96.9
3 Hep B by 24 months	99.1	96.2
1 Varicella by 24 months	95.7	93.1
UTD PCV by 24 months	99.1	97.1
2 Rotavirus by 24 months	94.8	87.2
2 Hep A by 24 months	68.7	56.6
1+ Influenza by 24 months	59.1	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



District 9-2, Georgia Immunization Study Report, p3

Table 9-2-C: District 9-2 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 9-2 Sample		Immunization Rates for District 9-2 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 9-2 sample of births n=115 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 9-2 Rates			90.4	90.4	97.4
Maternal Race/Ethnicity^{‡,†}					
White, non-Hispanic (n=66)	43.1	57.4	87.9	87.9	95.4
White, Hispanic (n=2)	3.4	1.7	100.0	100.0	100.0
Black (n=32)	36.0	27.8	90.6	90.6	100.0
Unspecified, Hispanic (n=10)	7.6	8.7	100.0	100.0	100.0
Asian (n=1)	2.6	0.9	100.0	100.0	100.0
Multiracial (n=0)	1.4	0.0	N/A	N/A	N/A
Maternal Age^{‡,†}					
<25 years (n=64)	40.1	55.7	84.4	84.4	95.3
25-34 years (n=44)	47.3	38.3	97.7	97.7	100.0
35+ years (n=7)	12.5	6.1	100.0	100.0	100.0
Maternal Education^{‡,†}					
Some College+ (n=44)	45.4	38.3	97.7	97.7	100.0
HS Diploma/GED (n=41)	32.1	35.7	90.2	90.2	97.6
9th-11th grade (n=25)	14.7	21.7	80.0	80.0	92.0
<9th grade (n=5)	4.8	4.3	80.0	80.0	100.0
Maternal Marital Status[‡]					
Married (n=48)	49.6	41.7	95.8	95.8	100.0
Unmarried (n=67)	50.2	58.3	86.6	86.6	95.5
WIC[⊖]					
Non-WIC (n=20)	32.8	17.4	100.0	100.0	100.0
WIC (n=95)	67.2	82.6	88.4	88.4	96.8
Number of Providers^{‡,⊖}					
1 (n=27)	44.6	23.5	100.0	100.0	100.0
2 (n=16)	22.3	13.9	87.5	87.5	100.0
3 (n=7)	7.3	6.1	100.0	100.0	100.0
Provider Type^{‡,⊖}					
Public Sector Only (n=2)	0.8	1.7	100.0	100.0	100.0
Private Sector Only (n=31)	64.2	27.0	100.0	100.0	100.0
Both (n=17)	9.2	14.8	88.2	88.2	100.0

⊖ Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 9-2, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 9-2 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic mothers
- Children of mothers under 25 years of age
- Children of mothers still in high school
- Children of unmarried mothers
- Children enrolled in the WIC program
- Children who received immunizations from two providers vs. a single provider
- Children seeing providers in both the public and private sector

Figure 9-2-B: Immunizations Administered in Private vs. Public Sector, District 9-2, 2014 (n=1,018)

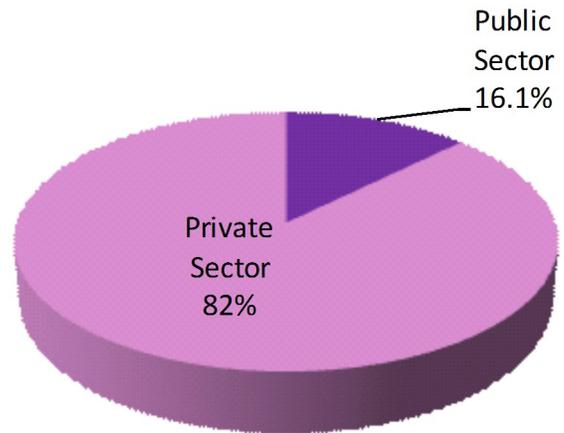


Table 9-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 9-2, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	75.7	85.6	83.6	87.0	89.6
3 Polio by 24 months	94.4	95.5	95.3	98.4	98.3
1 MMR by 24 months	86.9	94.6	94.5	95.1	93.9
UTD Hib by 24 months	82.2	92.8	96.1	97.6	98.3
3 Hepatitis B by 24 months	92.5	95.5	96.9	100.0	99.1
1 Varicella by 24 months	88.8	95.5	93.8	96.7	95.7
UTD PCV by 24 months	86.0	96.4	89.1	87.0	99.1
2 Rotavirus	73.8	81.1	64.1	88.6	94.8
1 Influenza by 24 months	51.4	49.6	60.9	18.7	59.1
Hepatitis B birth dose	-	-	86.7	95.1	92.2

Immunization Rates by Vaccine Antigen: In District 9-2, the UTD immunization rates by 24 months for several vaccine antigens decreased in 2014 (shown in red) (Table 9-2-D).

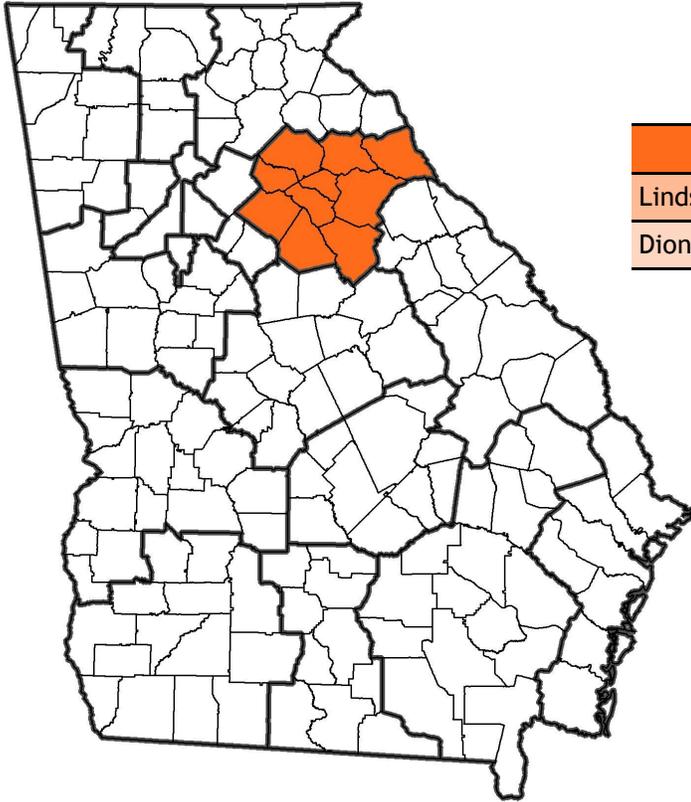
In District 9-2, the UTD immunization rate for DTaP was the lowest at 89.6%, up from 87.0% in 2013. The UTD immunization rate for MMR was also the second-lowest at 93.9%, down from 95.1% in 2013.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP and MMR vaccines could reasonably be the primary focus of District and County-level immunization campaigns.



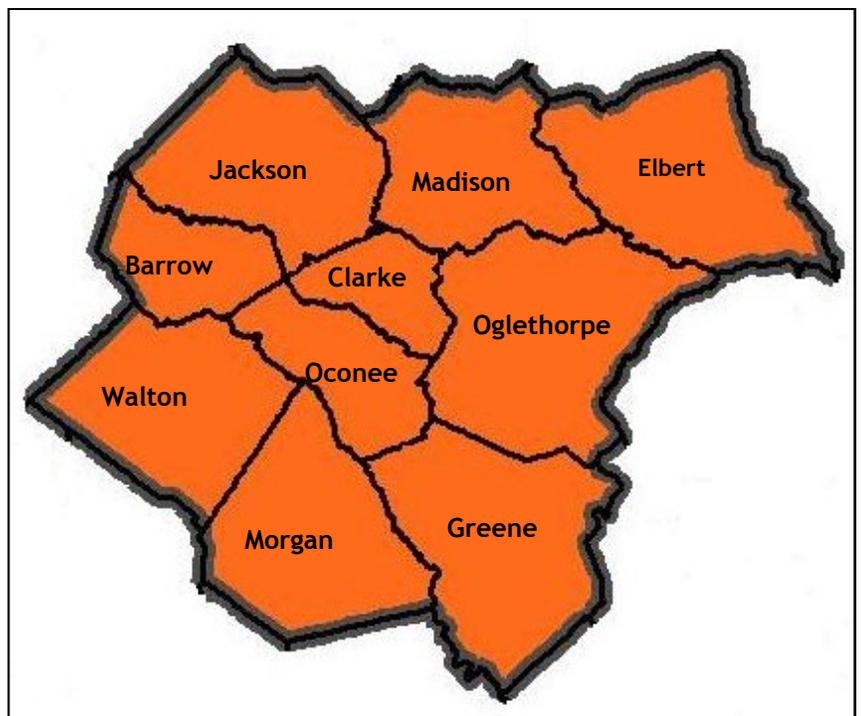
District 10-0

2014 Georgia Immunization Study Report



District 10 Data Collection Team	
Lindsey Kidd	District Immunization Coordinator
Dionne Hansey	Immunization Administrative Specialist

County	Number in Sample
Barrow	13
Clarke	19
Elbert	2
Greene	1
Jackson	16
Madison	7
Morgan	2
Oconee	4
Oglethorpe	2
Walton	18
District 10	84
District UTD by 24 months Immunization Rate	89.3%
State of Georgia	2,243
State UTD by 24 months Immunization Rate	87.6%





District 10-0

Georgia Immunization Study Report, p2



The 2014 GIS sampled a total of 84 children in District 10-0 (Table 10-0-A).

For the District 10-0 sample, the up-to-date (UTD) immunization rate by 24 months of age (89.3%) was 3.1% lower than in 2013 (92.2%). The UTD immunization rate based on GRITS alone (85.7%) fell 5.4% from 2013 (90.6%). The UTD immunization rate by the end of data collection (95.2%) was 2.6% lower than in 2013 (97.7%) Immunization rates that decreased are shown in red (Table 10-0-B).

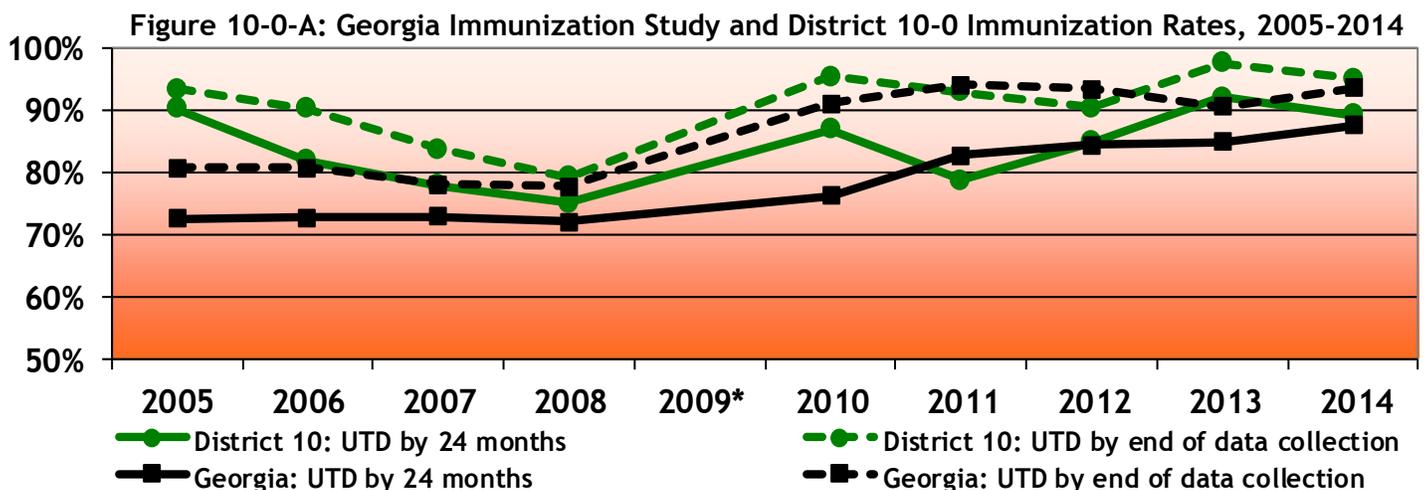
A comparison of District 10-0 coverage rates with state results for GA for the 4:3:1:3:3:1:4 series between 2005 and 2014 is shown in Figure 10-0-A.

	District 10 (n)	State (n)
Original Sample	92	2,550
Ineligible	6	172
(Refused to Participate)	(1)	(12)
Eligible Sample	86	2,378
Unable to Locate [†]	2	135
Final Sample	84	2,243
Response Rate (%)	97.7	94.3

[†] Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

	District 10-0 (%)	State Average (%)
UTD immunization rate** by 24 months	89.3	87.6
UTD immunization rate** Based on GRITS alone	85.7	82.3
UTD immunization rate** by end of data collection ^{††}	95.2	93.6
4 DTaP by 24 months	85.7	84.6
3 DTaP by 24 months	98.8	96.9
3 IPV by 24 months	98.8	96.0
1 MMR by 24 months	95.2	92.3
UTD Hib by 24 months	100.0	96.9
3 Hep B by 24 months	96.4	96.2
1 Varicella by 24 months	96.4	93.1
UTD PCV by 24 months	100.0	97.1
2 Rotavirus by 24 months	88.1	87.2
2 Hep A by 24 months	54.8	56.6
1+ Influenza by 24 months	65.5	63.6

^{††} This value includes children who become UTD during the data collection period. This number, when compared to the values followed with "by 24 months", is a testament to the efforts of District staff to reach the children originally listed as incomplete in their District.
 ** This rate includes children up-to-date by ACIP-recommended catch-up schedule.



* 2009 data was not collected due to a personnel vacancy.

District 10, Georgia Immunization Study Report, p3

Table 10-0-C: District 10-0 Sample Demographics & Immunization Rates, 2014

	Demographic Rates for State Sample and District 10-0 Sample		Immunization Rates for District 10-0 Sample		
	State sample of Jan. 2012 births n=2,243 (%)	District 10-0 sample of births n=84 (%)	UTD based on GRITS alone (%)	UTD by 24 months (%)	UTD by end of data collection (%)
District 10-0 Rates			85.7	89.3	95.2
Maternal Race/Ethnicity^{†,‡}					
White, non-Hispanic (n=50)	43.1	59.5	86.0	88.0	92.0
White, Hispanic (n=2)	3.4	2.4	50.0	100.0	100.0
Black (n=14)	36.0	16.7	85.7	85.7	100.0
Unspecified, Hispanic (n=13)	7.6	15.5	100.0	100.0	100.0
Asian (n=1)	2.6	1.2	0.0	0.0	100.0
Multiracial (n=0)	1.4	0.0	N/A	N/A	N/A
Maternal Age^{‡,†}					
<25 years (n=33)	40.1	39.3	84.8	87.9	97.0
25-34 years (n=46)	47.3	54.8	87.0	89.1	93.5
35+ years (n=5)	12.5	6.0	80.0	100.0	100.0
Maternal Education^{†,‡}					
Some College+ (n=33)	45.4	39.3	84.8	90.9	93.9
HS Diploma/GED (n=39)	32.1	46.4	82.1	84.6	94.9
9th-11th grade (n=7)	14.7	8.3	100.0	100.0	100.0
<9th grade (n=5)	4.8	6.0	100.0	100.0	100.0
Maternal Marital Status[‡]					
Married (n=48)	49.6	57.1	83.3	87.5	91.7
Unmarried (n=36)	50.2	42.9	88.9	91.7	100.0
WIC^Ø					
Non-WIC (n=27)	32.8	32.1	85.2	88.9	92.6
WIC (n=57)	67.2	67.9	86.0	89.5	96.5
Number of Providers^{†,Ø}					
1 (n=49)	44.6	58.3	89.8	93.9	95.9
2 (n=21)	22.3	25.0	71.4	76.2	90.5
3 (n=6)	7.3	7.1	100.0	100.0	100.0
Provider Type^{†,Ø}					
Public Sector Only (n=1)	0.8	1.2	0.0	0.0	100.0
Private Sector Only (n=66)	64.2	78.6	87.9	90.9	93.9
Both (n=9)	9.2	10.7	77.8	88.9	100.0

Ø Please refer to Appendix B for detailed information about the collection of information for this variable.

† Indicates that the percentages for this variable may not add up to 100.0% because the information was missing in some cases.

‡ Indicates that this variable corresponds to the data collected at the time of delivery.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2012 Georgia birth cohort, namely WIC status, Number of Providers and Provider Type.

District 10, Georgia Immunization Study Report, p4

Demographic Findings: In spite of the small sample size and inherent limitations of the data (Methods, p 11), the District 10 results suggest that the following groups were the least often up-to-date on their immunizations by 24 months of age:

- Children of white, non-Hispanic and black mothers
- Children of mothers under 25 years of age
- Children of mothers with a high school/GED level of education
- Children of married mothers
- Children who received immunizations from two providers vs. a single provider

Figure 10-0-B: Immunizations Administered in Private vs. Public Sector, District 10-0, 2014 (n=1,524)

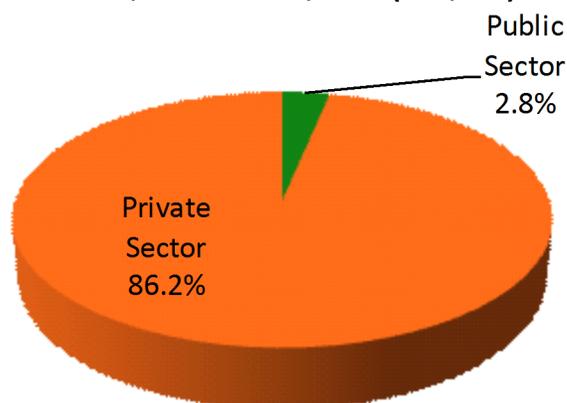


Table 10-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 10-0, 2010-2014

	2010	2011	2012	2013	2014
4 DTaP by 24 months	91.6	84.9	89.2	88.3	85.7
3 Polio by 24 months	97.7	96.0	95.8	100.0	98.8
1 MMR by 24 months	95.4	89.9	94.6	94.5	95.2
UTD Hib by 24 months	95.4	95.0	98.2	100.0	100.0
3 Hepatitis B by 24 months	97.0	95.0	95.2	99.2	96.4
1 Varicella by 24 months	97.0	93.9	95.8	95.3	96.4
UTD PCV by 24 months	97.7	95.0	97.0	87.5	100.0
2 Rotavirus	74.8	82.8	79.0	86.7	88.1
1 Influenza by 24 months	59.5	53.5	50.3	25.8	65.5
Hepatitis B birth dose	-	-	68.3	75.0	82.1

Immunization Rates by Vaccine Antigen: In District 10-0, the UTD immunization rates by 24 months for most vaccine antigens were at their highest in 2013, but a few decreased in 2014 (shown in red) (Table 10-0-D).

In District 10-0, the UTD immunization rate for DTaP was the lowest at 85.7%, down from 88.3% in 2013. The UTD immunization rate for MMR was the second-lowest at 95.2%, up from 94.5% in 2013.

Vaccine Antigen-Specific Conclusions: Antigen specific data suggest that the DTaP and MMR vaccines could reasonably be the primary focus of District and County-level immunization campaigns.

Appendices

Appendix A: Margins of Error, p1

Appendix Table A-1: Margins of Error for UTD Immunization Rates by 24 months, Georgia, 2014						
District	Final Sample (n)	Immunization Rate	1-Immunization Rate	Margin of Error*	95% Confidence Intervals	
1-1 Northwest (Rome)	145	84.8%	15.2%	3.0%	79.0%	90.6%
1-2 North Georgia (Dalton)	97	84.5%	15.5%	3.7%	77.3%	91.7%
2-0 North (Gainesville)	141	87.2%	12.8%	2.8%	81.7%	92.7%
3-1 Cobb-Douglas	167	92.2%	7.8%	2.1%	88.1%	96.3%
3-2 Fulton	160	90.6%	9.4%	2.3%	86.1%	95.1%
3-3 Clayton	157	79.0%	21.0%	3.3%	72.6%	85.4%
3-4 Gwinnett, Newton, Rockdale	153	86.3%	13.7%	2.8%	80.9%	91.7%
3-5 DeKalb	97	91.8%	8.2%	2.8%	86.3%	97.3%
4-0 LaGrange	157	86.6%	13.4%	2.7%	81.3%	91.9%
5-1 South Central (Dublin)	81	87.7%	12.3%	3.6%	80.5%	94.9%
5-2 North Central (Macon)	98	93.9%	6.1%	2.4%	89.2%	98.6%
6-0 East Central (Augusta)	130	90.0%	10.0%	2.6%	84.8%	95.2%
7-0 West Central (Columbus)	99	78.8%	21.2%	4.1%	70.7%	86.9%
8-1 South (Valdosta)	101	84.2%	15.8%	3.6%	77.1%	91.3%
8-2 Southwest (Albany)	107	91.6%	8.4%	2.7%	86.3%	96.9%
9-1 Coastal (Savannah)	154	88.3%	11.7%	2.6%	83.2%	93.4%
9-2 Southeast (Waycross)	115	90.4%	9.6%	2.7%	85.0%	95.8%
10-0 Northeast (Athens)	84	89.3%	10.7%	3.4%	82.7%	95.9%
Georgia	2243	87.6%	12.4%	0.7%	86.2%	89.0%

**The margin of error (MOE) is a statistic conveying the amount of random sampling error in a survey's results. It expresses the maximum expected difference between the true population parameter and a sample estimate of that parameter. The larger the MOE around an estimated value, the less accurate the estimated value is.*

Appendix A: Margins of Error, p2

Appendix Table A-2: Margins of Error for UTD Immunization Rates by End of Six-Month Data Collection, Georgia, 2014						
District	Final Sample (n)	Immunization Rate	1-Immunization Rate	Margin of Error*	95% Confidence Intervals	
1-1 Northwest (Rome)	145	91.7%	8.3%	2.3%	87.2%	96.2%
1-2 North Georgia (Dalton)	97	91.8%	8.2%	2.8%	86.3%	97.3%
2-0 North (Gainesville)	141	90.8%	9.2%	2.4%	86.0%	95.6%
3-1 Cobb-Douglas	167	97.6%	2.4%	1.2%	95.3%	99.9%
3-2 Fulton	160	94.4%	5.6%	1.8%	90.8%	98.0%
3-3 Clayton	157	86.0%	14.0%	2.8%	80.6%	91.4%
3-4 Gwinnett, Newton, Rockdale	153	92.2%	7.8%	2.2%	88.0%	96.4%
3-5 DeKalb	97	97.9%	2.1%	1.5%	95.0%	100%
4-0 LaGrange	157	92.4%	7.6%	2.1%	88.3%	96.5%
5-1 South Central (Dublin)	81	90.1%	9.9%	3.3%	83.6%	96.6%
5-2 North Central (Macon)	98	95.9%	4.1%	2.0%	92.0%	99.8%
6-0 East Central (Augusta)	130	96.2%	3.8%	1.7%	92.9%	99.5%
7-0 West Central (Columbus)	99	92.9%	7.1%	2.6%	87.8%	98.0%
8-1 South (Valdosta)	101	97.0%	3.0%	1.7%	93.7%	100%
8-2 Southwest (Albany)	107	96.3%	3.7%	1.8%	92.7%	99.9%
9-1 Coastal (Savannah)	154	92.2%	7.8%	2.2%	88.0%	96.4%
9-2 Southeast (Waycross)	115	97.4%	2.6%	1.5%	94.5%	100%
10-0 Northeast (Athens)	84	95.2%	4.8%	2.3%	90.6%	99.8%
Georgia	2243	93.6%	6.4%	0.5%	92.6%	94.6%

**The margin of error (MOE) is a statistic conveying the amount of random sampling error in a survey's results. It expresses the maximum expected difference between the true population parameter and a sample estimate of that parameter. The larger the MOE around an estimated value, the less accurate the estimated value is.*

Appendix B: Description of Demographic Variables, p1

Variable	How Often Missing for State Sample (%)	Source	Additional Information
Maternal Race	10.5%	Electronic Birth Records	Was combined with maternal ethnicity variable to form race/ethnicity category.
Maternal Ethnicity	5.9%	Electronic Birth Records	Only used in combination with white race and undefined race because the statewide sample had only 10 children for whom maternal race was defined, not “white”, with Hispanic ethnicity.
Maternal Education	3.1%	Electronic Birth Records	Additional coding not needed; standard measure in GA Electronic Birth Records.
Maternal Age	0.1%	Electronic Birth Records	Originally coded as number of days. Maternal age break-down chosen based on HEDIS measures
Maternal Marital Status	0.2%	Electronic Birth Records	Additional coding not needed; standard measure in GA Electronic Birth Records. See below for more information about combination with repeat birth variable.
Provider Type	%	GRITS/Data Collectors	For each administered vaccine, the provider was assessed as either private, public or unknown. If a child only received immunizations from a public health department, they were classified as “public only”. If a child received immunizations exclusively from (a) private provider/s, they were classified as “private only”. If they received immunizations from a mixture, they were classified as “both”
Number of Providers	%	GRITS/Data Collectors	For each administered vaccine, the provider was researched. For records where the same provider administered all vaccines, the child was classified as having “1” provider. For two different providers, the child would have “2” providers. The number of providers was limited to 3.
WIC Enrollment	N/A	WIC Program	Yearly cumulative lists of enrolled children were used to match children from the study sample to the enrollment list using names and dates of birth. The duration of enrollment was not calculated, so the children classified as “WIC enrolled” could have been enrolled for a short amount of time or for their entire lives.

Appendix C: Reasons for Incomplete Immunization History

Appendix Table C: Frequency of Reasons for Incomplete Immunizations by End of Data Collection, Georgia, 2014

- A. Religious Exemption
- B. Medical Exemption
- C. Temporary Vaccine Shortage
- D. Parent Refuses to Vaccinate*
- E. Parent Chooses to delay vaccination
- F. Physician Chooses to delay vaccination
- G. Missed Appointments/Convenience Issue
- H. Other

District	Sample	A	B	C	D	E	F	G	H	Total
1-1 Northwest (Rome)	145	4	0	0	0	4	0	1	3	12
1-2 North Georgia (Dalton)	97	0	0	0	3	3	1	1	0	8
2-0 North (Gainesville)	141	4	0	0	2	4	0	3	0	13
3-1 Cobb-Douglas	167	0	0	1	0	2	1	0	0	4
3-2 Fulton	160	0	0	1	2	4	0	0	2	9
3-3 Clayton	157	2	0	1	1	7	4	2	5	22
3-4 Gwinnett, Newton, Rockdale	153	0	0	0	6	1	0	5	0	12
3-5 DeKalb	97	0	0	0	1	1	0	0	0	2
4-0 LaGrange	157	0	0	0	2	4	0	2	4	12
5-1 South Central (Dublin)	81	0	0	0	3	1	1	2	1	8
5-2 North Central (Macon)	98	0	0	0	1	3	0	0	0	4
6-0 East Central (Augusta)	130	1	0	0	1	1	0	2	0	5
7-0 West Central (Columbus)	99	0	0	0	0	0	0	5	2	7
8-1 South (Valdosta)	101	1	0	0	0	1	0	0	1	3
8-2 Southwest (Albany)	107	0	1	0	1	1	0	1	0	4
9-1 Coastal (Savannah)	154	2	0	0	1	1	3	3	2	12
9-2 Southeast (Waycross)	115	0	0	0	0	0	0	3	0	3
10-0 Northeast (Athens)	84	0	0	0	0	3	0	1	0	4
Georgia	2243	14	1	3	24	41	10	31	20	144

*Child was classified as "Parent Refusal to Vaccinate" if a parent refused one or more vaccine series.

Appendix D: District Immunization Measures, p1

Appendix Table E-1: District Immunization Coverage Rates, 2014

Highest Rate

- A. District Response Rate
- B. UTD by 24 months, based on GRITS alone, 2014
- C. UTD by 24 months, 2014
- D. UTD by end of data collection, 2014
- E. Average UTD by 24 months, 2010-2014
- F. Percent change in UTD by 24 months, 2013 to 2014
- G. Percent change in UTD by end of data collection, 2013 to 2014
- H. Percent change in UTD from 24 months to end of data collection, 2014

District	A (%)	B (%)	C (%)	D (%)	E (%)	F (%)	G (%)	H (%)
1-1 Northwest (Rome)	97.3	80.7	84.8	91.7	86.5	0.5	0.7	8.1
1-2 North Georgia (Dalton)	98.0	78.4	84.5	91.8	83.1	-4.3	-1.1	8.6
2-0 North (Gainesville)	97.9	78.0	87.2	90.8	83.8	6.2	6.8	4.1
3-1 Cobb-Douglas	90.8	88.0	92.2	97.6	83.6	16.7	7.4	5.9
3-2 Fulton	94.1	87.5	90.6	94.4	82.2	8.0	7.5	4.2
3-3 Clayton	88.7	79.0	79.0	86.0	77.8	16.3	18.9	8.9
3-4 East Metro (Lawrenceville)	93.9	77.1	86.3	92.2	81.8	0.0	1.0	6.8
3-5 DeKalb	79.5	88.7	91.8	97.9	87.3	0.4	4.4	6.6
4-0 LaGrange	98.1	84.7	86.6	92.4	83.2	2.2	3.8	6.7
5-1 South Central (Dublin)	94.2	81.5	87.7	90.1	81.6	1.4	-6.0	2.7
5-2 North Central (Macon)	91.6	67.3	93.9	95.9	85.8	3.2	3.7	2.1
6-0 East Central (Augusta)	100.0	83.8	90.0	96.2	84.3	4.4	-0.4	6.9
7-0 West Central (Columbus)	98.0	71.7	78.8	92.9	81.4	-12.2	-0.6	17.9
8-1 South (Valdosta)	96.2	80.2	84.2	97.0	84.2	-4.9	4.0	15.2
8-2 Southwest (Albany)	99.1	86.9	91.6	96.3	84.5	4.7	2.3	5.1
9-1 Coastal (Savannah)	90.1	85.7	88.3	92.2	79.1	11.1	5.9	4.4
9-2 Southeast (Waycross)	99.1	90.4	90.4	97.4	82.4	4.9	4.2	7.7
10-0 Northeast (Athens)	97.7	85.7	89.3	95.2	86.5	-3.1	-2.6	6.6
Georgia	94.3	83.2	87.6	93.6	83.2	3.1	3.3	6.8

Appendix D: District Immunization Measures, p2

Appendix Table E-2: District Vaccine Antigen-Specific Immunization Measures, 2014

Highest Rate by 24 months

District	4 DTaP (%)	3+ Polio (%)	1 MMR (%)	UTD Hib (%)	HepB Birth (%)	3 HepB (%)	1 Varic. (%)	UTD PCV (%)	2+ Rota. (%)	1+ Flu (%)
1-1 Northwest (Rome)	84.1	95.2	92.4	95.9	87.6	95.2	92.4	95.9	86.2	58.6
1-2 North Georgia (Dalton)	82.5	97.9	91.8	97.9	85.6	95.9	92.8	100.0	90.7	75.3
2-0 North (Gainesville)	85.1	95.0	90.1	96.5	83.0	93.6	92.9	96.5	90.1	64.5
3-1 Cobb-Douglas	88.6	98.2	95.2	100.0	77.8	97.0	94.6	99.4	92.2	69.5
3-2 Fulton	87.5	96.9	91.9	97.5	84.4	96.3	93.8	96.9	85.6	51.2
3-3 Clayton	73.9	89.2	84.1	94.9	87.9	93.0	84.7	95.5	83.4	56.1
3-4 East Metro (Lawrenceville)	83.7	96.1	91.5	94.8	73.9	95.4	92.2	94.8	92.2	64.7
3-5 DeKalb	88.7	96.9	96.9	99.0	82.5	96.9	97.9	100.0	85.6	72.2
4-0 LaGrange	82.8	95.5	90.4	94.3	85.4	96.2	89.8	94.3	84.1	68.2
5-1 South Central (Dublin)	80.2	95.1	93.8	92.6	95.1	95.1	93.8	93.8	70.4	44.4
5-2 North Central (Macon)	89.8	94.9	94.9	96.9	96.9	96.9	95.9	96.9	83.7	62.2
6-0 East Central (Augusta)	87.7	96.9	92.3	98.5	83.8	97.7	94.6	98.5	90.0	72.3
7-0 West Central (Columbus)	75.8	97.0	89.9	96.0	98.0	98.0	89.9	96.0	88.9	58.6
8-1 South (Valdosta)	85.1	98.0	93.1	98.1	91.1	98.0	94.1	99.0	93.1	68.3
8-2 Southwest (Albany)	88.8	97.2	95.3	98.1	77.8	98.1	95.3	99.1	88.8	67.3
9-1 Coastal (Savannah)	84.4	94.8	93.5	96.1	84.4	94.8	94.2	95.5	79.9	66.9
9-2 Southeast (Waycross)	89.6	98.3	93.9	98.3	92.2	99.1	95.7	99.1	94.8	59.1
10-0 Northeast (Athens)	85.7	98.8	95.2	100.0	82.1	96.4	96.4	100.0	88.1	65.5
Georgia	84.6	96.0	92.3	96.9	85.6	96.2	93.1	97.1	87.2	63.6

Additional Resources

For more information about the Georgia Department of Public Health Immunization Program, please visit the following website:

<http://dph.georgia.gov/immunization-section>

For past Georgia Immunization Study Final Reports, please visit the following website:

<http://dph.georgia.gov/immunization-publications>

For more information about the Georgia Department of Public Health Acute Disease Epidemiology Unit, please visit the following website:

<http://dph.georgia.gov/acute-disease-epidemiology>

For more information about the Centers for Disease Control and Prevention's (CDC) National Immunization Survey (NIS), please visit the following website:

<http://www.cdc.gov/nchs/nis.htm>

To access current vaccine schedules, vaccine information sheets and other immunization materials, please visit the Immunization Action Coalition website:

<http://www.immunize.org>

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