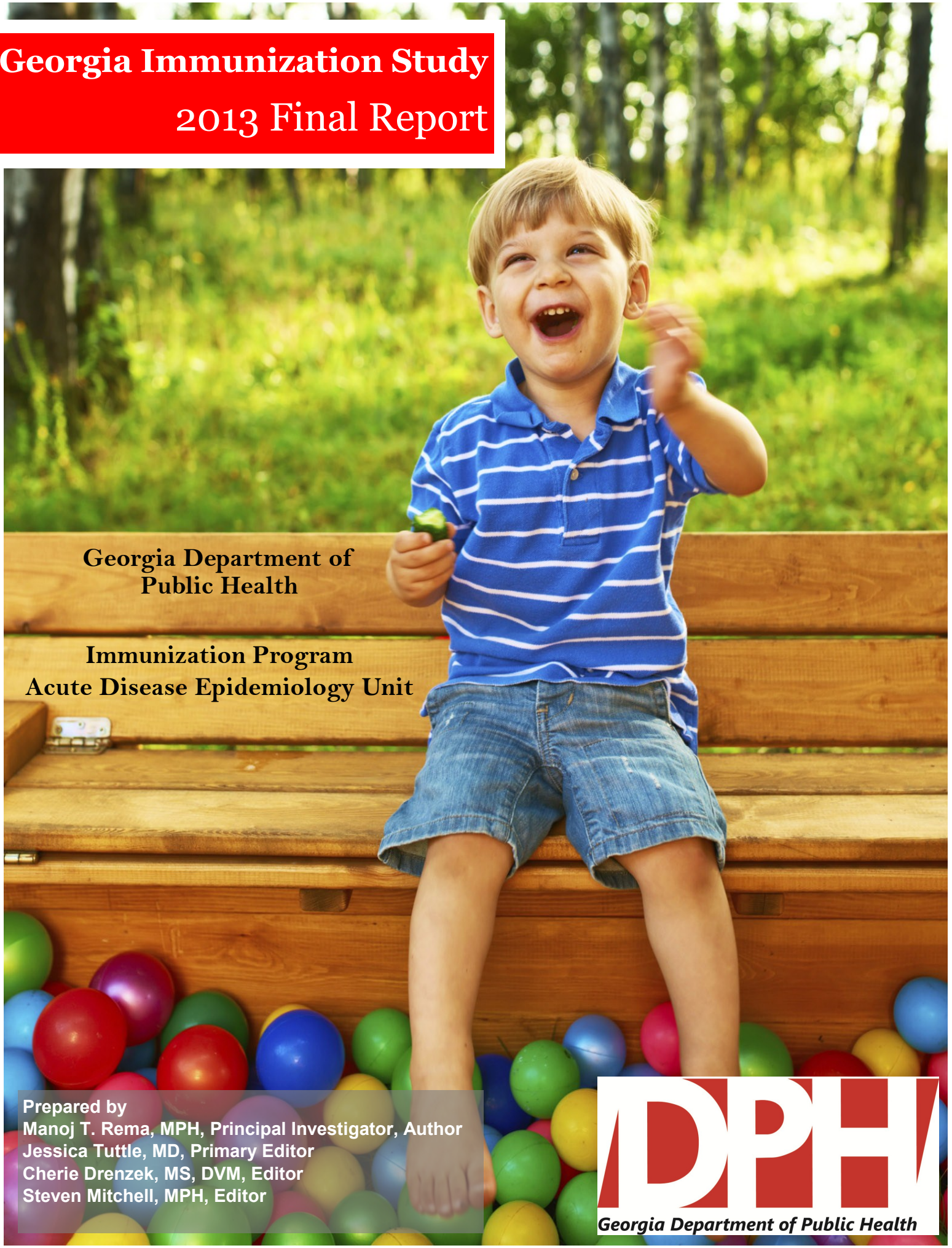
Georgia Immunization Study
2013 Final Report



Georgia Department of Public Health

Immunization Program
Acute Disease Epidemiology Unit

Prepared by
Manoj T. Rema, MPH, Principal Investigator, Author
Jessica Tuttle, MD, Primary Editor
Cherie Drenzek, MS, DVM, Editor
Steven Mitchell, MPH, Editor

DPH
Georgia Department of Public Health

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A profound thank you and sincere appreciation is also given to the private and non-public health providers and the Vaccines for Children providers that participated in this collaborative effort. Their cooperation and assistance throughout the study is greatly appreciated.

Additional gratitude goes to Mike Chaney from the Georgia Chapter of the American Academy of Pediatrics for his support on making this study more pertinent to pediatricians throughout Georgia; Karl Soetebier for the development and maintenance of our data collection system; and to Dr. John Carter for his guidance and support on making the study and analysis possible.

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Executive Summary

The 2013 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 2-year-old GIS employed a retrospective cohort research design to determine the up-to-date immunization rate for children born in the State of Georgia. Immunization history data for 18 Health District cohorts of children who turned two in January of 2013 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 2013[1].

Each child's immunization record was reviewed in GRITS for completeness. If the child's record was not up-to-date, 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 (UTD), 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 month*s 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 2013, the Georgia statewide up-to-date immunization rate by 24 months was 85.0%, up from 84.5% in 2012 (Page 18, Table 2).

This year, an additional immunization rate was calculated: up-to-date by 24 months based on GRITS data alone. This was classified by documenting all the dates in the vaccine series based on GRITS information alone. This rate can be used to determine how well GRITS data reflects UTD by 24 months status. The UTD immunization rate based on GRITS data alone for the state was 80.2% - less than 5% below the UTD by 24 months rate of 85.0%.

An interesting observation was uncovered. When statewide immunization rates of 2-year-olds were compared by demographic group (Page 20, Table 4), children of White, Hispanic and Asian mothers had notably lower rates based on GRITS alone (74.0% and 76.8%, respectively) than when based on parent and provider recall (90.6% and 91.3%, respectively) indicating that these racial/ethnic groups may be UTD but are seeing providers who are not maintaining GRITS documentation. Similarly, children whose provider served in the public sector only had markedly lower rates based on GRITS data alone (37.5%) when compared with that based on parent and provider recall (81.3%). Further evaluation into possible relationships between findings is warranted, and may require provider education in the importance of timely GRITS documentation.

Efforts to bring children up-to-date were evident by an overall 6.6% increase in the immunization rate between 24 months of age and the end of the data collection period (Page xxvil, Appendix Table E-1). This increase provides evidence that 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 from our sample were administered in the private sector, the increase in up-to-date immunization rates by the end of the data collection 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,

[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

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 2013 study sample of children who were born in Georgia in 2011, 83.6% received their first dose of hepatitis B vaccine at birth (Page xxviii, Appendix Table E-2), up from 82.7% in 2012. In addition, the percentage of children who received the entire 3-dose hepatitis B series by 24 months of age slightly decreased from 96.1% in 2012 to 95.9% in 2013. These data suggest that the best way to protect children from hepatitis B infection by 24 months of age is to vaccinate at birth. Credit goes 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 67.9% in the Clayton District (3-3) to 92.2% in the Athens District (10-0). Between 2012 and 2013, District up-to-date by 24 months immunization rates rose by 0.6% overall for the state, with the greatest increase of 11.0% seen in the Dublin District (5-1) (Page xxvii, Appendix Table E-1).

Although the percentage of Georgia children who received the fourth dose of DTaP by 24 months of age decreased in 2013, it continues to significantly lag behind the percentage of children who received the third dose by 24 months of age. In fact, 96.6% of children had received 3 doses of DTaP by 24 months of age while only 84.6% had received their fourth dose in 2013 (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 children after their one year check-up. Future studies will assess the role Medicaid coverage and loss of coverage may have on the drop in fourth dose DTaP coverage among Georgia 2-year-olds.

Some variation remained by District in the percent of two-year-olds reported to be fully immunized by the end of the data collection period, ranging from 72.3% in the Clayton District (3-3) to 97.7% in the Athens District (10-0). These data support that contact with parents and providers during data collection *made a difference*. The greatest impact was seen in the Cobb District (3-1), where up-to-date immunization rates rose 15.1% 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 five Districts included children of unmarried mothers, children of mothers with previous children, and children of mothers less than 25 years of age. The groups that were high risk in at least eight Districts included children receiving immunizations from two or more providers instead of only one, children whose birth was covered by government-assisted insurance and children of mothers without a college education. 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 2013 report is the list of the top 3 Health Districts for various categories, including response rates, series immunization rates, and antigen-specific immunization rates (Page 23, Table 7). 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 2013 GIS report offers the people of Georgia and its Public 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 2013 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 two-year-old children born in the State of Georgia. Immunization history data for cohorts of children who turned two in January 2013 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.

At the end of 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 month*s 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 introduced to the study, *UTD by 24 months based on GRITS alone*, to ascertain how accurate 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 for demographic groups along with the District sample.

Target and Sample Populations

The target population of the 2013 GIS included all 24-month-old children born in the State of Georgia in 2011. A sample of 2,813 children born in the month of January 2011 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 2011. The number of children randomly selected from each District depended on population distribution statistics, response rates, and District immunization rates from the 2012 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
- Child's gestational age
- 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
- Payment type used to cover child's birth

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 five distinct sections to be completed by the public health data collectors: Child, 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.

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Step #2: Search for immunization records through the parent(s) and/or guardian(s).
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 2013 data analysis methods were different as those employed in 2012. 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 2011 and, thus, represented a fair estimate of immunization rates for all two-year-olds born in 2011, 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

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care system.

- Third, there may be children in the eligible sample 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 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=1004)
- White, Hispanic (n=96)
- Black (n=951)
- Unspecified, Hispanic (n=222)
- Asian (n=69)
- Multiracial (n=75)

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, GIS Georgia, 2013

	2013 (n)
Original Sample	2,813
Ineligible	181
(Refused to Participate)	(20)
Eligible Sample	2,632
Unable to Locate†	143
Final Sample	2,489
Response Rate (%)	94.6

† 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.

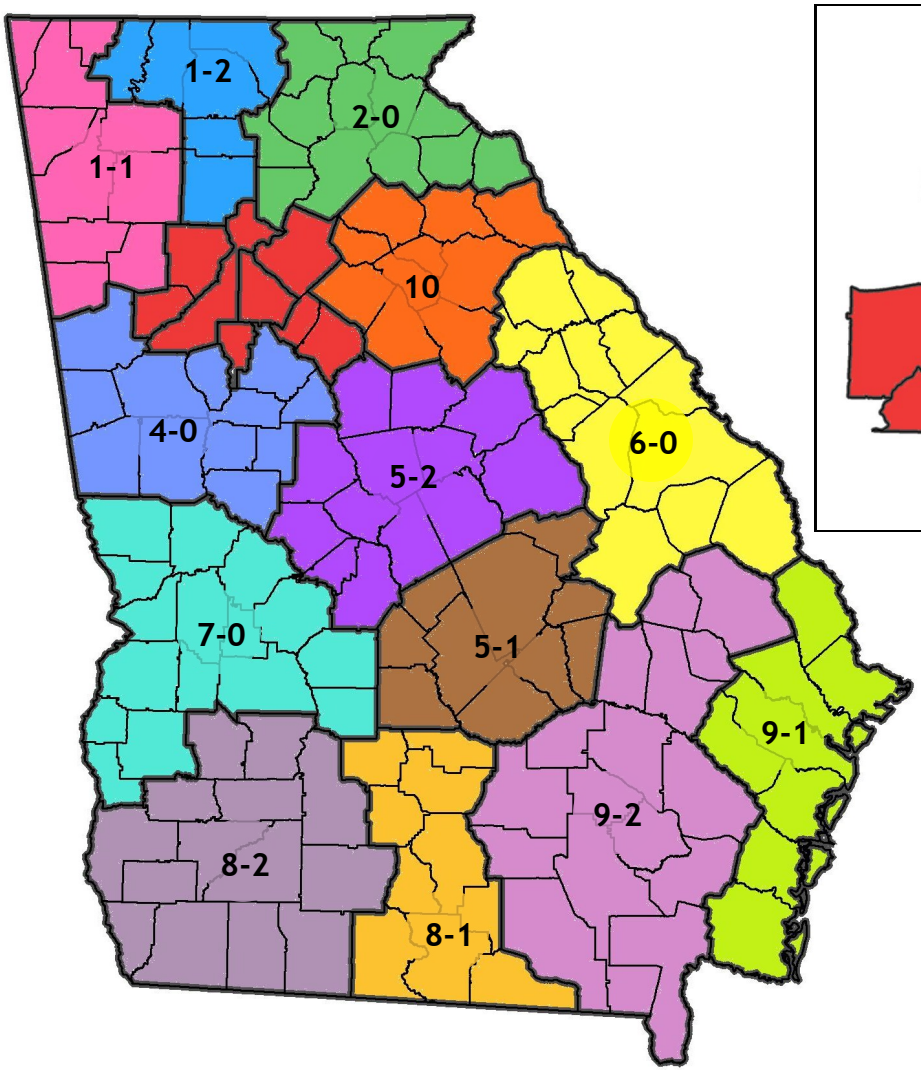
Section II

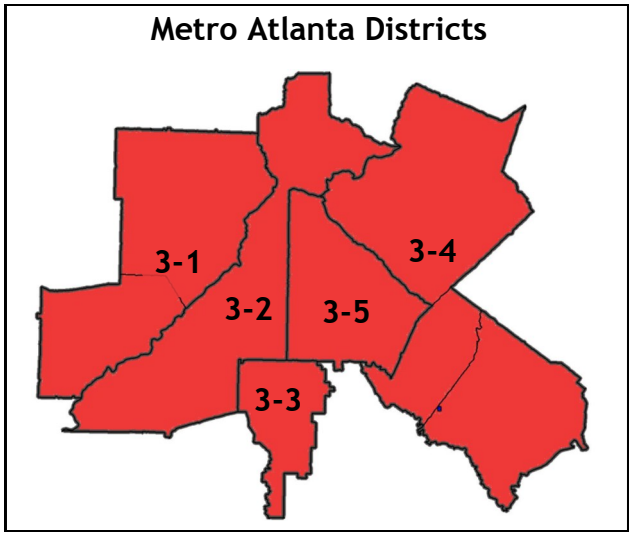
Statewide Results

State of Georgia

2013 Georgia Immunization Study Report

State-Level Immunization Study Staff	
Manoj T. Rema, MPH	Immunization Study Epidemiologist, Principal Investigator & Author
Jessica Tuttle, MD	Medical Epidemiologist, Primary Editor





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From 24 months to End of Data Collection: For the state sample, the up-to-date (UTD) immunization rate by 24 months of age (85.0%) was 4.8% higher than the UTD immunization rate based on GRITS alone (80.2%). By the end of data collection, the State UTD immunization rate was 90.6% (Table 2).

From 2012 to 2013: UTD coverage by 24 months increased by 0.6% from 2012 to 2013. The UTD coverage rate by the end of data collection decreased by 3.3% from 2012 to 2013 (Figure 1).

Sample population demographics for Georgia and their effect on immunization rates are discussed on the following pages.

Table 1: Sampling Scheme, Georgia, 2013

	2012 (n)	2013 (n)
Original Sample	2,973	2,813
Ineligible	130	181
(Refused to Participate)	(8)	(20)
Eligible Sample	2,835	2,632
Unable to Locate†	246	143
Final Sample	2,589	2,489
Response Rate (%)	92.3	94.6

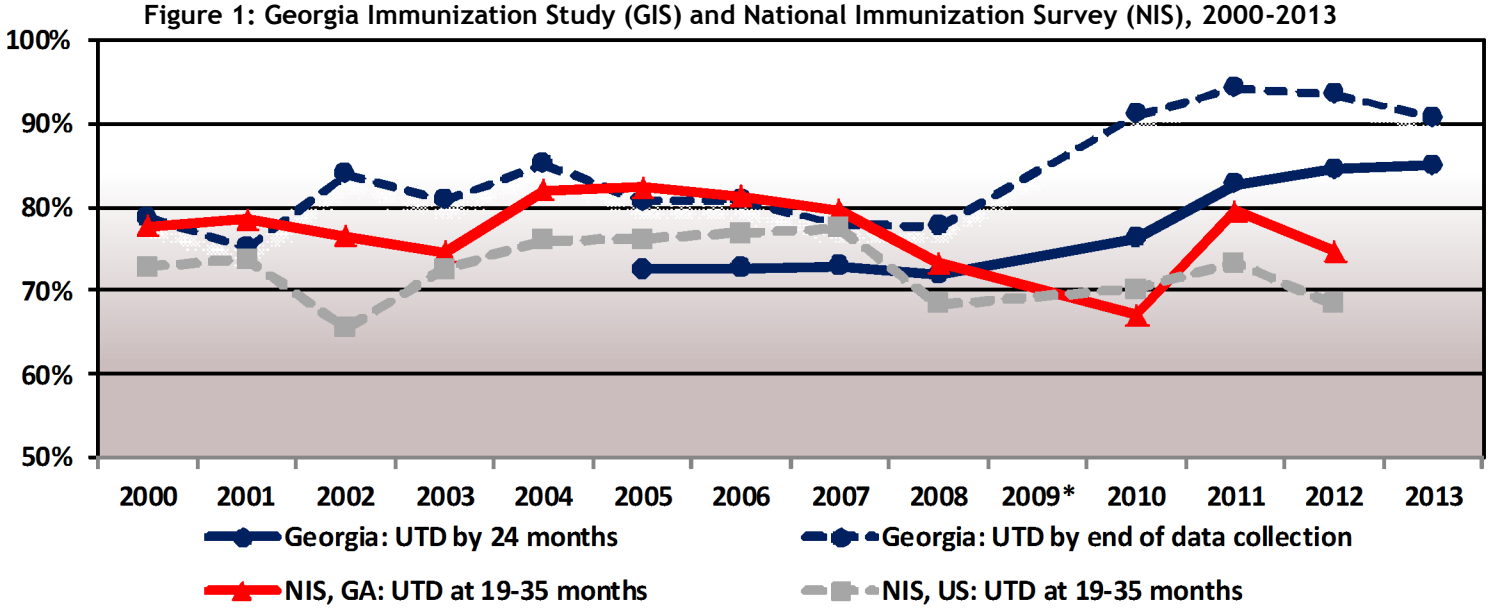
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 2: Immunization Summary by Series and Vaccine Antigen, Georgia, 2013

	2012 (%)	2013 (%)
UTD immunization rate* **by 24 months**	84.5	85.0
UTD immunization rate* **based on GRITS alone**	–	80.2
UTD immunization rate* **by end of six-month data collection†**	93.6	90.6
4 DTaP **by 24 months**	87.0	84.6
3 DTaP **by 24 months**	97.0	96.6
3 IPV **by 24 months**	96.0	95.7
1 MMR **by 24 months**	93.2	92.7
UTD Hib **by 24 months**	96.1	96.3
3 Hep B **by 24 months**	96.1	95.9
1 Varicella **by 24 months**	94.2	93.5
UTD PCV **by 24 months**	92.2	84.5
2 Rotavirus **by 24 months**	70.6	83.5
2 Hep A **by 24 months**	57.3	57.3
1+ Influenza **by 24 months**	57.1	29.3

† 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: Georgia Immunization Study (GIS) and National Immunization Survey (NIS), 2000-2013



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

Table 3: Sample Population Demographics, Georgia, 2013		
	State Sample of Jan. 2011 Births n=2,489 (%)	*All Georgia 2011 Births n= 132,239 (%)*
Maternal Race/Ethnicity‡,†		
White, non-Hispanic (n=1,004)	40.3	40.3
White, Hispanic (n=96)	3.8	3.8
Black (n=951)	38.2	33.2
Unspecified, Hispanic (n=222)	8.9	8.8
Asian (n=69)	2.8	3.5
Multiracial (n=75)	3.0	3.2
Maternal Education‡,†		
Some College+ (n=1,102)	44.3	48.8
HS Diploma/GED (n=749)	30.1	29.1
9th-11th grade (n=400)	16.1	12.9
<9th grade (n=121)	4.9	4.6
WIC[θ]		
Non-WIC (n=865)	34.8	-
WIC (n=1624)	65.2	-
Metro Residence[θ]		
Metro (n=1,941)	78.0	83.2
Non-metro (n=548)	22.0	16.8
Maternal Marital Status‡		
Married (n=1,198)	48.1	54.8
Unmarried (n=1,286)	51.7	45.1
Repeat Birth‡		
First Child (n=1,038)	41.7	40.4
Repeat Birth (n=1,451)	58.3	57.9
Gestational Age‡		
<37 weeks (n=271)	10.9	11.6
37+ weeks (n=2,218)	89.1	88.4
Provider Type†,θ		
Public Sector Only (n=48)	1.9	-
Private Sector Only (n=1,994)	80.1	-
Both (n=9)	0.4	-
Payment at Birth‡		
Government Assist (n=1,265)	50.8	44.1
Private Insurance (n=708)	28.4	31.5
Other (n=168)	6.7	6.3
Self Pay (n=114)	4.6	4.6

Notable Demographic Findings: Overall, the study sample for the state was comparable to the 2011 Georgia birth cohort, but varied for certain demographic variables (Table 3).

For example, the state sample had a higher number of black mothers compared to all Georgia births (38.2% vs. 33.2%) but had a lower number of mothers with some college education (44.3% vs. 48.8%) compared to the 2011 birth cohort.

The state sample had a lower number of metro residents than the birth cohort (78.0% vs. 83.2%) and a lower number of married mothers (48.1% vs. 54.8%).

The final state sample contained a much larger percentage of government-assisted births than the birth cohort (50.8% vs. 44.1%). The state sample also had a higher number of children whose mothers were less than 25 years of age compared to all Georgia 2011 births (38.8% vs. 35.8%) and a lower number of mothers between 25-34 years of age (47.7% vs. 50.6%).

Other demographic measures for the state sample were similar to the findings of the 2011 Georgia birth cohort as a whole.

Some demographic variables were measured outside of the birth record and could not be measured for the entire 2011 Georgia birth cohort, namely WIC status, Number of Providers, and Provider Type.

	% of State Sample (n=2,489)	*% of Georgia 2011 Births (n=132,239)*
Child's Gender‡		
Male (n=1,234)	49.6	51.0
Female (n=1,255)	50.4	49.0
Number of Providers†,θ		
1 (n=1,269)	51.0	-
2 (n=639)	25.7	-
3 (n=223)	9.0	-
Maternal Age‡,†		
<25 years (n=965)	38.8	35.8
25-34 years (n=1,187)	47.7	50.6
35+ years (n=311)	12.5	13.6

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.

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Table 4: UTD Immunization Rates by 24 months by demographic group, Georgia—2013

	UTD based on GRITS alone (%)	UTD by 24 months (%)	*UTD by end of data collection (%)*
Georgia Sample (n=2,489)	80.2	**85.0**	*90.6*
Maternal Race/Ethnicity‡,†			
White, non-Hispanic (n=1,004)	81.7	**86.4**	*90.4*
White, Hispanic (n=96)	74.0	**90.6**	*97.9*
Black (n=951)	77.5	**81.4**	*89.2*
Unspecified, Hispanic (n=222)	87.8	**90.5**	*94.1*
Asian (n=69)	76.8	**91.3**	*95.7*
Multiracial (n=75)	86.7	**86.7**	*90.7*
Maternal Education‡,†			
Some College+ (n=1,102)	82.1	**86.7**	*90.7*
HS Diploma/GED (n=749)	76.8	**82.1**	*89.3*
9th-11th grade (n=400)	77.8	**82.3**	*91.5*
<9th grade (n=121)	87.6	**90.1**	*92.6*
WIC$^{\theta}$			
Non-WIC (n=865)	80.5	**85.1**	*88.8*
WIC (n=1624)	80.0	**84.9**	*91.6*
Maternal Age‡			
<25 years (n=965)	77.6	**82.9**	*90.5*
25-34 years (n=1,187)	81.6	**86.0**	*90.3*
35+ years (n=311)	83.6	**88.1**	*92.3*
Maternal Marital Status‡ and Repeat Birth‡ Combination			
Married, First Birth (n=434)	85.0	**89.2**	*92.2*
Unmarried, First Birth (n=604)	82.5	**87.9**	*93.0*
Married, Repeat Birth (n=764)	80.8	**85.5**	*90.7*
Unmarried, Repeat Birth (n=682)	74.5	**79.2**	*87.5*
Gestational Age‡			
<37 weeks (n=271)	79.0	**81.2**	*88.2*
37+ weeks (n=2,218)	80.3	**85.4**	*90.9*
Provider Type†,$^{\theta}$			
Public Sector Only (n=48)	37.5	**81.3**	*89.6*
Private Sector Only (n=1,994)	83.4	**87.2**	*92.7*
Both (n=9)	88.9	**88.9**	*100.0*
Payment at Birth‡,†			
Government Assist (n=1,265)	77.2	**82.3**	*89.6*
Private Insurance (n=708)	85.3	**89.4**	*92.2*
Other (n=168)	79.2	**84.5**	*88.7*
Self Pay (n=114)	83.3	**84.2**	*89.5*

UTD Immunization Rates by Demographic Group: In Georgia, immunization rates by 24 months of age varied between certain demographic groups (Table 4).

In terms of maternal race/ethnicity, children of Asian (91.3%), white Hispanic (90.6%) and unspecified Hispanic (90.5%) mothers were the most often UTD by 24 months.

Higher maternal education, above the high school level, was positively associated with UTD by 24 months coverage rates.

Children of mothers who had previous children were less often UTD by 24 months than children of mothers without previous children. In addition, children of unmarried mothers with previous children were least often UTD by 24 months (79.2%).

Children whose birth costs were covered by private insurance (89.4%) were more often UTD by 24 months than children whose birth was covered by government-assisted insurance (82.3%).

In terms of number of providers, children with 3 or more providers (83.9%) were less often UTD by 24 months than those with only one provider (86.2%), or two providers (85.1%).

	UTD based on GRITS alone (%)	UTD by 24 months (%)	*UTD by end of data collection (%)*
Number of Providers†,$^{\theta}$			
1 (n=1,269)	**82.0**	**86.2**	*90.2*
2 (n=639)	**79.8**	**85.1**	*92.3*
3+ (n=223)	**79.3**	**83.9**	*91.0*
Child's Gender‡			
Male (n=1,234)	**79.4**	**84.4**	*90.0*
Female (n=1,255)	**81.0**	**85.5**	*91.3*
Metro Residence$^{\theta}$			
Metro (n=1,941)	**78.9**	**84.5**	*90.0*
Non-metro (n=548)	**84.7**	**86.7**	*93.1*

Footnotes

θ "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

To varying degrees, demographic-related disparities between the study sample and the Georgia birth cohort resolved by the end of data collection (Table 4, *column in italics*).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p.13), 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 less educated mothers
- Children of mothers with previous children
- Children of unmarried mothers with previous children
- Children who received immunizations from three or more providers or lacking a medical home

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

Figure 2: Immunizations Administered in Private VS Public Sector, Georgia, 2013 (n=44,137)

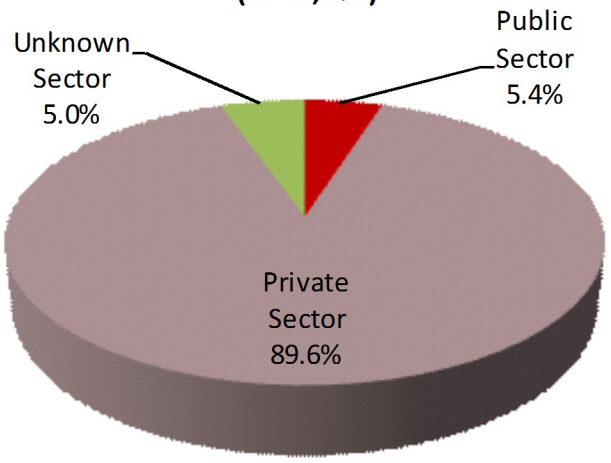

Table 5: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, Georgia, 2006-2012

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	76.1	76.4	76.5	84.5	85.8	87.0	84.6
3 Polio by 24 months	87.8	87.8	87.5	95.1	96.7	96.0	95.7
1 MMR by 24 months	86.1	91.4	92.7	91.5	93.0	93.2	92.7
UTD Hib by 24 months	87.5	91.1	86.1	90.0	95.1	96.1	96.3
3 Hepatitis B by 24 months	88.4	88.8	88.7	94.8	96.5	96.1	95.9
1 Varicella by 24 months	86.5	85.2	85.5	92.9	93.9	94.2	93.5
UTD PCV by 24 months	73.6	77.2	81.6	90.5	96.7	92.2	84.5
2 Rotavirus*	-	-	-	72.6	83.8	70.6	83.5
1 Influenza*,† by 24 months	-	-	-	58.2	60.1	57.1	29.3
2 Hepatitis A* by 24 months	-	-	-	—	53.1	55.1	57.3
Hepatitis B birth dose*	54.8	58.3	66.2	76.2	83.4	82.7	83.6

* 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.

Immunization Rates by Vaccine Antigen: In Georgia, the UTD immunization rate by 24 months for most vaccine antigens remained steady from 2006 to 2008, but increased to higher rates in 2010 and remained high through 2013 (Table 5).

Among Georgia coverage rates by antigen in 2013, the PCV UTD immunization rate was the lowest at 84.5%, down from 92.2% in 2012. The DTaP UTD immunization rate dropped from 87.0% in 2012 to 84.6% in 2013.

Among Georgia coverage rates by antigen in 2013, the influenza rate decreased from 57.1% in 2012 to 29.3% in 2013. This may reflect a data capture error, and is currently being investigated.

Antigen-Specific Conclusions: Because of the lower coverage rates for DTaP and PCV vaccines, the antigen -specific data suggest that these vaccines could reasonably be the primary focus of District- and County-level immunization campaigns.

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District Immunization Rates: While the statewide UTD immunization coverage rate by 24 months was 85.0%, variation was seen between Districts. The Districts with the highest UTD immunization rates by 24 months were Districts 3-5, 5-2, 7-0, 8-1 and 10-0. The Districts with the lowest UTD immunization rates by 24 months were Districts 2-0, 3-1, 3-2, 3-3, and 9-1 (Figure 3 and Table 6).

Response rates for each District are included on the second page of all District reports (Section III) and 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 were classified as 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.

Note: Remember that there is a discrepancy between UTD by 24 months, based on GRITS alone and UTD by 24 months. UTD by 24 months, based on GRITS alone shows not those who needed the vaccine but those whose vaccines are not being documented. This is reflected in the following Health Districts who had a 10% or higher change from UTD by 24 months based on GRITS alone and UTD by 24 months: 2-0, 3-1, 3-4.

Figure 3: UTD by 24 months Immunization Rates by District, Georgia, 2012

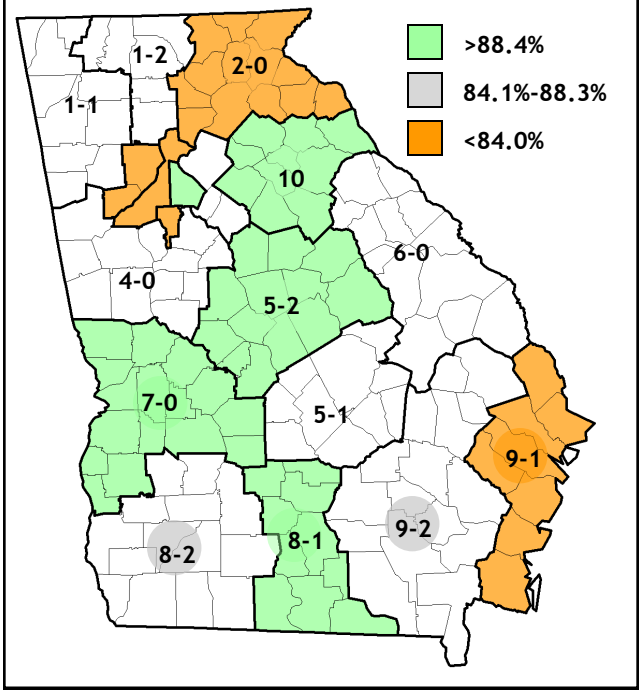

Table 6: District UTD Immunization Rates by 24 months and by End of Data Collection, Georgia, 2013

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)	84.4	84.4	91.1	90
1-2 North Georgia (Dalton)	85.6	88.3	92.8	111
2-0 North (Gainesville)	67.1	82.1	85.0	140
3-1 Cobb-Douglas	69.9	79.0	90.9	176
3-2 Fulton	80.5	83.9	87.8	205
3-3 Clayton	62.8	67.9	72.3	137
3-4 Gwinnett, Newton, Rockdale	77.6	86.3	91.3	183
3-5 DeKalb	87.7	91.4	93.8	162
4-0 LaGrange	80.4	84.7	89.0	163
5-1 South Central (Dublin)	82.4	86.5	95.9	74
5-2 North Central (Macon)	88.7	91.0	92.5	133
6-0 East Central (Augusta)	80.7	86.2	96.6	145
7-0 West Central (Columbus)	83.3	89.8	93.5	108
8-1 South (Valdosta)	81.7	88.5	93.3	104
8-2 Southwest (Albany)	86.0	87.5	94.1	136
9-1 Coastal (Savannah)	77.2	79.5	87.1	171
9-2 Southeast (Waycross)	86.2	86.2	93.5	123
10-0 Northeast (Athens)	90.6	92.2	97.7	128
Georgia	80.2	85.0	90.6	2,489
Color Shading Legend		: <84.0%	: 84.1%-88.3%	: >88.4%

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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 7 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 2013 results.

The lower portion of the Table addresses the vaccine antigen-specific coverage by 24 months and only includes 2013 results.

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

Table 7: District Immunization Champions, Georgia, 2008-2013

Category	1st Place	2nd Place	3rd Place	State
Highest Response Rate, 2013	Gainesville District (2-0) & Augusta District (6-0) 100.0%	Cobb District (3-1) 99.4%	Dalton District (1-2) 98.2%	94.6%
Highest UTD by 24 months in 2013	Athens District (10-0) 92.2%	DeKalb District (3-5) 91.4%	Macon District (5-2) 91.0%	85.0%
Highest UTD by 24 months, based on GRITS alone	Athens District (10-0) 90.6%	Macon District (5-2) 88.7%	DeKalb District (3-5) 87.7%	80.2%
Highest UTD by end of data collection, 2013	Athens District (10-0) 97.7%	Augusta District (6-0) 96.6%	Dublin District (5-1) 95.9%	90.6%
Highest 5-year Average: Response Rate (2008-2013)	Augusta District (6-0) 99.9%	Gainesville District (2-0) 98.0%	Dalton District (1-2) 97.8%	93.1%
Highest 5-year Average: UTD by 24 months (2008-2013)	DeKalb District (3-5) 83.7%	Athens District (10-0) 83.6%	Gainesville District (2-0) 82.0%	77.7%
Greatest Increase in UTD by 24 months from 2012 to 2013	Dublin District (5-1) 11.0%	Fulton District (3-2) & Athens District (10-0) 8.5%	Macon District (5-2) 6.6%	0.6%
Greatest Increase in UTD by end of data collection from 2012 to 2013	Athens District (10-0) 8.1%	Albany District (8-2) 6.2%	Valdosta District (8-1) 5.3%	-3.2%
Greatest Increase in UTD from 24 months to end of data collection, 2013	Cobb District (3-1) 15.1%	Augusta District (6-0) 12.1%	Dublin District (3-1) 10.9%	6.6%
Highest Coverage*: 4+ DTaP Doses, 2013	Columbus District (7-0) 90.7%	Macon District (5-2) 88.7%	Athens District (1-2) & DeKalb District (3-5) 88.3%	84.6%
Highest Coverage*: 3+ Polio Doses, 2013	Athens District (10-0) 100.0%	Dublin District (5-1) 98.6%	Waycross District (9-2) 98.4%	95.7%
Highest Coverage*: 1 MMR Dose, 2013	Augusta District (6-0) 97.9%	Dublin District (5-1) 95.9%	Waycross District (9-2) 95.9%	92.7%
Highest Coverage*: UTD Hib, 2013	Athens District (10-0) 100.0%	Dublin District (5-1) 98.6%	Albany District (8-2) 97.8%	96.3%
Highest Coverage**: Hepatitis B Birth Dose, 2013	Waycross District (9-2) 95.1%	Columbus District (8-1) 92.6%	Valdosta District (5-2) 92.3%	83.6%
Highest Coverage*: 3+ Hepatitis B Doses, 2013	Waycross District (9-2) 100.0%	Albany District (8-2) 99.3%	Athens District (10-0) 99.2%	95.9%
Highest Coverage*: 1 Varicella Dose, 2013	Augusta District (6-0) 97.2%	Macon District (5-2) 97.0%	Waycross District (9-2) 96.7%	93.5%
Highest Coverage*: UTD PCV, 2013	Valdosta District (8-1) 91.3%	Macon District (5-2) 91.0%	Dalton District (1-2) 90.1%	84.5%
Highest Coverage*: 1+ Hepatitis A Doses, 2013	Albany District (8-2) 64.4%	Valdosta District (8-1) 64.2%	Rome District (1-1) 63.3%	57.2%
Highest Coverage*: 1+ Influenza Doses, 2013	Dalton District (1-2) 76.6%	Gainesville District (2-0) 41.4%	Cobb District (3-1) 38.1%	29.3%

*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.

Findings Related to WIC Enrollment: Statewide results do not show an overall disparity in UTD immunization rate by 24 months between WIC-enrolled children and children not enrolled in WIC (see Table 4). This appears to be consistent with District-level analyses. In general, Health District does not appear to modify the effect of WIC on UTD immunization status by 24 months of age. There were no Health Districts found to have a significant difference in immunization rate by 24 months of age between those enrolled and not enrolled in WIC (Figure 4 and Table 8).

Figure 4: Immunization Rates among WIC and Non-WIC Enrolled Children, Georgia, 2013

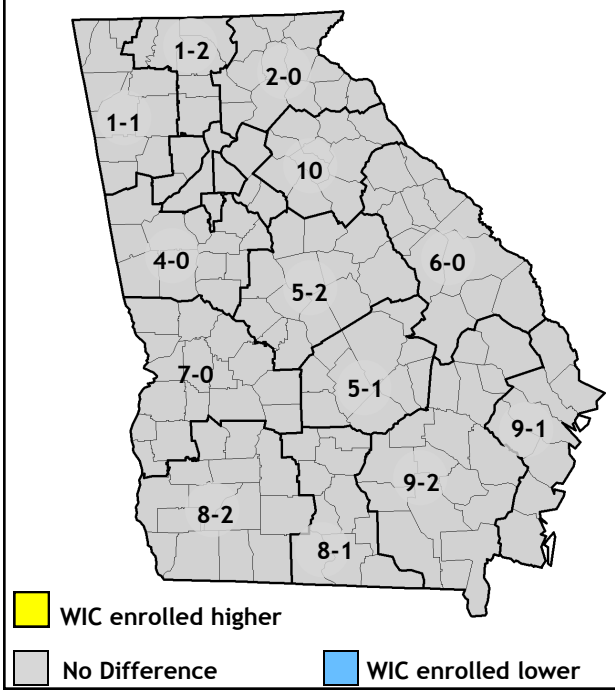


Table 8: Difference in UTD Immunization Rate by 24 months between WIC Enrollment Groups, Georgia, 2012

District	Immunization Rate for children enrolled in WIC (%)	Immunization Rate for children *not* enrolled in WIC (%)	Disparity (WIC Rate-Non-WIC Rate) (%)	95% Confidence Interval of Difference (% — %)*
1-1 Northwest (Rome)	83.6	85.7	-2.1	-17.3 — 13.1
1-2 North Georgia (Dalton)	85.9	91.5	-5.6	-17.3 — 6.1
2-0 North (Gainesville)	85.6	76.0	9.6	-4.3 — 23.5
3-1 Cobb-Douglas	74.5	85.1	-10.6	-22.3 — 1.1
3-2 Fulton	81.4	87.0	-5.6	-15.5 — 4.3
3-3 Clayton	70.2	60.6	9.6	-9.2 — 28.4
3-4 Gwinnett, Newton, Rockdale	87.0	85.3	1.7	-8.5 — 11.9
3-5 DeKalb	93.1	88.5	4.6	-4.8 — 14.0
4-0 LaGrange	82.7	87.7	-5.0	-15.9 — 5.9
5-1 South Central (Dublin)	85.2	90.0	-4.8	-21.0 — 11.4
5-2 North Central (Macon)	90.7	91.7	-1.0	-11.7 — 9.7
6-0 East Central (Augusta)	87.0	83.8	3.2	-10.3 — 16.7
7-0 West Central (Columbus)	91.3	85.7	5.6	-8.8 — 20.0
8-1 South (Valdosta)	90.3	84.4	5.9	-8.4 — 20.2
8-2 Southwest (Albany)	89.1	84.1	5.0	-7.5 — 17.5
9-1 Coastal (Savannah)	79.6	79.3	0.3	-12.5 — 13.1
9-2 Southeast (Waycross)	85.3	90.5	-5.2	-19.5 — 9.1
10-0 Northeast (Athens)	93.0	91.2	1.8	-7.7 — 11.3
Georgia	**84.9**	**85.1**	**-0.2**	**-3.1 — 2.7**

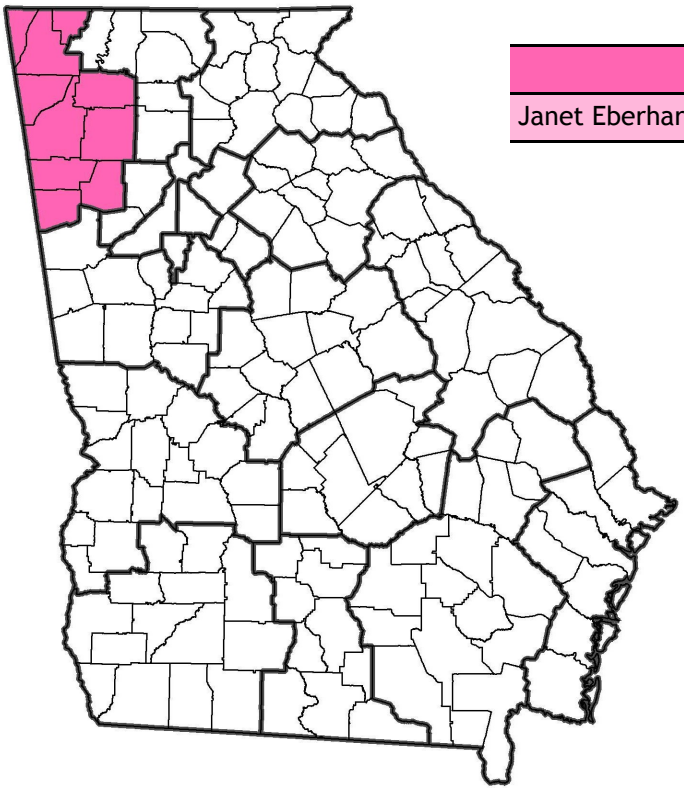
***If the confidence interval overlaps zero, then the difference between groups is not statistically significant.**

Section III

Health District Immunization Reports

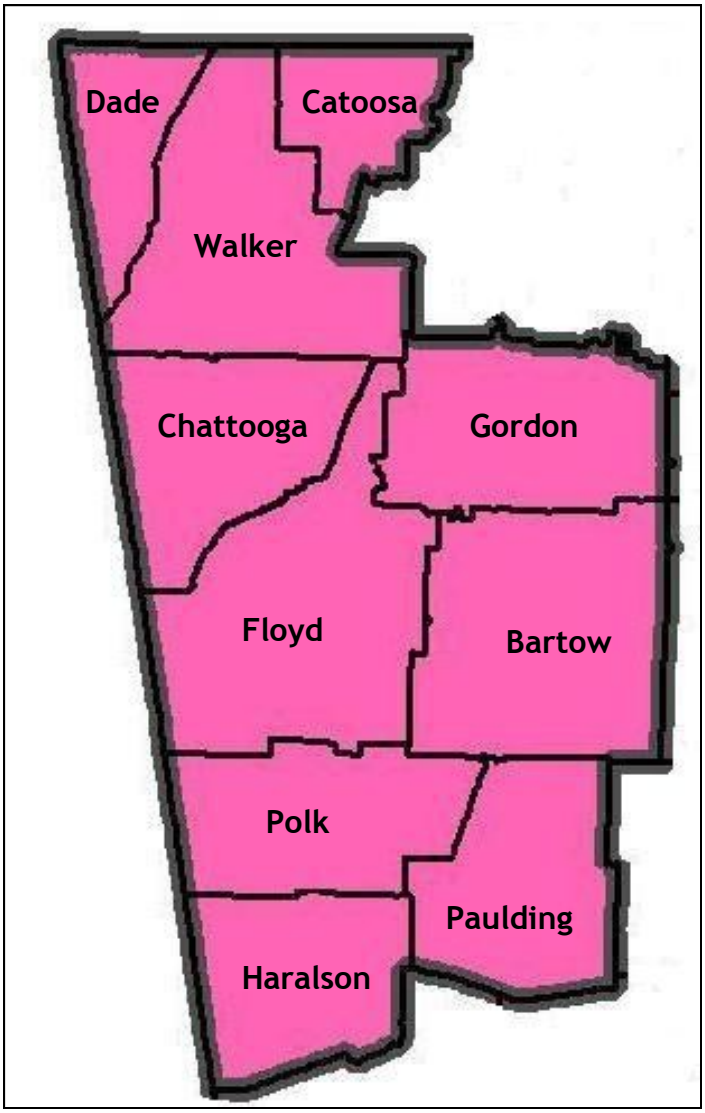
District 1-1

2013 Georgia Immunization Study Report



District 1-1 Data Collection Team	
Janet Eberhart, RN, BSN	District Immunization Coordinator

County	Number in Sample	Metro
Bartow	19	Metro
Catoosa	3	Metro
Chattooga	8	Nonmetro
Dade	0	Nonmetro
Floyd	19	Metro
Gordon	10	Nonmetro
Haralson	3	Metro
Paulding	16	Metro
Polk	7	Nonmetro
Walker	5	Metro
District 1-1	**90**	
District UTD by 24 months Immunization Rate	**84.4%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 1-1

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 1-1 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was equal to the UTD immunization rate based on GRITS alone and slightly lower than the state UTD by 24 months rate (84.4% vs. 85.0%). By the end of data collection, the District UTD immunization rate was higher than the state rate (91.1% vs. 90.6%) (Table 1-1-B).

From 2012 to 2013: The District 1-1 UTD immunization rate by 24 months decreased by 9.1% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 6.0% from 2012 to 2013 (Figure 1-1-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 1-1-A: GIS Sampling Scheme, District 1-1, 2013

	District 1-1 (n)	State (n)
Original Sample	100	2,813
Ineligible	5	181
(Refused to Participate)	(1)	(20)
Eligible Sample	95	2,632
Unable to Locate†	5	143
Final Sample	90	2,489
Response Rate (%)	94.7	94.6

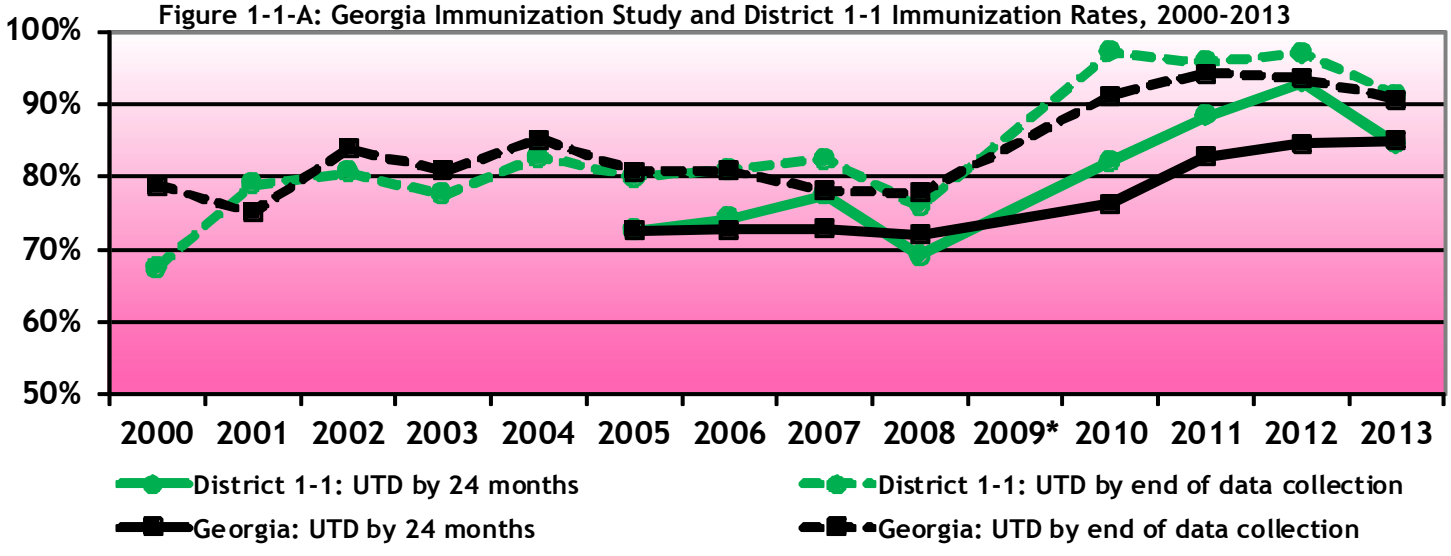
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 1-1-B: Immunization Summary by Series & Vaccine Antigen, District 1-1, 2013

	District 1-1 (%)	State Average (%)
UTD immunization rate** **by 24 months**	84.4	85.0
UTD immunization rate** **Based on GRITS alone**	84.4	80.2
UTD immunization rate** **by end of data collection**††	91.1	90.6
4 DTaP by 24 months	85.6	84.6
3 DTaP by 24 months	98.9	96.6
3 IPV by 24 months	97.8	95.7
1 MMR by 24 months	93.3	92.7
UTD Hib by 24 months	96.7	96.3
3 Hep B by 24 months	96.7	95.9
1 Varicella by 24 months	94.4	93.5
UTD PCV by 24 months	87.8	84.5
2 Rotavirus by 24 months	91.1	83.5
2 Hep A by 24 months	63.3	57.3
1+ Influenza by 24 months	32.2	29.3

†† 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, 2000-2013



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

District 1-1, Georgia Immunization Study Report, p3

Table 1-1-C: UTD Immunization Rates by Demographic Group, District 1-1, 2013

	State Avg. UTD by 24 months (%)	1-1—UTD by 24 months (%)	*1-1—UTD by end of d.c.[β] (%)*
District 1-1 Sample (n=90)	85.0	**84.4**	*91.1*
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=62)	86.4	**85.5**	*91.9*
White, Hispanic (n=3)	90.6	**100.0**	*100.0*
Black (n=12)	81.4	**75.0**	*91.7*
Unspecified, Hispanic (n=5)	90.5	**100.0**	*100.0*
Asian (n=4)	91.3	**100.0**	*100.0*
Multiracial (n=1)	86.7	**0.0**	*0.0*
Maternal Education[‡,†]			
Some College+ (n=46)	86.7	**87.0**	*87.0*
HS Diploma/GED (n=25)	82.1	**80.0**	*96.0*
9th-11th grade (n=13)	82.3	**76.9**	*92.3*
<9th grade (n=4)	90.1	**100.0**	*100.0*
WIC[θ]			
Non-WIC (n=35)	85.1	**85.7**	*85.7*
WIC (n=55)	84.9	**83.6**	*94.5*
Maternal Age[‡]			
<25 years (n=35)	82.9	**80.0**	*94.3*
25-34 years (n=44)	86.0	**86.4**	*86.4*
35+ years (n=10)	88.1	**100.0**	*100.0*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=22)	89.2	**86.4**	*95.5*
Unmarried, First Birth (n=20)	87.9	**85.0**	*95.0*
Married, Repeat Birth (n=33)	85.5	**81.8**	*87.9*
Unmarried, Repeat Birth (n=15)	79.2	**86.7**	*86.7*
Gestational Age[‡]			
<37 weeks (n=11)	81.2	**90.9**	*90.9*
37+ weeks (n=79)	85.4	**83.5**	*91.1*
Provider Type[†,θ]			
Public Sector Only (n=0)	81.3	**N/A**	*N/A*
Private Sector Only (n=72)	87.2	**86.1**	*93.1*
Both (n=1)	88.9	**100.0**	*100.0*
Payment at Birth[‡,†]			
Government Assist (n=46)	82.3	**73.9**	*87.0*
Private Insurance (n=34)	89.4	**94.1**	*94.1*
Other (n=5)	84.5	**100.0**	*100.0*
Self Pay (n=2)	84.2	**100.0**	*100.0*

UTD Immunization Rates by Demographic Group: In District 1-1, the UTD immunization rates among white, non-Hispanics was lower than the state's UTD by 24 months rate (85.5% vs. 86.4%), however the District's other race/ethnicity group sample sizes were too small to draw any definite conclusions (Table 1-1-C).

For District 1-1, children of mothers with a 9th-11th grade education were least often UTD by 24 months (76.9%). In terms of maternal age, children of mothers <25 years of age were least often UTD by 24 months of age (80.0%).

In terms of the maternal marital status and repeat births, children of unmarried mothers with previous children were most often UTD by 24 months (86.7%), and this was markedly different from the overall state finding (79.2%).

In addition, children whose birth costs were covered by private insurance were more often UTD than children whose birth costs were covered by government-assisted insurance (94.1% vs. 73.9%).

The District data support the importance of a medical home; children who had one provider (Number of Providers) were more often UTD by 24 months than those with two providers (86.3% vs. 73.9%).

	State Avg. UTD by 24 months (%)	1-1—UTD by 24 months (%)	*1-1—UTD by end of d.c.[β] (%)*
Number of Providers[†,θ]			
1 (n=51)	**86.2**	**86.3**	*90.2*
2 (n=23)	**85.1**	**73.9**	*91.3*
3+ (n=9)	**83.9**	**100.0**	*100.0*
Child's Gender[‡]			
Male (n=47)	**79.4**	**80.9**	*87.2*
Female (n=43)	**81.0**	**88.4**	*95.3*
Metro Residence[θ]			
Metro (n=65)	**84.5**	**86.2**	*93.8*
Non-metro (n=25)	**86.7**	**80.0**	*84.0*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic group.

Although many demographic-related disparities resolved by the end of data collection, some still remained and some new disparities emerged (Table 1-1-C, *column in italics*). For example, children of mothers with a college education were less likely to be UTD by the end of data collection, but this group was larger than those of lesser educated mothers (87.0% vs. 96.0%, 92.3% and 100.0%).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 mothers with a high school level of education or lower
- Children of mothers <25 years of age
- Children receiving immunizations from more than two providers

Figure 1-1-B: Immunizations Administered in Private VS Public Sector, District 1-1, 2013 (n=1,768)

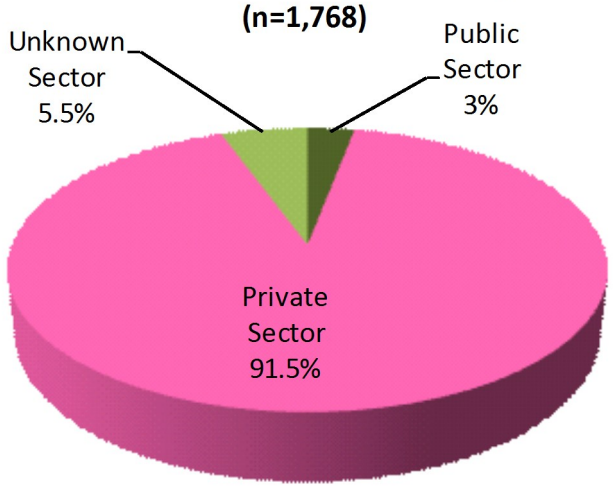


Table 1-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 1-1, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	76.1	79.1	74.1	88.6	88.3	95.3	85.6
3 Polio by 24 months	89.0	93.4	90.7	98.6	96.8	97.6	97.8
1 MMR by 24 months	89.6	89.6	86.4	95.0	92.6	96.9	93.3
UTD Hib by 24 months	86.5	88.5	84.6	92.9	95.7	98.4	96.7
3 Hepatitis B by 24 months	90.8	94.0	93.2	96.4	96.8	97.6	96.7
1 Varicella by 24 months	80.4	89.0	86.4	95.7	92.6	98.4	94.4
UTD PCV by 24 months	80.4	81.9	82.1	95.0	95.7	96.9	87.8
2 Rotavirus	-	-	-	67.9	87.2	78.7	91.1
1 Influenza by 24 months	-	-	-	61.4	70.2	64.6	32.2

Immunization Rates by Vaccine Antigen: In District 1-1, the UTD immunization rate by 24 months for most vaccine antigens decreased in 2013, when compared to 2012 (Table 1-1-D).

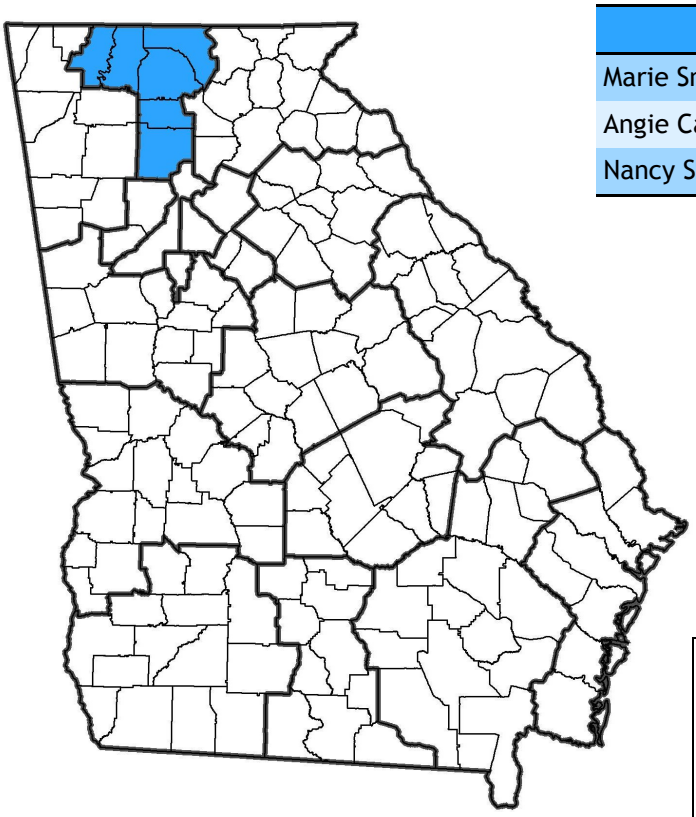
Among District 1-1 immunization rates by vaccine antigen in 2013, the UTD immunization rate for DTaP showed the largest decline from 2012, decreasing from 95.3% to 85.6%. The UTD immunization rates for the remaining vaccines either remained constant or slightly decreased from 2012 to 2013.

Among District 1-1 immunization rates by vaccine-antigen in 2013, the influenza rate decreased from 64.6% in 2012 to 32.2% in 2013. This may reflect a data capture error, and is currently being investigated.

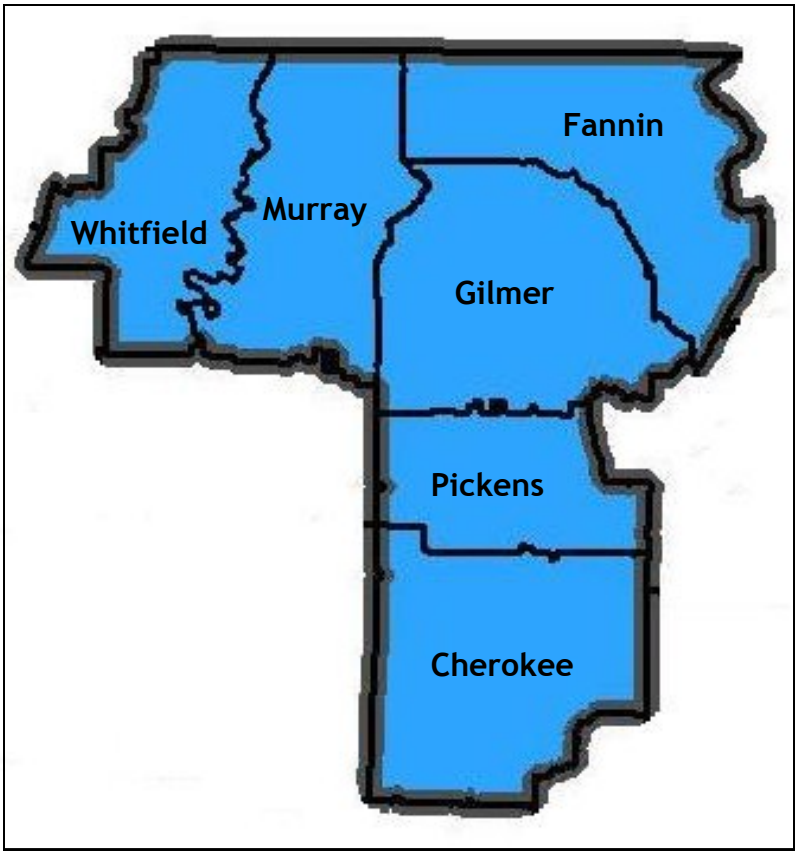
Vaccine Antigen-Specific Conclusions: The antigen specific data suggest that the fourth dose of DTaP, MMR, Varicella and PCV vaccines could reasonably be the primary focus of District and County-level immunization campaigns.

District 1-2

2013 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	Metro
Cherokee	65	Metro
Fannin	5	Nonmetro
Gilmer	6	Nonmetro
Murray	9	Metro
Pickens	5	Metro
Whitfield	21	Metro
District 1-2	**111**	
District UTD by 24 months Immunization Rate	**88.3%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	

District 1-2

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 1-2 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 2.7% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (88.3% vs. 85.0%), and remained higher at the end of data collection (92.8 vs. 90.6%) (Table 1-2-B).

From 2012 to 2013: The District 1-2 UTD immunization rate by 24 months increased by 1.0% from 2012 to 2013. However the District UTD immunization rate by the end of data collection decreased by 2.4% from 2012 to 2013 (Figure 1-2-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 1-2-A: GIS Sampling Scheme, District 1-2, 2013

	District 1-2 (n)	State (n)
Original Sample	121	2,813
Ineligible	8	181
(Refused to Participate)	(1)	(20)
Eligible Sample	113	2,632
Unable to Locate†	2	143
Final Sample	111	2,489
Response Rate (%)	98.2	94.6

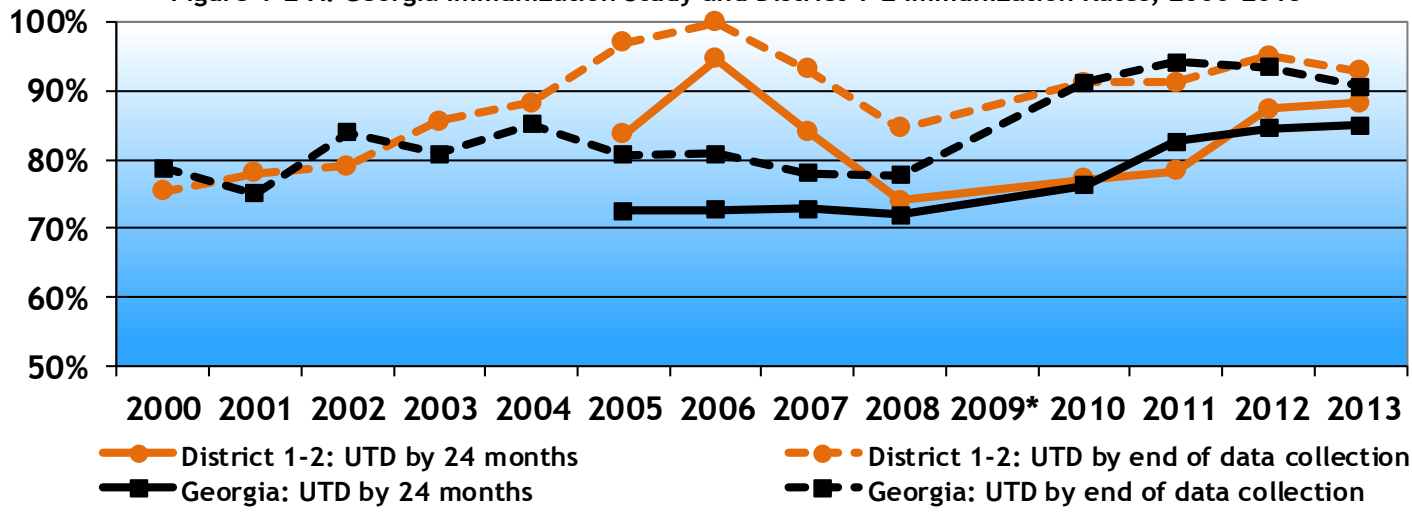
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 1-2-B: Immunization Summary by Series & Vaccine Antigen, District 1-2, 2013

	District 1-2 (%)	State Average (%)
UTD immunization rate** **by 24 months**	88.3	85.0
UTD immunization rate** **Based on GRITS alone**	85.6	80.2
UTD immunization rate** **by end of data collection**††	92.8	90.6
4 DTaP by 24 months	87.4	84.6
3 DTaP by 24 months	98.2	96.6
3 IPV by 24 months	94.6	95.7
1 MMR by 24 months	94.6	92.7
UTD Hib by 24 months	97.3	96.3
3 Hep B by 24 months	96.4	95.9
1 Varicella by 24 months	95.5	93.5
UTD PCV by 24 months	90.1	84.5
2 Rotavirus by 24 months	88.3	83.5
2 Hep A by 24 months	55.0	57.3
1+ Influenza by 24 months	76.6	29.3

†† 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 1-2-A: Georgia Immunization Study and District 1-2 Immunization Rates, 2000-2013



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

District 1-2, Georgia Immunization Study Report, p3

Table 1-2-C: UTD Immunization Rates by Demographic Group, District 1-2, 2013

	State Avg. UTD by 24 months (%)	1-2—UTD by 24 months (%)	*1-2—UTD by end of d.c.[θ] (%)*
District 1-2 Sample (n=111)	85.0	**88.3**	*92.8*
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=79)	86.4	**88.6**	*89.9*
White, Hispanic (n=6)	90.6	**66.7**	*100.0*
Black (n=1)	81.4	**100.0**	*100.0*
Unspecified, Hispanic (n=15)	90.5	**93.3**	*100.0*
Asian (n=2)	91.3	**100.0**	*100.0*
Multiracial (n=2)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=44)	86.7	**81.8**	*84.1*
HS Diploma/GED (n=22)	82.1	**86.4**	*95.5*
9th-11th grade (n=22)	82.3	**90.9**	*100.0*
<9th grade (n=7)	90.1	**100.0**	*100.0*
WIC			
Non-WIC (n=47)	85.1	**91.5**	*93.6*
WIC (n=64)	84.9	**85.9**	*92.2*
Maternal Age[‡]			
<25 years (n=33)	82.9	**90.9**	*97.0*
25-34 years (n=59)	86.0	**88.1**	*91.5*
35+ years (n=17)	88.1	**82.4**	*88.2*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=28)	89.2	**89.3**	*89.3*
Unmarried, First Birth (n=12)	87.9	**100.0**	*100.0*
Married, Repeat Birth (n=58)	85.5	**84.5**	*91.4*
Unmarried, Repeat Birth (n=13)	79.2	**92.3**	*100.0*
Gestational Age[‡]			
<37 weeks (n=4)	81.2	**75.0**	*75.0*
37+ weeks (n=107)	85.4	**88.8**	*93.5*
Provider Type[†]			
Public Sector Only (n=0)	81.3	**N/A**	*N/A*
Private Sector Only (n=93)	87.2	**89.2**	*94.6*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth[‡,†]			
Government Assist (n=32)	82.3	**87.5**	*90.6*
Private Insurance (n=46)	89.4	**87.0**	*91.3*
Other (n=11)	84.5	**90.0**	*100.0*
Self Pay (n=7)	84.2	**85.7**	*100.0*
Number of Providers[†]			
1 (n=71)	**86.2**	**85.9**	*91.5*
2 (n=21)	**85.1**	**100.0**	*100.0*
3+ (n=9)	**83.9**	**88.9**	*88.9*
Child's Gender[‡]			
Male (n=54)	**79.4**	**87.0**	*92.6*
Female (n=57)	**81.0**	**89.5**	*93.0*
Metro Residence[θ]			
Metro (n=100)	**84.5**	**88.0**	*93.0*
Non-metro (n=11)	**86.7**	**90.9**	*90.9*

UTD Immunization Rates by Demographic Group: In District 1-2, children of Hispanic mothers of unspecified race were UTD by 24 months at a higher rate than children of white, non-Hispanic mothers (93.3% vs. 88.6%). The District's other race/ethnicity group sample sizes were too small to draw any definite conclusions (Table 1-2-C).

Children of mothers with some college or higher education were least often UTD by 24 months (81.8%). Children of mothers 35+ years of age were least often UTD by 24 months of age (82.4%). In terms of maternal marital status and repeat births, children of married mothers with previous children were least often UTD by 24 months (84.5%).

Most children had only one provider, but were less often UTD by 24 months of age than children with 2 providers (85.9% vs. 100.0%).

Although many demographic-related disparities resolved by the end of data collection, some still remained and some new ones emerged (Table 1-2-C, *column in italics*). For example, children of Hispanic mothers of unspecified race remained more often UTD at the end of data collection when compared to children of white non-Hispanic mothers, the largest group (100% vs. 89.9%).

Footnotes

θ "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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, Hispanic mothers
- Children of mothers 35+ years of age
- Children of married mothers with previous children
- Children of mothers with some college+ education

Figure 1-2-B: Immunizations Administered in Private VS Public Sector, District 1-2, 2013 (n=2,160)

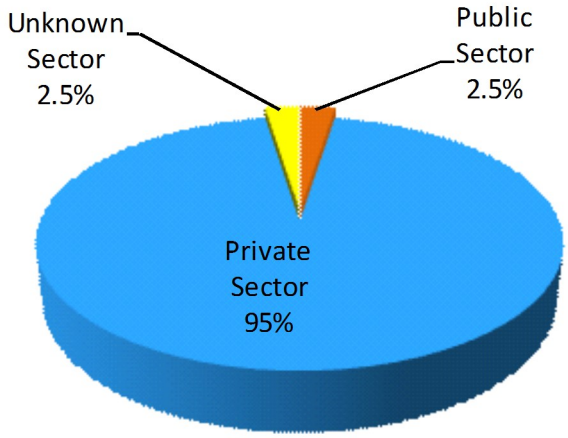


Table 1-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 1-2, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	94.6	86.4	75.9	86.8	81.7	90.2	87.4
3 Polio by 24 months	100.0	93.2	91.4	96.5	93.9	97.9	94.6
1 MMR by 24 months	94.6	93.2	86.2	91.2	90.4	95.8	94.6
UTD Hib by 24 months	94.6	97.7	89.7	85.1	91.3	97.9	97.3
3 Hepatitis B by 24 months	97.3	97.8	91.4	96.5	95.7	98.6	96.4
1 Varicella by 24 months	94.6	95.5	87.9	94.7	93.0	97.9	95.5
UTD PCV by 24 months	89.2	88.6	86.2	93.9	93.0	93.0	90.1
2 Rotavirus	-	-	-	77.2	82.6	69.9	88.3
1 Influenza by 24 months	-	-	-	60.5	60.0	71.3	76.6

Immunization Rates by Vaccine Antigen: In District 1-2, the UTD immunization rates by 24 months for most vaccine antigens slightly decreased between 2012 and 2013. A notable increase occurred for the UTD coverage of 2 doses of rotavirus vaccine, rising from 69.9% in 2012 to 88.3% in 2013 (Table 1-2-D).

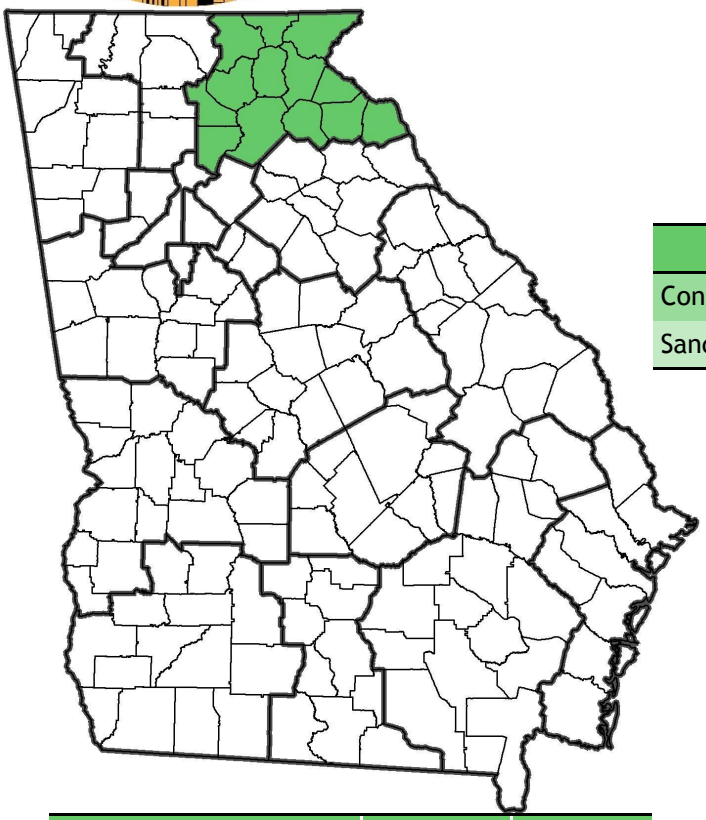
Among District 1-2 immunization rates by vaccine antigen in 2013, the largest decrease in UTD immunization rates was for PCV and Polio vaccines. The UTD immunization rate for PCV showed a decrease from 93.0% in 2012 to 90.1% in 2013. The UTD immunization rate for Polio decreased from 97.9% in 2012 to 94.6 in 2013.

The UTD immunization rate for Rotavirus and Influenza vaccines were the only antigen-specific immunization rates to actually increase between 2012 and 2013.

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

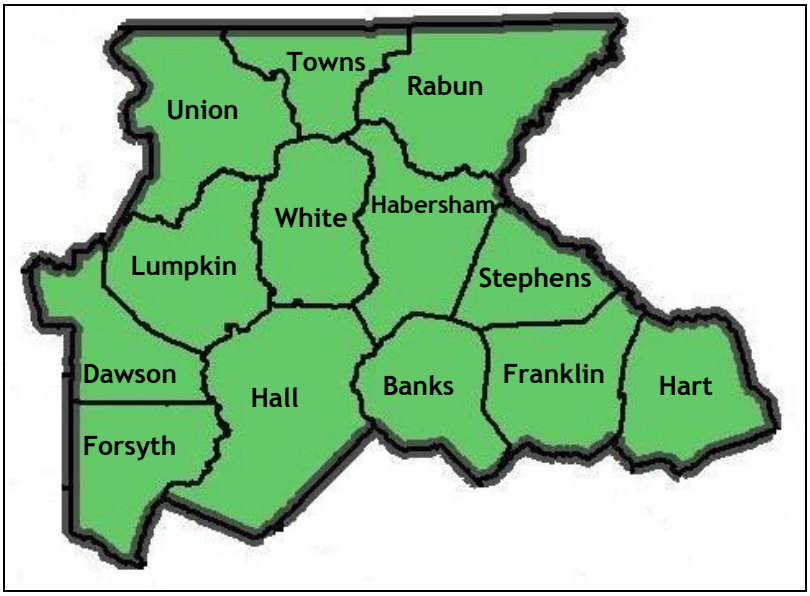
District 2-0

2013 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	Metro
Banks	2	Nonmetro
Dawson	8	Metro
Forsyth	35	Metro
Franklin	10	Nonmetro
Habersham	11	Nonmetro
Hall	61	Metro
Hart	0	Nonmetro
Lumpkin	3	Nonmetro
Rabun	0	Metro
Stephens	5	Nonmetro
Towns	0	Nonmetro
Union	3	Nonmetro
White	2	Nonmetro
District 2-0	**140**	
District UTD by 24 months Immunization Rate	**82.1%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 2-0

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 2-0 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 15.0% higher than the UTD immunization rate based on GRITS alone and lower than the state UTD by 24 months rate (82.1% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained lower than the state rate (85.0% vs. 90.6%) (Table 2-0-B).

From 2012 to 2013: The District 2-0 UTD immunization rate by 24 months decreased by 2.4% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 10.0% from 2012 to 2013 (Figure 2-0-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 2-0-A: GIS Sampling Scheme, District 2-0, 2013

	District 2-0 (n)	State (n)
Original Sample	155	2,813
Ineligible	15	181
(Refused to Participate)	(3)	(20)
Eligible Sample	140	2,632
Unable to Locate†	0	143
Final Sample	140	2,489
Response Rate (%)	100	94.6

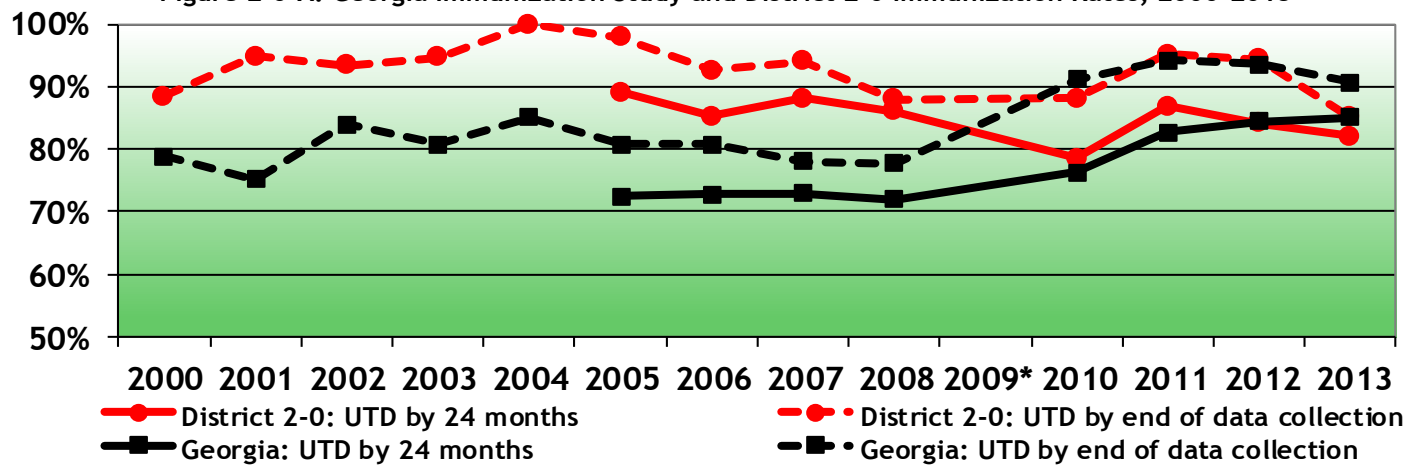
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 2-0-B: Immunization Summary by Series & Vaccine Antigen, District 2-0, 2013

	District 2-0 (%)	State Average (%)
UTD immunization rate** **by 24 months**	82.1	85.0
UTD immunization rate** **Based on GRITS alone**	67.1	80.2
UTD immunization rate** **by end of data collection**††	85.0	90.6
4 DTaP by 24 months	87.1	84.6
3 DTaP by 24 months	95.0	96.6
3 IPV by 24 months	94.3	95.7
1 MMR by 24 months	91.4	92.7
UTD Hib by 24 months	95.0	96.3
3 Hep B by 24 months	91.4	95.9
1 Varicella by 24 months	90.7	93.5
UTD PCV by 24 months	87.1	84.5
2 Rotavirus by 24 months	87.9	83.5
2 Hep A by 24 months	62.1	57.3
1+ Influenza by 24 months	41.4	29.3

†† 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 2-0-A: Georgia Immunization Study and District 2-0 Immunization Rates, 2000-2013



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

District 2-0, Georgia Immunization Study Report, p3

Table 2-0-C: UTD Immunization Rates by Demographic Group, District 2-0, 2013

	State Avg. UTD by 24 months (%)	2-0—UTD by 24 months (%)	*2-0—UTD by end of d.c.[6] (%)*
District 2-0 Sample (n=140)	85.0	82.1	85.0
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=98)	86.4	**77.6**	*80.6*
White, Hispanic (n=20)	90.6	**95.0**	*95.0*
Black (n=4)	81.4	**100.0**	*100.0*
Unspecified, Hispanic (n=7)	90.5	**100.0**	*100.0*
Asian (n=4)	91.3	**75.0**	*100.0*
Multiracial (n=2)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=69)	86.7	**82.6**	*85.5*
HS Diploma/GED (n=39)	82.1	**71.8**	*74.4*
9th-11th grade (n=8)	82.3	**87.5**	*100.0*
<9th grade (n=11)	90.1	**100.0**	*100.0*
WIC			
Non-WIC (n=50)	85.1	**76.0**	*78.0*
WIC (n=90)	84.9	**85.6**	*88.9*
Maternal Age[‡]			
<25 years (n=42)	82.9	**78.6**	*85.7*
25-34 years (n=80)	86.0	**81.3**	*82.5*
35+ years (n=18)	88.1	**94.4**	*94.4*
Maternal Marital Status[‡], & Repeat Birth[‡] Combination			
Married, First Birth (n=35)	89.2	**80.0**	*82.9*
Unmarried, First Birth (n=27)	87.9	**85.2**	*88.9*
Married, Repeat Birth (n=53)	85.5	**77.4**	*81.1*
Unmarried, Repeat Birth (n=24)	79.2	**91.7**	*91.7*
Gestational Age[‡]			
<37 weeks (n=15)	81.2	**73.3**	*80.0*
37+ weeks (n=125)	85.4	**83.2**	*85.6*
Provider Type[†]			
Public Sector Only (n=27)	81.3	**81.5**	*85.2*
Private Sector Only (n=83)	87.2	**90.4**	*92.8*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth[‡,†]			
Government Assist (n=61)	82.3	**80.3**	*85.2*
Private Insurance (n=45)	89.4	**80.0**	*82.2*
Other (n=20)	84.5	**85.0**	*85.0*
Self Pay (n=7)	84.2	**85.7**	*85.7*

UTD Immunization Rates by Demographic Group: In District 2-0, children of white, non-Hispanic mothers were least likely to be UTD by 24 months compared to the District sample as a whole (77.6% vs. 82.1%) and this discrepancy remained at the end of data collection (80.6% vs. 85.0%) although other race/ethnicity groups were small (Table 2-0-C).

Children of mothers with some college education were more often UTD at 24 months compared to children of mothers who had only completed high school (82.6% vs. 71.8%).

In terms of maternal age, children of mothers 35+ years of age were more often UTD by 24 months of age (94.4%) and children of mothers <25 years of age were least often UTD by 24 months (78.6%).

In terms of maternal marital status and repeat births, children of married mothers who had previous children were least often UTD by 24 months (77.4%) (see Table 2-0-F).

In District 2-0, children who had one provider (Number of Providers) were less often UTD by 24 months than those with two providers (80.5% vs. 88.9%).

	State Avg. UTD by 24 months (%)	2-0—UTD by 24 months (%)	*2-0—UTD by end of d.c.[6] (%)*
Number of Providers[†]			
1 (n=77)	**86.2**	**80.5**	*83.1*
2 (n=36)	**85.1**	**88.9**	*94.4*
3 (n=6)	**83.9**	**83.3**	*83.3*
Child's Gender[‡]			
Male (n=68)	**79.4**	**80.9**	*82.4*
Female (n=72)	**81.0**	**83.3**	*87.5*
Metro Residence			
Metro (n=104)	**84.5**	**83.7**	*86.5*
Non-metro (n=36)	**86.7**	**77.8**	*80.6*

Footnotes

6 "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

Although many demographic-related disparities resolved by the end of data collection, some still remained (Table 2-0-C, *column in italics*).

Children of married mothers who were repeat births remained least often UTD by the end of the data collection (81.1%) (see Table 2-0-C).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 who completed a high school level of education only
- Children of married mothers with previous children
- Children of mothers <25 years of age

Figure 2-0-B: Immunizations Administered in Private VS Public Sector, District 2-0, 2013 (n=2,428)

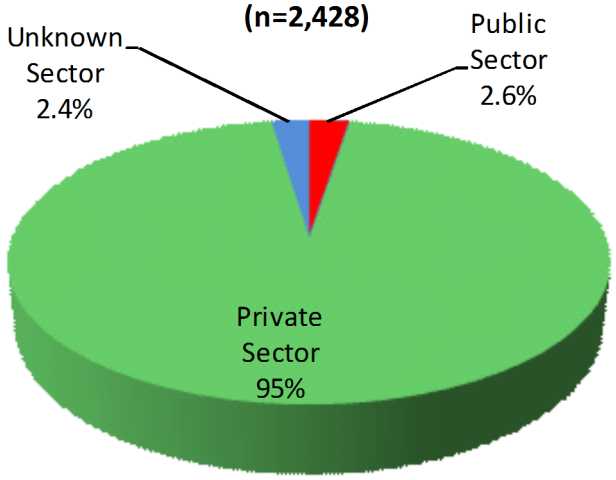


Table 2-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 2-0, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	85.2	89.3	88.0	86.9	90.3	86.5	87.1
3 Polio by 24 months	92.6	94.1	92.0	95.2	97.9	96.8	94.3
1 MMR by 24 months	85.2	94.1	94.0	92.9	94.5	96.0	91.4
UTD Hib by 24 months	96.3	94.1	88.0	91.7	97.2	96.8	95.0
3 Hepatitis B by 24 months	96.3	96.4	92.0	96.4	97.9	93.7	91.4
1 Varicella by 24 months	88.9	95.2	94.0	91.7	95.2	95.2	90.7
UTD PCV by 24 months	77.8	88.1	90.0	90.5	97.2	90.5	87.1
2 Rotavirus	-	-	-	79.8	92.4	89.7	87.9
1 Influenza by 24 months	-	-	-	65.5	66.2	69.1	41.4

Immunization Rates by Vaccine Antigen: In District 2-0, the UTD immunization rates for most vaccine antigens fluctuated from 2006 to 2013, and most decreased between 2012 and 2013. Only DTaP coverage rates increased from 2012 to 2013 (Table 2-0-D).

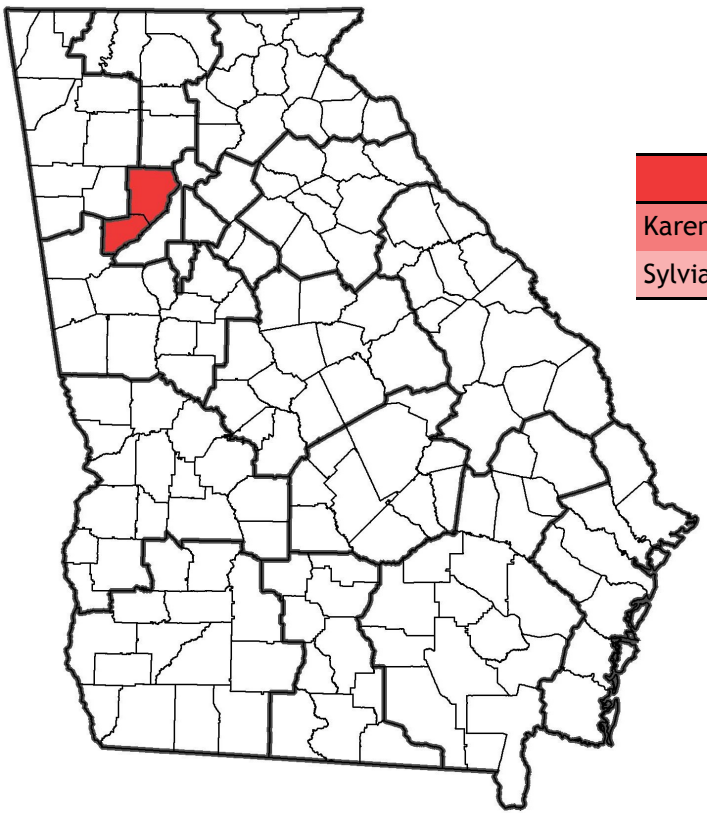
Among District 2-0 immunization rates by vaccine antigen in 2013, the UTD immunization rate for DTaP was the lowest at 87.1%, although this was up from 86.5% in 2012. The UTD immunization rate for PCV was also the lowest at 87.1%, down from 90.5% in 2012.

Among District 2-0 immunization rates by vaccine antigen in 2013, the influenza vaccine rate decreased from 69.1% in 2012 to 41.4% in 2013. Though this rate was still higher than the overall influenza vaccine coverage rate for the state sample, this may reflect a data capture error and is under investigation.

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.

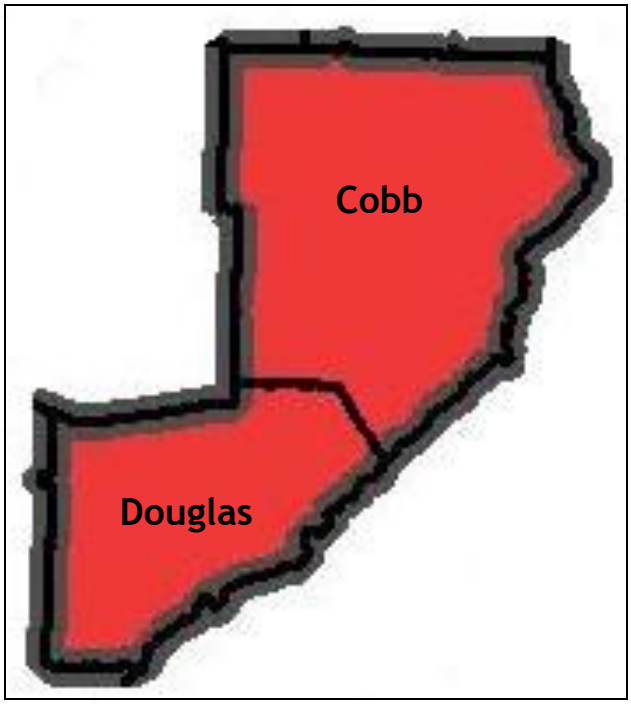
District 3-1

2013 Georgia Immunization Study Report



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

County	Number in Sample	Metro
Cobb	155	Metro
Douglas	21	Metro
District 3-1	**176**	
District UTD by 24 months Immunization Rate	**79.0%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 3-1

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 3-1 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 9.1% higher than the UTD immunization rate based on GRITS alone and lower than the state UTD by 24 months rate (79.0% vs. 85.0%). By the end of data collection, the District UTD immunization rate was slightly higher than the state rate (90.9% vs. 90.6%) (Table 3-1-B).

From 2012 to 2013: The District 3-1 UTD immunization rate by 24 months decreased by 4.7% from 2012 to 2013. The District UTD immunization rate by the end of data collection also decreased by 4.3% from 2012 to 2013 (Figure 3-1-A).

Sample population demographics for this District and their effect on UTD immunization rates are discussed on the following pages.

Table 3-1-A: GIS Sampling Scheme, District 3-1, 2013

	District 3-1 (n)	State (n)
Original Sample	196	2,813
Ineligible	19	181
(Refused to Participate)	(4)	(20)
Eligible Sample	177	2,632
Unable to Locate†	1	143
Final Sample	176	2,489
Response Rate (%)	99.4	94.6

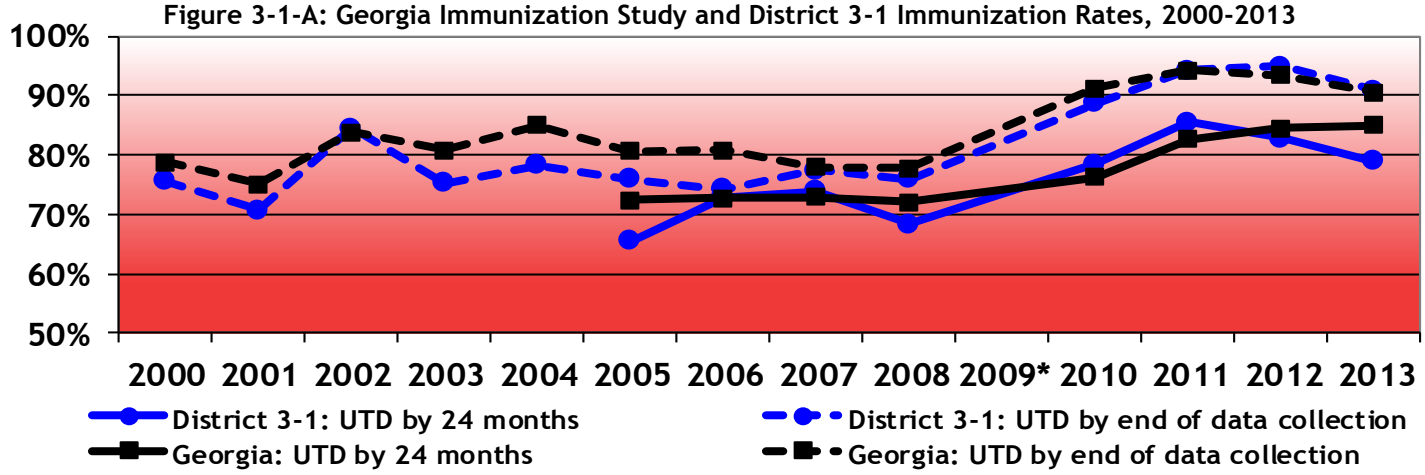
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 3-1-B: Immunization Summary by Series & Vaccine Antigen, District 3-1, 2013

	District 3-1 (%)	State Average (%)
UTD immunization rate** by 24 months	79.0	85.0
UTD immunization rate** Based on GRITS alone	69.9	80.2
UTD immunization rate** by end of data collection††	90.9	90.6
4 DTaP by 24 months	79.5	84.6
3 DTaP by 24 months	96.6	96.6
3 IPV by 24 months	95.5	95.7
1 MMR by 24 months	93.8	92.7
UTD Hib by 24 months	95.5	96.3
3 Hep B by 24 months	96.0	95.9
1 Varicella by 24 months	92.6	93.5
UTD PCV by 24 months	81.3	84.5
2 Rotavirus by 24 months	86.4	83.5
2 Hep A by 24 months	50.6	57.3
1+ Influenza by 24 months	38.1	29.3

†† 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, 2000-2013



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

District 3-1, Georgia Immunization Study Report, p3

Table 3-1-C: UTD Immunization Rates by Demographic Group, District 3-1, 2013

	State Avg. UTD by 24 months (%)	3-1—UTD by 24 months %	*3-1—UTD by end of d.c.[β] (%)*
District 3-1 Sample (n=176)	85.0	79.0	90.9
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=77)	86.4	**80.5**	*89.6*
White, Hispanic (n=14)	90.6	**78.6**	*100.0*
Black (n=52)	81.4	**71.2**	*90.4*
Unspecified, Hispanic (n=13)	90.5	**84.6**	*84.6*
Asian (n=7)	91.3	**100.0**	*100.0*
Multiracial (n=2)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=91)	86.7	**84.6**	*93.4*
HS Diploma/GED (n=47)	82.1	**72.3**	*89.4*
9th-11th grade (n=16)	82.3	**56.3**	*81.3*
<9th grade (n=9)	90.1	**88.9**	*88.9*
WIC[θ]			
Non-WIC (n=74)	85.1	**85.1**	*94.6*
WIC (n=102)	84.9	**74.5**	*88.2*
Maternal Age[‡]			
<25 years (n=39)	82.9	**59.0**	*82.1*
25-34 years (n=100)	86.0	**84.0**	*94.0*
35+ years (n=37)	88.1	**86.5**	*91.9*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=36)	89.2	**88.9**	*97.2*
Unmarried, First Birth (n=30)	87.9	**80.0**	*86.7*
Married, Repeat Birth (n=68)	85.5	**82.4**	*91.2*
Unmarried, Repeat Birth (n=42)	79.2	**64.3**	*88.1*
Gestational Age[‡]			
<37 weeks (n=18)	81.2	**72.2**	*88.9*
37+ weeks (n=158)	85.4	**79.7**	*91.1*
Provider Type[†]			
Public Sector Only (n=0)	81.3	**N/A**	*N/A*
Private Sector Only (n=134)	87.2	**82.8**	*94.8*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth[‡,†]			
Government Assist (n=68)	82.3	**67.6**	*88.2*
Private Insurance (n=82)	89.4	**89.0**	*96.3*
Other (n=13)	84.5	**69.2**	*76.9*
Self Pay (n=3)	84.2	**100.0**	*100.0*

UTD Immunization Rates by Demographic Group: In District 3-1, children of white, non-Hispanic mothers, the largest demographic group in this District sample, were similarly UTD by 24 months when compared to the District sample as a whole (80.5% vs. 79.0%). Children of Black mothers were UTD by 24 months at a rate less than the District sample (71.2% vs. 79.0%). The District's other race/ethnicity group sample sizes were too small to draw any definite conclusions (Table 3-1-C).

In terms of maternal education, children of mothers with a high school diploma were less often UTD by 24 months compared to children of mothers with some college education (72.3% vs. 84.6%).

With regard to maternal age, children of mothers <25 years of age were least often UTD by 24 months of age (59.0%). With regard to maternal marital status and repeat births, children of unmarried mothers with previous children were the least often UTD by 24 months (64.3%).

In terms of payment at birth, District 3-1 children whose birth costs were covered by private insurance were more often UTD than children whose birth costs were covered by government-assisted insurance (89.0% vs. 67.6%).

	State Avg. UTD by 24 months (%)	3-1—UTD by 24 months (%)	*3-1—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=89)	**86.2**	**83.1**	*93.3*
2 (n=45)	**85.1**	**75.6**	*88.9*
3+ (n=15)	**83.9**	**80.0**	*93.3*
Child's Gender[‡]			
Male (n=99)	**79.4**	**77.8**	*88.9*
Female (n=77)	**81.0**	**80.5**	*93.5*
Metro Residence[θ]			
Metro (n=176)	**84.5**	**79.0**	*90.9*
Non-metro (n=0)	**86.7**	N/A	*N/A*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

Although many demographic-related disparities resolved by the end of data collection, some still remained (Table 3-1-C, *column in italics*).

For example, children of white non-Hispanic mothers remained the least often UTD (89.6%).

In addition, children of mothers with only a high school diploma remained less often UTD by the end of data collection compared to those whose mothers had a college level education (89.4% vs. 93.4%).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 whose mothers have a high school graduate level of education only
- Children whose mothers are <25 years of age
- Children whose birth was covered by government-assisted insurance

Figure 3-1-B: Immunizations Administered in Private VS Public Sector, District 3-1, 2013 (n=3,128)

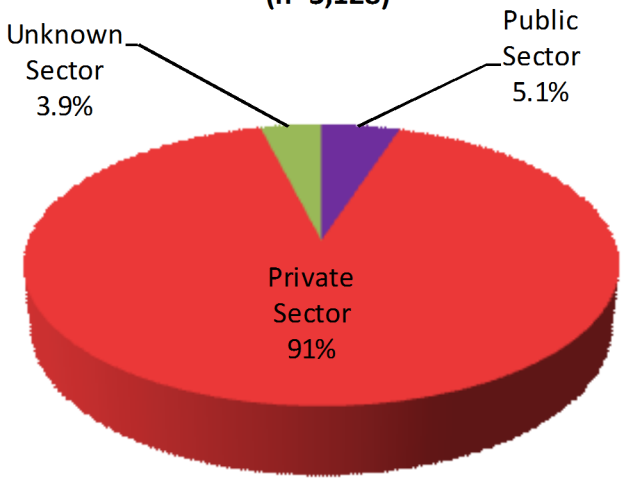


Table 3-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-1, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	73.9	80.1	77.6	88.8	89.7	85.7	79.5
3 Polio by 24 months	83.0	90.3	88.5	94.0	98.3	94.3	95.5
1 MMR by 24 months	86.2	87.2	88.0	94.0	94.8	90.7	93.8
UTD Hib by 24 months	87.2	86.7	85.3	90.3	97.7	93.6	95.5
3 Hepatitis B by 24 months	86.2	90.3	87.4	94.0	96.6	95.0	96.0
1 Varicella by 24 months	83.5	84.1	85.8	93.3	95.4	91.4	92.6
UTD PCV by 24 months	79.4	83.2	82.0	91.0	98.3	92.1	81.3
2 Rotavirus	-	-	-	79.9	87.4	75.7	86.4
1 Influenza by 24 months	-	-	-	61.9	74.7	60.0	38.1

Immunization Rates by Vaccine Antigen: In District 3 -1, the UTD immunization rates by 24 months for most vaccine antigens fluctuated from 2006 to 2013. All rates increased between 2012 and 2013 except for DTaP and PCV (Table 3-1-D).

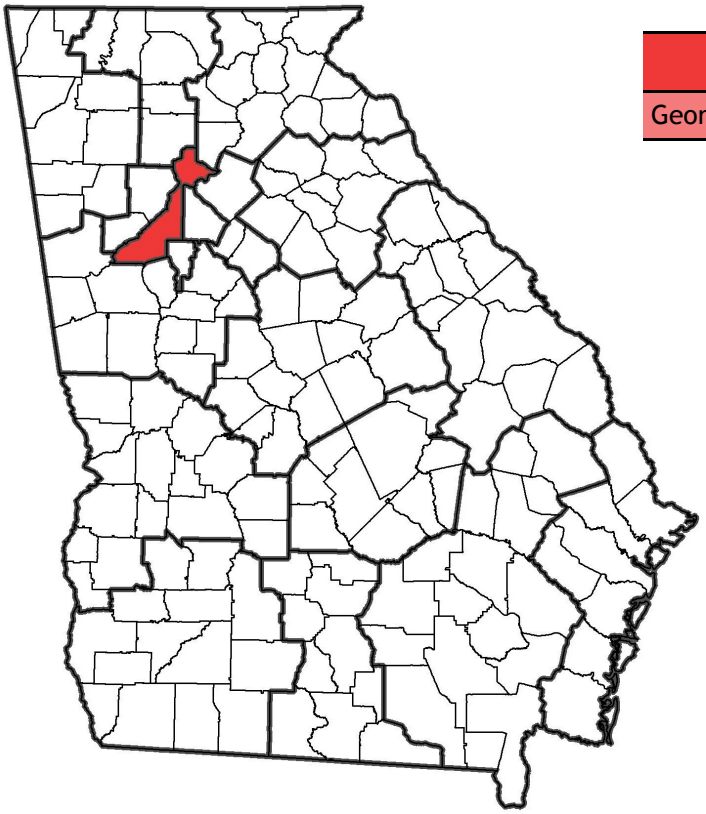
Among District 3-1 immunization rates by vaccine antigen in 2013, the UTD immunization rate for DTaP was lowest, as it has been over the last 7 years, at 79.5%. The UTD immunization rate for PCV was the second-lowest at 81.3%, having decreased from 92.1% in 2012.

Among District 3-1 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 60.0% in 2012 to 38.1% in 2013. This may reflect a data capture error, and is currently being investigated.

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

District 3-2

2013 Georgia Immunization Study Report



District 3-2 Data Collection Team	
Georgia Goseer, RN	District Immunization Coordinator

County	Number in Sample	Metro
Fulton	205	Metro
District 3-2	205	
District UTD by 24 months Immunization Rate	83.9%	
State of Georgia	2,489	
State UTD by 24 months Immunization Rate	85.0%	

District 3-2

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 3-2 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 3.4% higher than the immunization rate based on GRITS alone and slightly lower than the state UTD by 24 months rate (83.9% vs. 85.0%). At the end of data collection, the District UTD immunization rate remained lower than the state rate (87.8% vs. 90.6%) (Table 3-2-B).

From 2012 to 2013: The District 3-2 UTD immunization rate by 24 months increased by 8.5% from 2012 to 2013. The District UTD immunization rate by the end of data collection also increased by 4.5% from 2012 to 2013 (Figure 3-2-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 3-2-A: GIS Sampling Scheme, District 3-2, 2013

	District 3-2 (n)	State (n)
Original Sample	232	2,813
Ineligible	9	181
(Refused to Participate)	(2)	(20)
Eligible Sample	223	2,632
Unable to Locate†	18	143
Final Sample	205	2,489
Response Rate (%)	91.9	94.6

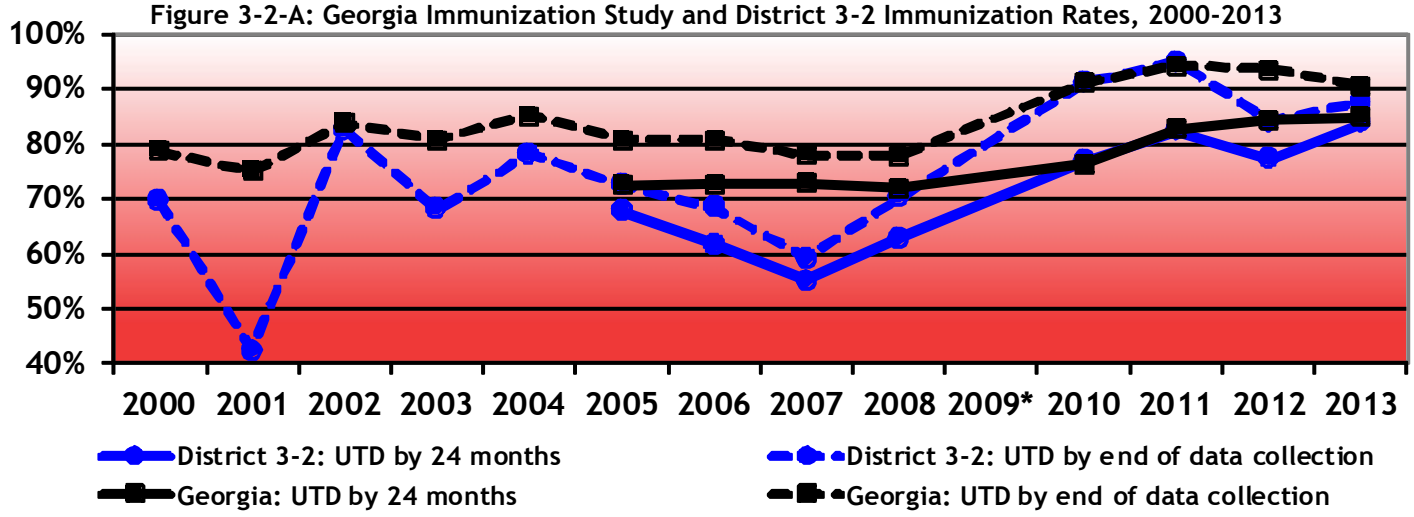
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 3-2-B: Immunization Summary by Series & Vaccine Antigen, District 3-2, 2013

	District 3-2 (%)	State Average (%)
UTD immunization rate** **by 24 months**	83.9	85.0
UTD immunization rate** **Based on GRITS alone**	80.5	80.2
UTD immunization rate** **by end of data collection**††	87.8	90.6
4 DTaP by 24 months	83.4	84.6
3 DTaP by 24 months	95.6	96.6
3 IPV by 24 months	92.7	95.7
1 MMR by 24 months	92.7	92.7
UTD Hib by 24 months	95.6	96.3
3 Hep B by 24 months	95.1	95.9
1 Varicella by 24 months	95.6	93.5
UTD PCV by 24 months	81.5	84.5
2 Rotavirus by 24 months	81.5	83.5
2 Hep A by 24 months	51.7	57.3
1+ Influenza by 24 months	30.7	29.3

†† 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 3-2-A: Georgia Immunization Study and District 3-2 Immunization Rates, 2000-2013



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

District 3-2, Georgia Immunization Study Report, p3

Table 3-2-C: UTD Immunization Rates by Demographic Group, District 3-2, 2013

	State Avg. UTD by 24 months (%)	3-2—UTD by 24 months %	*3-2—UTD by end of d.c.[β] (%)*
District 3-2 Sample (n=205)	85.0	83.9	87.8
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=49)	86.4	**89.8**	*89.8*
White, Hispanic (n=1)	90.6	**100.0**	*100.0*
Black (n=120)	81.4	**77.5**	*84.2*
Unspecified, Hispanic (n=13)	90.5	**92.3**	*92.3*
Asian (n=9)	91.3	**100.0**	*100.0*
Multiracial (n=0)	86.7	**N/A**	*N/A*
Maternal Education[‡,†]			
Some College+ (n=111)	86.7	**88.3**	*89.2*
HS Diploma/GED (n=47)	82.1	**85.1**	*89.4*
9th-11th grade (n=30)	82.3	**63.3**	*80.0*
<9th grade (n=6)	90.1	**100.0**	*100.0*
WIC[θ]			
Non-WIC (n=92)	85.1	**87.0**	*87.0*
WIC (n=113)	84.9	**81.4**	*88.5*
Maternal Age[‡]			
<25 years (n=62)	82.9	**77.4**	*83.9*
25-34 years (n=104)	86.0	**83.7**	*87.5*
35+ years (n=39)	88.1	**94.9**	*94.9*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=44)	89.2	**86.4**	*86.4*
Unmarried, First Birth (n=40)	87.9	**80.0**	*80.0*
Married, Repeat Birth (n=55)	85.5	**92.7**	*94.5*
Unmarried, Repeat Birth (n=66)	79.2	**77.3**	*87.9*
Gestational Age[‡]			
<37 weeks (n=18)	81.2	**72.2**	*77.8*
37+ weeks (n=187)	85.4	**85.0**	*88.8*
Provider Type[†]			
Public Sector Only (n=0)	81.3	**N/A**	*N/A*
Private Sector Only (n=166)	87.2	**87.3**	*91.6*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth[‡,†]			
Government Assist (n=73)	82.3	**80.8**	*87.7*
Private Insurance (n=77)	89.4	**88.3**	*88.3*
Other (n=31)	84.5	**80.6**	*83.9*
Self Pay (n=10)	84.2	**70.0**	*80.0*

UTD Immunization Rates by Demographic Group: In District 3-2, children of black mothers were less often UTD by 24 months when compared to the District sample as a whole (77.5% vs. 83.9%). Most of the District's other race/ethnicity group sample sizes were too small to draw any definite conclusions (Table 3-2-C).

In terms of maternal education, children of mothers who were still in high school were the least often UTD by 24 months (63.3%). In contrast, children of mothers with a high school and some college education were more often UTD by 24 months (85.1% and 88.3%).

Children of mothers 35+ years of age were most often up to date by 24 months of age (94.9%).

In terms of maternal marital status and repeat births, children of married mothers were the most often UTD by 24 months (92.7% and 86.4%).

Children whose birth costs were covered by private insurance were more often UTD by 24 months than those whose birth costs were covered by government-assisted insurance (88.3% vs. 80.8%).

In addition, children who received immunizations from only one provider (Number of Providers) were

	State Avg. UTD by 24 months (%)	3-2—UTD by 24 months (%)	*3-2—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=128)	**86.2**	**85.2**	*86.7*
2 (n=42)	**85.1**	**85.7**	*88.1*
3+ (n=9)	**83.9**	**88.9**	*100.0*
Child's Gender[‡]			
Male (n=107)	**79.4**	**81.3**	*85.0*
Female (n=98)	**81.0**	**86.7**	*90.8*
Metro Residence[θ]			
Metro (n=205)	**84.5**	**83.9**	*87.8*
Non-metro (n=0)	**86.7**	N/A	*N/A*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

as often UTD by 24 months compared to those receiving immunizations from two providers (85.2% vs. 85.7%).

Although many demographic-related disparities resolved by the end of data collection, some still remained (Table 3-2-C, *column in italics*).

For example, children of mothers who were still in high school remained the least often UTD by the end of data collection (see Table 3-2-C).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 were still in high school
- Children of unmarried mothers
- Children whose birth costs were covered by government-assisted insurance

Figure 3-2-B: Immunizations Administered in Private VS Public Sector, District 3-2, 2013 (n=3,783)

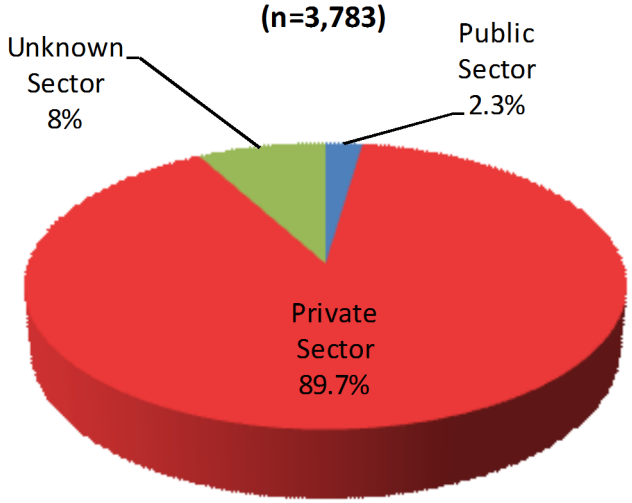


Table 3-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-2, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	63.9	58.7	66.4	84.3	86.3	83.0	83.4
3 Polio by 24 months	79.4	72.2	79.9	94.0	96.3	91.2	92.7
1 MMR by 24 months	79.4	68.8	78.5	91.7	93.8	87.1	92.7
UTD Hib by 24 months	81.6	70.7	74.8	89.8	95.0	93.8	95.6
3 Hepatitis B by 24 months	76.5	71.3	78.5	94.0	96.3	93.3	95.1
1 Varicella by 24 months	79.8	68.1	78.1	93.1	91.9	88.7	95.6
UTD PCV by 24 months	70.8	61.8	70.8	89.8	96.9	86.6	81.5
2 Rotavirus	-	-	-	72.7	86.9	73.2	81.5
1 Influenza by 24 months	-	-	-	61.1	58.8	57.2	30.7

Immunization Rates by Vaccine Antigen: In District 3-2, UTD immunization rates by 24 months consistently increased for most vaccine antigens between 2006 to 2011, but the dropped in 2012. All antigen-specific rates increased in 2013, with the exception of PCV, which decreased (86.6% to 81.5%) (Table 3-2-D).

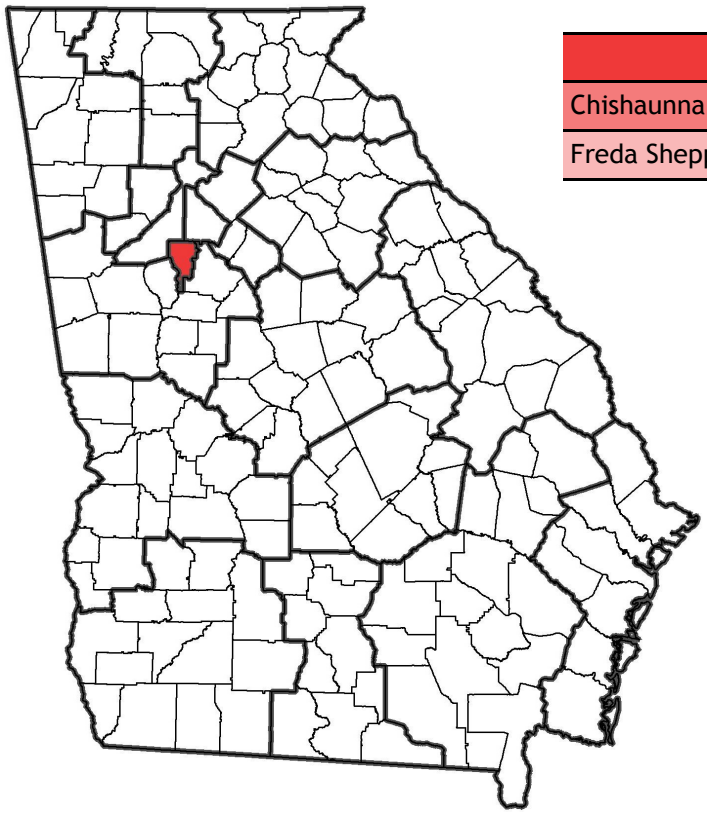
Among District 3-2 immunization rates by vaccine antigen in 2013, the UTD immunization rate for PCV by vaccine antigen was lowest at 81.5%. The DTaP UTD immunization rate was second-lowest at 83.4%.

Among District 3-2 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 57.2% in 2012 to 30.7% in 2013. This may reflect a data capture error, and is currently being investigated.

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

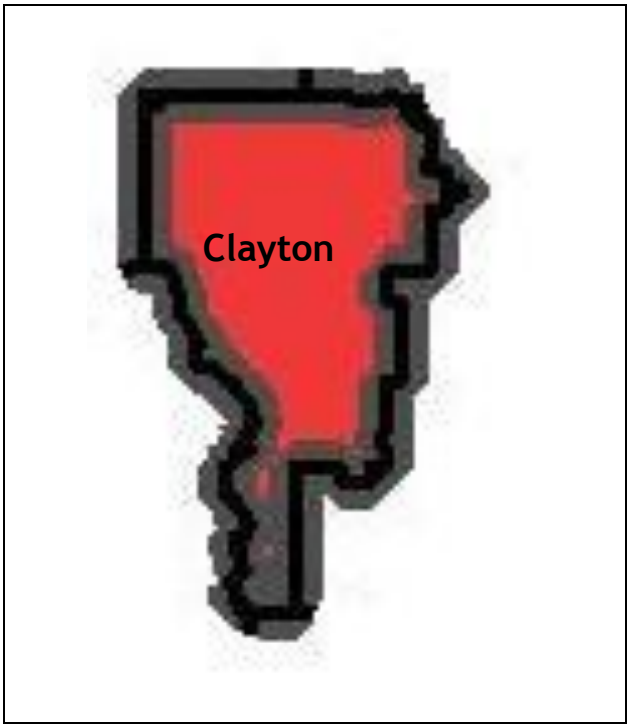
District 3-3

2013 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	Metro
Clayton	137	Metro
District 3-3	**137**	
District UTD by 24 months Immunization Rate	**67.9%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 3-3

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 3-3 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 5.1% higher than the UTD immunization rate based on GRITS alone and lower than the state UTD by 24 months rate (67.9% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained lower than the state rate (72.3% vs. 90.6%) (Table 3-3-B).

From 2012 to 2013: The District 3-3 UTD immunization rate by 24 months decreased by 19.1% from 2012 to 2013. The District UTD immunization rate by the end of data collection also decreased by 24.1% from 2012 to 2013 (Figure 3-3-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 3-3-A: GIS Sampling Scheme, District 3-3, 2013

	District 3-3 (n)	State (n)
Original Sample	151	2,813
Ineligible	2	181
(Refused to Participate)	(1)	(20)
Eligible Sample	149	2,632
Unable to Locate†	12	143
Final Sample	137	2,489
Response Rate (%)	91.9	94.6

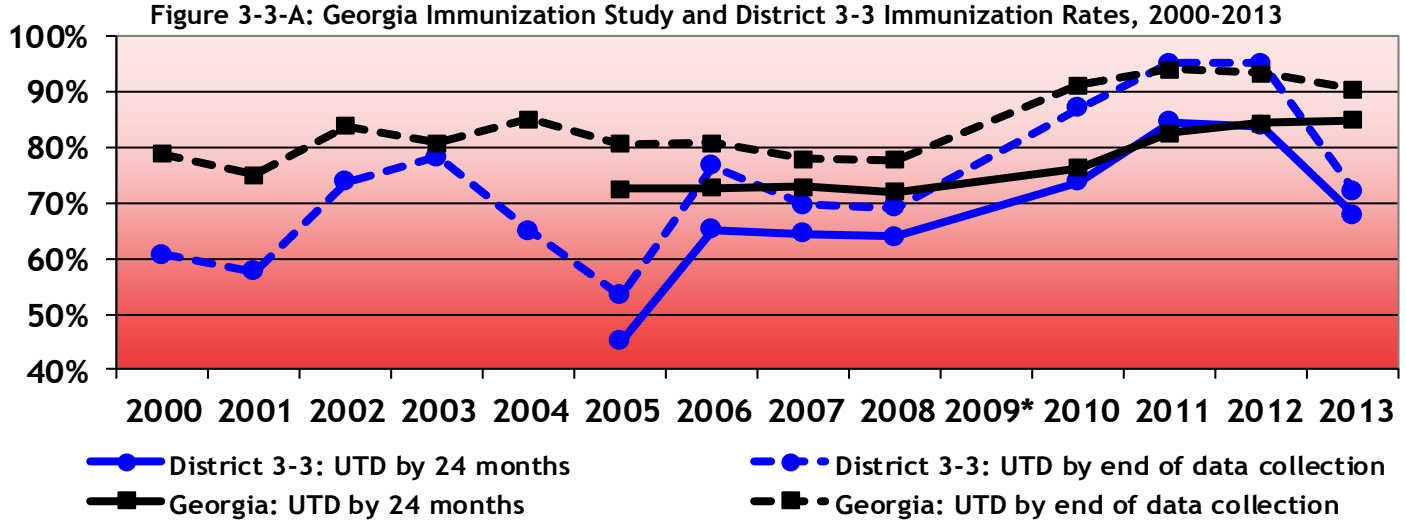
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 3-3-B: Immunization Summary by Series & Vaccine Antigen, District 3-3, 2013

	District 3-3 (%)	State Average (%)
UTD immunization rate** **by 24 months**	67.9	85.0
UTD immunization rate** **Based on GRITS alone**	62.8	80.2
UTD immunization rate** **by end of data collection**††	72.3	90.6
4 DTaP **by 24 months**	67.2	84.6
3 DTaP **by 24 months**	86.9	96.6
3 IPV **by 24 months**	86.1	95.7
1 MMR **by 24 months**	82.5	92.7
UTD Hib **by 24 months**	88.3	96.3
3 Hep B **by 24 months**	85.4	95.9
1 Varicella **by 24 months**	83.2	93.5
UTD PCV **by 24 months**	65.0	84.5
2 Rotavirus **by 24 months**	75.9	83.5
2 Hep A **by 24 months**	48.2	57.3
1+ Influenza **by 24 months**	13.1	29.3

†† 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 3-3-A: Georgia Immunization Study and District 3-3 Immunization Rates, 2000-2013



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

District 3-3, Georgia Immunization Study Report, p3

Table 3-3-C: UTD Immunization Rates by Demographic Group, District 3-3, 2013

	State Avg. UTD by 24 months (%)	3-3—UTD by 24 months %	*3-3—UTD by end of d.c.β (%)*
District 3-3 Sample (n=137)	85.0	67.9	72.3
Maternal Race/Ethnicity‡,†			
White, Non-Hispanic (n=9)	86.4	**55.6**	*66.7*
White, Hispanic (n=1)	90.6	**100.0**	*100.0*
Black (n=89)	81.4	**62.9**	*67.4*
Unspecified, Hispanic (n=30)	90.5	**86.7**	*90.0*
Asian (n=4)	91.3	**75.0**	*75.0*
Multiracial (n=0)	86.7	**N/A**	*N/A*
Maternal Education‡,†			
Some College+ (n=48)	86.7	**70.8**	*77.1*
HS Diploma/GED (n=47)	82.1	**59.6**	*63.8*
9th-11th grade (n=26)	82.3	**73.1**	*76.9*
<9th grade (n=13)	90.1	**84.6**	*84.6*
WICθ			
Non-WIC (n=33)	85.1	**60.6**	*63.6*
WIC (n=104)	84.9	**70.2**	*75.0*
Maternal Age‡			
<25 years (n=50)	82.9	**70.0**	*74.0*
25-34 years (n=73)	86.0	**64.4**	*69.9*
35+ years (n=14)	88.1	**78.6**	*78.6*
Maternal Marital Status‡ & Repeat Birth‡ Combination			
Married, First Birth (n=6)	89.2	**66.7**	*83.3*
Unmarried, First Birth (n=33)	87.9	**81.8**	*84.8*
Married, Repeat Birth (n=33)	85.5	**72.7**	*75.8*
Unmarried, Repeat Birth (n=64)	79.2	**59.4**	*64.1*
Gestational Age‡			
<37 weeks (n=14)	81.2	**71.4**	*78.6*
37+ weeks (n=123)	85.4	**67.5**	*71.5*
Provider Type†			
Public Sector Only (n=1)	81.3	**0.0**	*0.0*
Private Sector Only (n=105)	87.2	**74.3**	*78.1*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth‡,†			
Government Assist (n=80)	82.3	**61.3**	*65.0*
Private Insurance (n=12)	89.4	**66.7**	*75.0*
Other (n=24)	84.5	**75.0**	*79.2*
Self Pay (n=12)	84.2	**91.7**	*91.7*

UTD Immunization Rates by Demographic Group: *Note: District 3-3 Immunization Coordinator position was vacant during a portion of data collection period.*

In District 3-3, children of Hispanic mothers of unspecified race were most UTD by 24 months (86.7%). Children of black mothers were least often UTD by 24 months (62.9%).The other race/ethnicity group sample sizes were too small to draw any definite conclusions (Table 3-3-C).

In terms of maternal education, children of mothers with a high school diploma/GED were the least often UTD by 24 months (59.6%) of all of the maternal education groups.

In terms of maternal age, children of mothers between the ages of 25 and 34 years were least likely to be UTD at 24 months (64.4%).

In terms of maternal marital status and repeat births, children of unmarried mothers with previous children were the least often UTD by 24 months (59.4%).

District 3-3 children whose birth costs were covered by private insurance were more often UTD by 24 months than children whose birth costs were

	State Avg. UTD by 24 months (%)	3-3—UTD by 24 months (%)	*3-3—UTD by end of d.c.β (%)*
Number of Providers†			
1 (n=55)	**86.2**	**69.1**	*72.7*
2 (n=36)	**85.1**	**63.9**	*72.2*
3+ (n=14)	**83.9**	**78.6**	*78.6*
Child's Gender‡			
Male (n=80)	**79.4**	**65.0**	*70.0*
Female (n=57)	**81.0**	**71.9**	*75.4*
Metro Residenceθ			
Metro (n=137)	**84.5**	**67.9**	*72.3*
Non-metro (n=0)	**86.7**	N/A	*N/A*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

covered by government-assisted insurance (66.7% vs. 61.3%).

Children with one provider were more often UTD by 24 months than those with two providers (69.1% vs. 63.9%).

Although many demographic-related disparities resolved by the end of data collection, some still remained (Table 3-3-C, *column in italics*).

For example, children of mothers aged 25-34 years remained the least often UTD by the end of data collection (69.9%), as did children of unmarried mothers with previous children (64.1%).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 of mothers with a high school diploma/GED level of education only
- Children whose mothers were between 25-34 years of age
- Children of unmarried mothers with previous children
- Children whose birth costs were covered by government-assisted insurance

Figure 3-3-B: Immunizations Administered in Private VS Public Sector, District 3-3, 2013 (n=1,986)

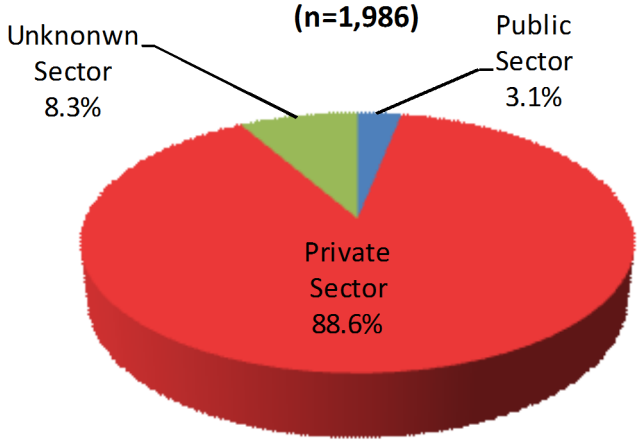


Table 3-3-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-3, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	70.7	68.4	69.3	78.7	88.5	84.7	67.2
3 Polio by 24 months	84.2	87.5	79.7	92.9	97.1	95.2	86.1
1 MMR by 24 months	83.5	79.6	78.7	90.8	93.3	94.4	82.5
UTD Hib by 24 months	85.4	81.6	74.8	91.5	94.2	93.6	88.3
3 Hepatitis B by 24 months	86.6	88.8	84.2	92.9	97.1	96.0	85.4
1 Varicella by 24 months	82.3	80.3	79.2	90.1	94.2	96.0	83.2
UTD PCV by 24 months	59.2	61.8	70.8	85.8	98.1	91.9	65.0
2 Rotavirus	-	-	-	61.7	81.7	62.9	75.9
1 Influenza by 24 months	-	-	-	48.9	47.2	41.9	13.1

Immunization Rates by Vaccine Antigen: In District 3-3, the UTD immunization rates by 24 months steadily increased for all vaccine antigens through 2011. In 2012, most immunization rates by antigen fell slightly, and continued to fall in 2013. Only the Rotavirus UTD immunization rate rose in 2013 to 75.9% (Table 3-2-D).

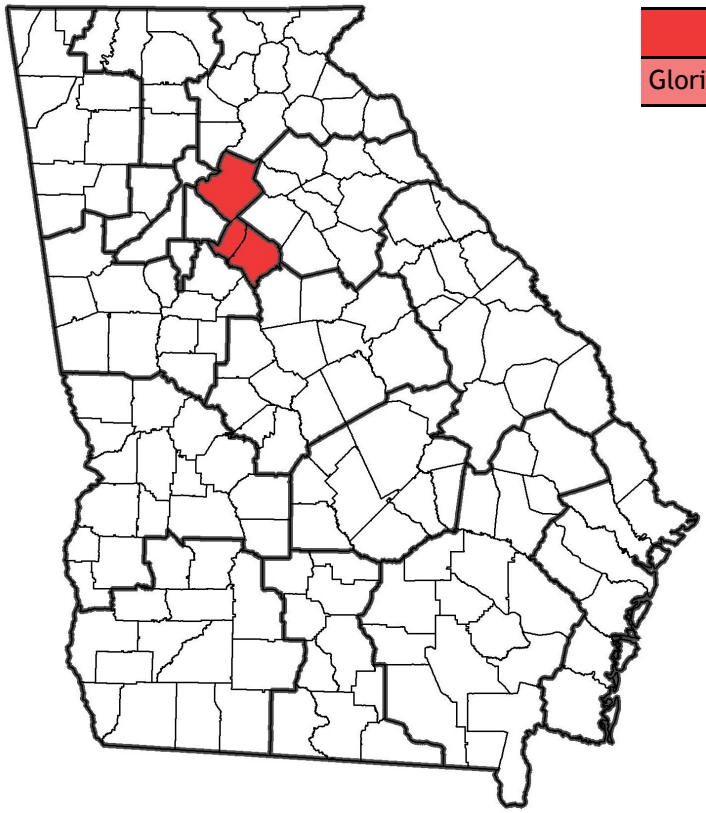
Among District 3-3 immunization rates by vaccine antigen in 2013, the UTD immunization rate for PCV was lowest at 65.0%, down from 91.9% in 2012. The UTD immunization rate for DTaP was the second-lowest at 67.2%, down from 84.7% in 2012.

Among District 3-3 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 41.9% in 2012 to 13.1% in 2013. This may reflect a data capture error, and is currently being investigated.

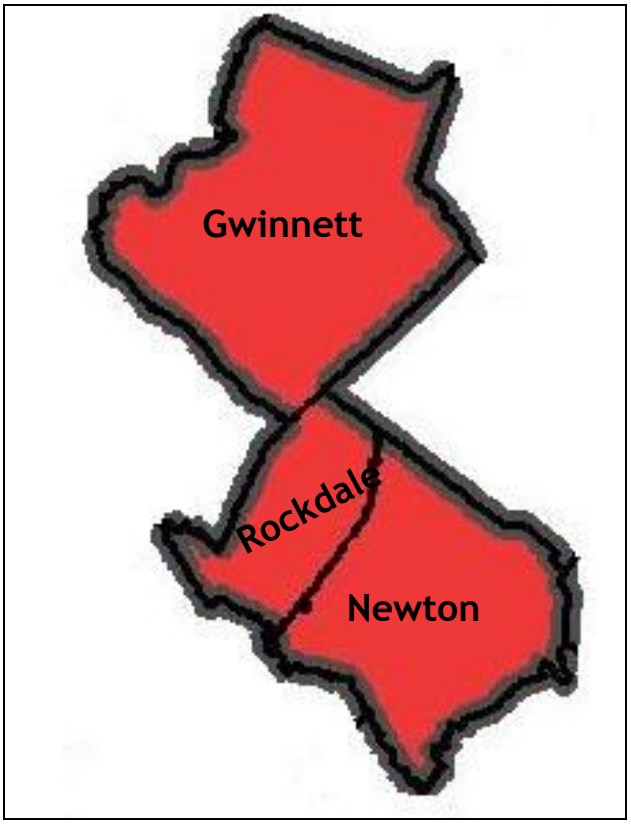
Vaccine Antigen-Specific Conclusions: The antigen specific data suggest that the DTaP and PCV vaccines could reasonably be the primary focus of District immunization campaigns.

District 3-4

2013 Georgia Immunization Study Report



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



County	Number in Sample	Metro
Gwinnett	152	Metro
Newton	21	Metro
Rockdale	10	Metro
District 3-4	**183**	
District UTD by 24 months Immunization Rate	**86.3%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	

District 3-4

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 3-4 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 8.7% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (86.3% vs. 85.0%). At the end of data collection, the District UTD immunization rate remained higher than the state rate (91.3% vs. 90.6%) (Table 3-4-B).

From 2012 to 2013: The District 3-4 UTD immunization rate by 24 months increased by 5.9% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 0.5% from 2012 to 2013 (Figure 3-4-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 3-4-A: GIS Sampling Scheme, District 3-4, 2013

	District 3-4 (n)	State (n)
Original Sample	214	2,813
Ineligible	16	181
(Refused to Participate)	(2)	(20)
Eligible Sample	198	2,632
Unable to Locate†	15	143
Final Sample	183	2,489
Response Rate (%)	92.4	94.6

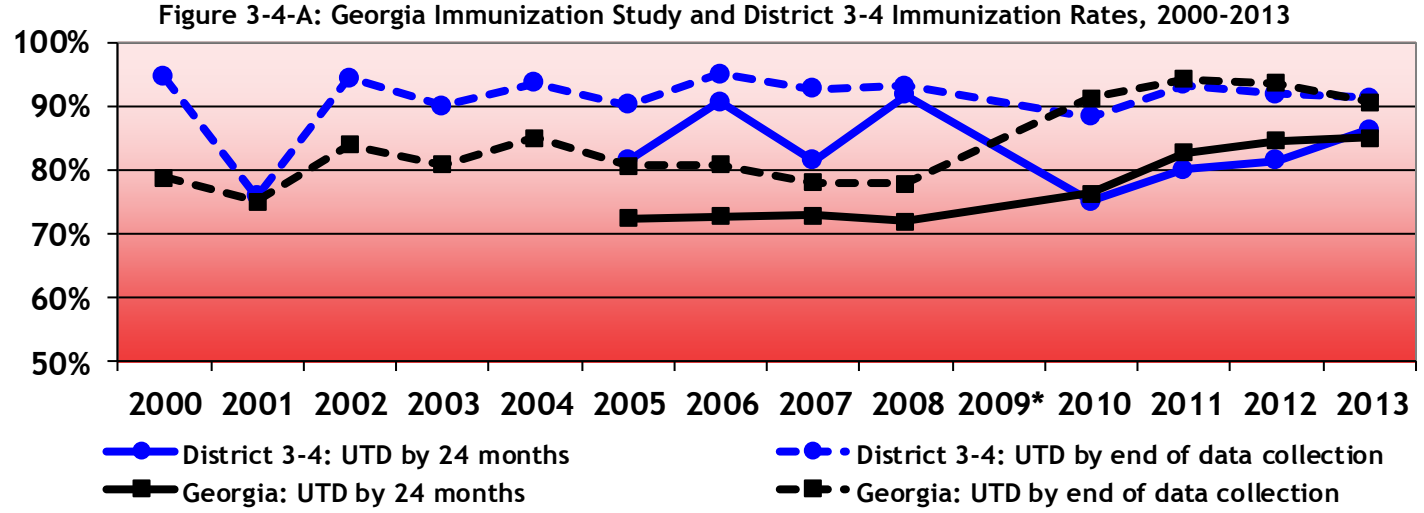
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 3-4-B: Immunization Summary by Series & Vaccine Antigen, District 3-4, 2013

	District 3-4 (%)	State Average (%)
UTD immunization rate** **by 24 months**	86.3	85.0
UTD immunization rate** **Based on GRITS alone**	77.6	80.2
UTD immunization rate** **by end of data collection**††	91.3	90.6
4 DTaP by 24 months	88.0	84.6
3 DTaP by 24 months	95.6	96.6
3 IPV by 24 months	95.1	95.7
1 MMR by 24 months	93.4	92.7
UTD Hib by 24 months	94.5	96.3
3 Hep B by 24 months	95.6	95.9
1 Varicella by 24 months	95.1	93.5
UTD PCV by 24 months	88.0	84.5
2 Rotavirus by 24 months	87.4	83.5
2 Hep A by 24 months	55.7	57.3
1+ Influenza by 24 months	26.8	29.3

†† 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 3-4-A: Georgia Immunization Study and District 3-4 Immunization Rates, 2000-2013



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

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Table 3-4-C: UTD Immunization Rates by Demographic Group, District 3-4, 2013

	State Avg. UTD by 24 months (%)	3-4—UTD by 24 months %	*3-4—UTD by end of d.c.[β] (%)*
District 3-4 Sample (n=183)	85.0	86.3	91.3
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=51)	86.4	**86.3**	*88.2*
White, Hispanic (n=14)	90.6	**92.9**	*100.0*
Black (n=57)	81.4	**84.2**	*89.5*
Unspecified, Hispanic (n=19)	90.5	**89.5**	*94.7*
Asian (n=18)	91.3	**88.9**	*94.4*
Multiracial (n=7)	86.7	**71.4**	*71.4*
Maternal Education[‡,†]			
Some College+ (n=91)	86.7	**89.0**	*92.3*
HS Diploma/GED (n=53)	82.1	**75.5**	*84.9*
9th-11th grade (n=11)	82.3	**100.0**	*100.0*
<9th grade (n=11)	90.1	**90.9**	*90.9*
WIC[θ]			
Non-WIC (n=75)	85.1	**85.3**	*89.3*
WIC (n=108)	84.9	**87.0**	*92.6*
Maternal Age[‡]			
<25 years (n=43)	82.9	**83.7**	*90.7*
25-34 years (n=99)	86.0	**85.9**	*90.9*
35+ years (n=41)	88.1	**90.2**	*92.7*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=39)	89.2	**89.7**	*94.9*
Unmarried, First Birth (n=30)	87.9	**93.3**	*96.7*
Married, Repeat Birth (n=77)	85.5	**84.4**	*89.6*
Unmarried, Repeat Birth (n=37)	79.2	**81.1**	*86.5*
Gestational Age[‡]			
<37 weeks (n=20)	81.2	**90.0**	*90.0*
37+ weeks (n=163)	85.4	**85.9**	*91.4*
Provider Type[†]			
Public Sector Only (n=2)	81.3	**100.0**	*100.0*
Private Sector Only (n=148)	87.2	**89.2**	*93.2*
Both (n=1)	88.9	**100.0**	*100.0*
Payment at Birth[‡,†]			
Government Assist (n=56)	82.3	**91.1**	*92.9*
Private Insurance (n=61)	89.4	**85.2**	*90.2*
Other (n=17)	84.5	**82.4**	*88.2*
Self Pay (n=9)	84.2	**100.0**	*100.0*

UTD Immunization Rates by Demographic Group: In District 3-4, children of white, Hispanic mothers were more often UTD by 24 months compared to the District sample as a whole (92.9% vs. 86.3%). Children of black mothers were least often UTD compared to the District sample as a whole (84.2% vs. 86.3%) (Table 3-4-C).

In terms of maternal education, District 3-4 children of mothers with a high school diploma/GED were least often UTD by 24 months compared to the District sample as a whole (75.5% and 86.3% respectively).

Children of mothers 35+ years of age were most often UTD by 24 months (90.2%).

In terms of maternal marital status and repeat births, children of mothers with previous children were less often UTD by 24 months than first-born children (see Table 3-4-C).

In District 3-4, children whose birth costs were covered by private insurance were less often UTD by 24 months than children whose birth was covered by government-assisted insurance (85.2% vs. 91.1%).

Additionally, children who had two providers (91.9%) were more often UTD than those with only

	State Avg. UTD by 24 months (%)	3-4—UTD by 24 months (%)	*3-4—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=99)	**86.2**	**88.9**	*92.9*
2 (n=37)	**85.1**	**91.9**	*91.9*
3+ (n=16)	**83.9**	**68.8**	*81.3*
Child's Gender[‡]			
Male (n=78)	**79.4**	**87.2**	*89.7*
Female (n=105)	**81.0**	**85.7**	*92.4*
Metro Residence[θ]			
Metro (n=183)	**84.5**	**86.3**	*91.3*
Non-metro (n=0)	**86.7**	N/A	*N/A*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

one provider (88.9%) (see Table 3-4-F).

Although most demographic-related disparities resolved by the end of data collection, some still remained and some new ones emerged (Table 3-4-C, *column in italics*).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 black mothers
- Children whose mothers have a high school diploma/ GED
- Children of mothers < 25 years of age.
- Children whose mothers have previous children
- Children receiving immunizations from three or more providers.

Figure 3-4-B: Immunizations Administered in Private VS Public Sector, District 3-4, 2013 (n=3,112)

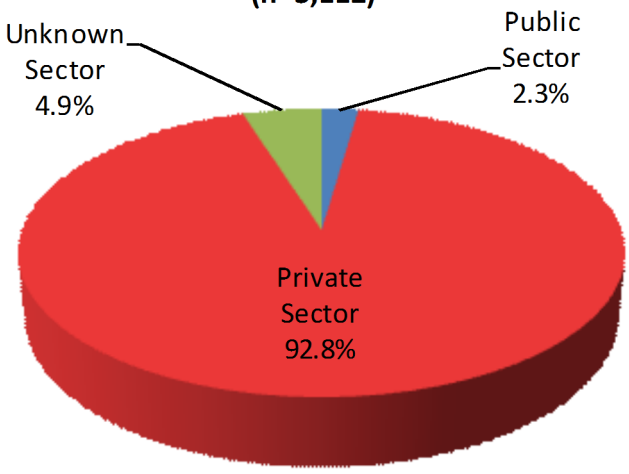


Table 3-4-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-4, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	91.5	84.0	94.4	81.7	83.9	83.6	88.0
3 Polio by 24 months	96.6	90.1	95.8	88.3	96.1	95.9	95.1
1 MMR by 24 months	93.2	91.4	95.8	86.7	90.6	91.8	93.4
UTD Hib by 24 months	94.9	93.8	95.8	85.0	97.2	96.9	94.5
3 Hepatitis B by 24 months	94.9	92.6	95.8	90.0	93.3	92.8	95.6
1 Varicella by 24 months	94.0	93.8	94.4	90.0	91.7	91.8	95.1
UTD PCV by 24 months	92.3	85.2	97.2	88.3	97.8	91.3	88.0
2 Rotavirus	-	-	-	75.0	91.7	81.0	87.4
1 Influenza by 24 months	-	-	-	61.7	60.6	59.0	26.8

Immunization Rates by Vaccine Antigen: In District 3-4, the UTD immunization rates by 24 months for most vaccine antigens fluctuated between 2006 and 2011 and decreased in 2012 (Table 3-4-D).

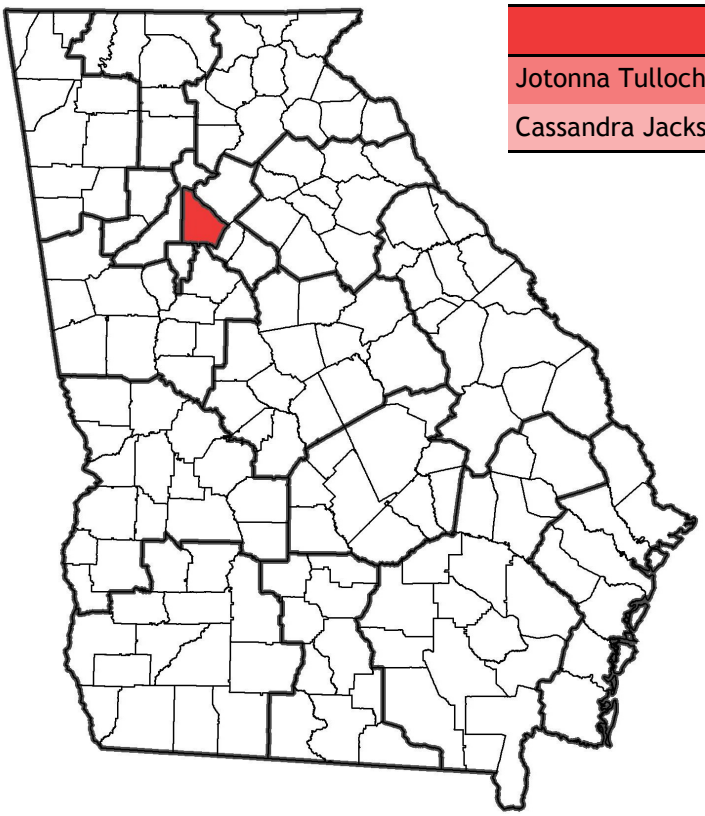
However, several of the UTD immunization rates by 24 months rose between 2012 and 2013—most notably DTaP (83.6% to 88.0%) and Varicella vaccines (91.8% to 95.1%). The lowest rates in 2013 remain among DTaP and PCV vaccines (88.0% and 88.0%), respectively.

Among District 3-4 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 59.0% in 2012 to 26.8% in 2013. This may reflect a data capture error, and is currently being investigated.

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

District 3-5

2013 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	Metro
DeKalb	162	Metro
District 3-5	**162**	
District UTD by 24 months Immunization Rate	**91.4%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	

District 3-5

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From 24 months to End of Data Collection: In the District 3-5 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 3.7% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (91.4% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained higher than the state rate (93.8% vs. 90.6%) (Table 3-5-B).

From 2012 to 2013: The District 3-5 UTD immunization rate by 24 months increased by 4.7% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 4.3% from 2012 to 2013 (Figure 3-5-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 3-5-A: GIS Sampling Scheme, District 3-5, 2013

	District 3-5 (n)	State (n)
Original Sample	198	2,813
Ineligible	15	181
(Refused to Participate)	(2)	(20)
Eligible Sample	183	2,632
Unable to Locate†	21	143
Final Sample	162	2,489
Response Rate (%)	88.5	94.6

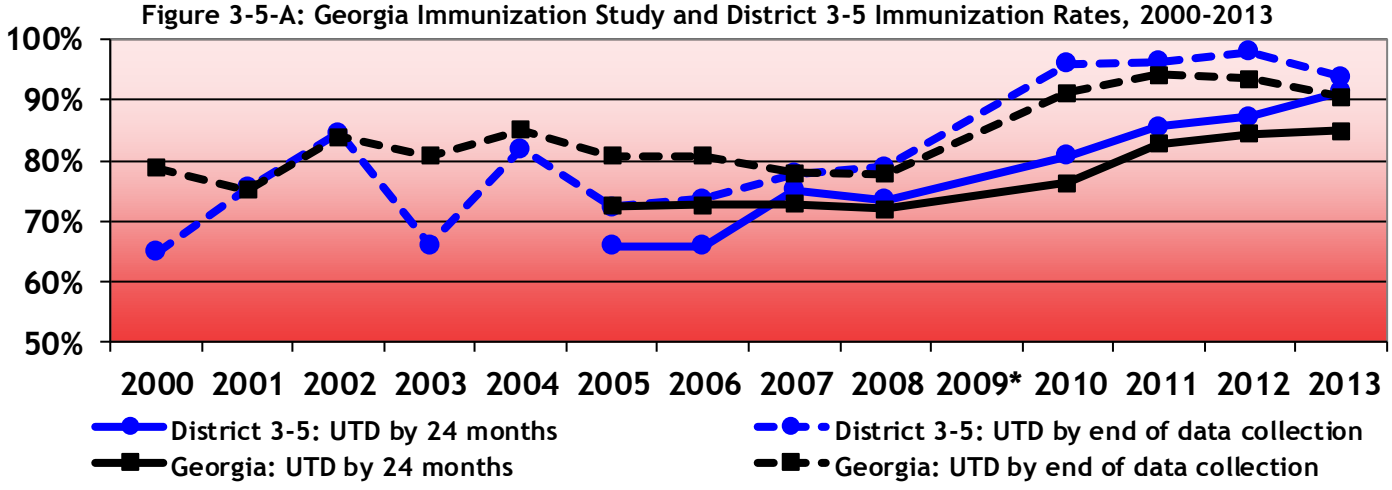
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 3-5-B: Immunization Summary by Series & Vaccine Antigen, District 3-5, 2013

	District 3-5 (%)	State Average (%)
UTD immunization rate** **by 24 months**	91.4	85.0
UTD immunization rate** **Based on GRITS alone**	87.7	80.2
UTD immunization rate** **by end of data collection**††	93.8	90.6
4 DTaP by 24 months	88.3	84.6
3 DTaP by 24 months	98.8	96.6
3 IPV by 24 months	98.1	95.7
1 MMR by 24 months	94.4	92.7
UTD Hib by 24 months	96.9	96.3
3 Hep B by 24 months	98.1	95.9
1 Varicella by 24 months	94.4	93.5
UTD PCV by 24 months	88.3	84.5
2 Rotavirus by 24 months	85.8	83.5
2 Hep A by 24 months	49.4	57.3
1+ Influenza by 24 months	29.0	29.3

†† 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 3-5-A: Georgia Immunization Study and District 3-5 Immunization Rates, 2000-2013



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

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Table 3-5-C: UTD Immunization Rates by Demographic Group, District 3-5, 2013

	State Avg. UTD by 24 months (%)	3-5—UTD by 24 months %	*3-5—UTD by end of d.c.[β] (%)*
District 3-5 Sample (n=162)	85.0	**91.4**	93.8
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=28)	86.4	**92.9**	*92.9*
White, Hispanic (n=1)	90.6	**100.0**	*100.0*
Black (n=82)	81.4	**87.8**	*92.7*
Unspecified, Hispanic (n=25)	90.5	**96.0**	*96.0*
Asian (n=10)	91.3	**100.0**	*100.0*
Multiracial (n=3)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=69)	86.7	**88.4**	*91.3*
HS Diploma/GED (n=46)	82.1	**97.8**	*97.8*
9th-11th grade (n=25)	82.3	**88.0**	*96.0*
<9th grade (n=15)	90.1	**86.7**	*86.7*
WIC[θ]			
Non-WIC (n=61)	85.1	**88.5**	*93.4*
WIC (n=101)	84.9	**93.1**	*94.1*
Maternal Age[‡]			
<25 years (n=58)	82.9	**89.7**	*94.8*
25-34 years (n=74)	86.0	**95.9**	*97.3*
35+ years (n=29)	88.1	**82.8**	*82.8*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=41)	89.2	**97.6**	*97.6*
Unmarried, First Birth (n=41)	87.9	**97.6**	*97.6*
Married, Repeat Birth (n=41)	85.5	**85.4**	*90.2*
Unmarried, Repeat Birth (n=39)	79.2	**84.6**	*89.7*
Gestational Age[‡]			
<37 weeks (n=20)	81.2	**90.0**	*95.0*
37+ weeks (n=142)	85.4	**91.5**	*93.7*
Provider Type[†]			
Public Sector Only (n=2)	81.3	**100.0**	*100.0*
Private Sector Only (n=129)	87.2	**93.0**	*93.8*
Both (n=2)	88.9	**100.0**	*100.0*
Payment at Birth[‡,†]			
Government Assist (n=76)	82.3	**88.2**	*92.1*
Private Insurance (n=47)	89.4	**95.7**	*95.7*
Other (n=12)	84.5	**100.0**	*100.0*
Self Pay (n=19)	84.2	**89.5**	*89.5*

UTD Immunization Rates by Demographic Group: In District 3-5, children of Hispanic mothers of unspecified race were most often UTD by 24 months compared to the District sample as a whole (96.0% vs. 91.4%). Children of black mothers were less often UTD compared to the District sample as a whole (87.8% vs. 91.4%). The other race/ethnicity group sample sizes were too small to draw any definite conclusions (Table 3-5-C).

Children of mothers 35+ years of age were least often UTD by 24 months (82.8%). In terms of maternal marital status and repeat births, children of mothers with previous children were less often UTD by 24 months than first-born children, regardless of marital status (see Table 3-5-C).

In terms of maternal education, District 3-5 children of mothers with a high school diploma/GED were most often UTD by 24 months (see Table 3-5-C).

District 3-5 children whose birth costs were covered by private insurance were more often UTD by 24 months than children whose birth was covered by government-assisted insurance (95.7% vs. 88.2%).

Children receiving immunizations from one provider

	State Avg. UTD by 24 months (%)	3-5—UTD by 24 months (%)	*3-5—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=69)	**86.2**	**89.9**	*89.9*
2 (n=46)	**85.1**	**95.7**	*97.8*
3+ (n=19)	**83.9**	**94.7**	*94.7*
Child's Gender[‡]			
Male (n=73)	**79.4**	**93.2**	*93.2*
Female (n=89)	**81.0**	**89.9**	*94.4*
Metro Residence[θ]			
Metro (n=162)	**84.5**	**91.4**	*93.8*
Non-metro (n=0)	**86.7**	N/A	*N/A*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

were less often UTD by 24 months than those receiving immunizations from two providers (89.9 vs. 95.7%).

Although most demographic-related disparities resolved by the end of data collection, some still remained (Table 3-5-C, *column in italics*).

For example, children of mothers aged 35+ years remained the least often UTD by the end of data collection (82.8%), as did children of mothers with previous children, regardless of marital status (Table 3-5-C, *column in italics*).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 35+ years of age
- Children of mothers with previous children, regardless of marital status
- Children whose birth costs were covered by government-assisted insurance

Figure 3-5-B: Immunizations Administered in Private VS Public Sector, District 3-5, 2013 (n=2,884)

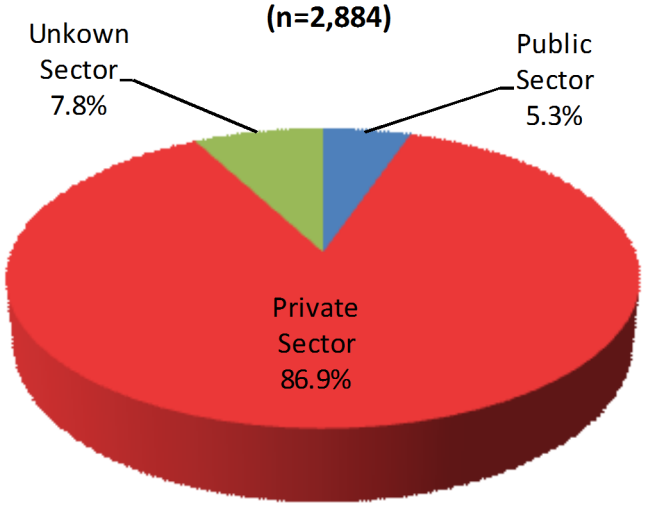


Table 3-5-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 3-5, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	72.8	78.7	77.8	88.0	86.2	90.0	88.3
3 Polio by 24 months	80.3	85.1	82.1	94.7	97.8	98.0	98.1
1 MMR by 24 months	82.3	86.0	84.6	94.7	92.8	96.0	94.4
UTD Hib by 24 months	81.5	85.1	82.1	93.3	96.4	97.3	96.9
3 Hepatitis B by 24 months	80.3	87.8	84.0	94.7	98.6	96.0	98.1
1 Varicella by 24 months	82.3	85.5	84.0	94.7	93.5	96.7	94.4
UTD PCV by 24 months	66.7	77.4	81.5	90.7	97.8	96.0	88.3
2 Rotavirus	-	-	-	76.0	91.3	75.3	85.8
1 Influenza by 24 months	-	-	-	64.0	64.5	64.0	29.0

Immunization Rates by Vaccine Antigen: In District 3-5, the UTD immunization rate by 24 months for most vaccine antigens remained steady from 2006 to 2008, increased from 2010 to 2012 but then decreased in 2013 (Table 3-5-D).

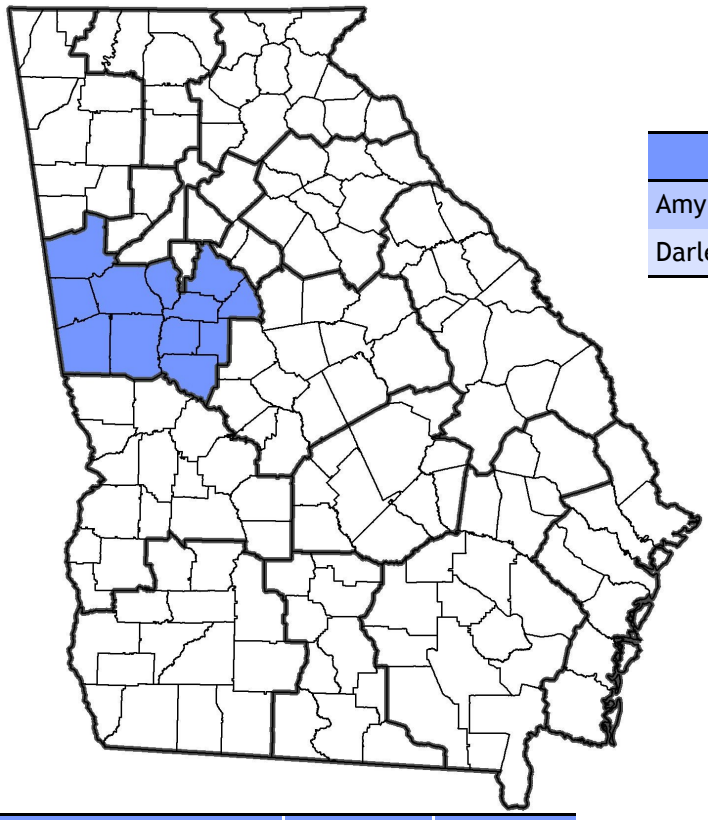
Among District 3-5 immunization rates by vaccine antigen in 2013, the UTD immunization rate for DTaP was lowest at 88.3%, a decline from 90.0% in 2012. The UTD immunization rate for PCV was also the lowest in 2013 at 88.3%, a decease from 96.0% in 2012.

Among District 3-5 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 64.0% in 2012 to 29.0% in 2013. This may reflect a data capture error, and is currently being investigated.

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

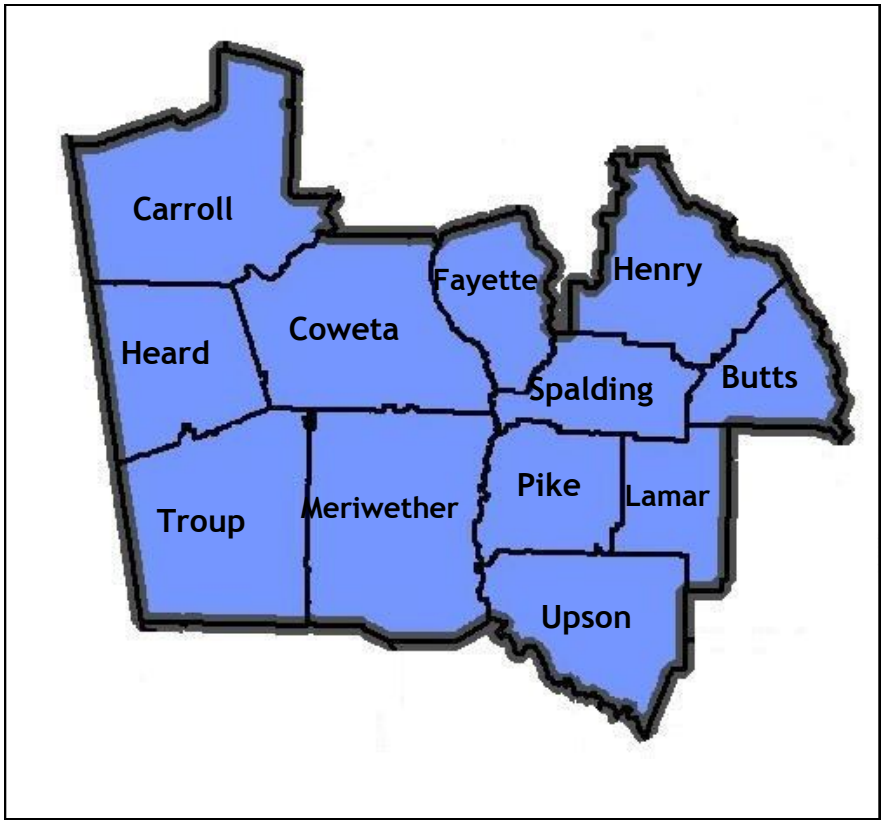
District 4-0

2013 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	Metro
Butts	5	Metro
Carroll	28	Metro
Coweta	21	Metro
Fayette	9	Metro
Heard	2	Metro
Henry	40	Metro
Lamar	6	Metro
Meriwether	2	Metro
Pike	4	Metro
Spalding	22	Metro
Troup	18	Nonmetro
Upson	6	Nonmetro
District 4-0	**163**	
District UTD by 24 months Immunization Rate	**84.7%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 4-0

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 4-0 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 4.3% higher than the UTD immunization rate based on GRITS alone and lower than the state UTD by 24 months rate (84.7% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained slightly lower than the state rate (89.0% vs. 90.6%) (Table 4-0-B).

From 2012 to 2013: The District 4-0 UTD immunization rate by 24 months decreased by 3.9% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 8.0% from 2012 to 2013 (Figure 4-0-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 4-0-A: GIS Sampling Scheme, District 4-0, 2013

	District 4-0 (n)	State (n)
Original Sample	177	2,813
Ineligible	8	181
(Refused to Participate)	(0)	(20)
Eligible Sample	169	2,632
Unable to Locate†	6	143
Final Sample	163	2,489
Response Rate (%)	96.4	94.6

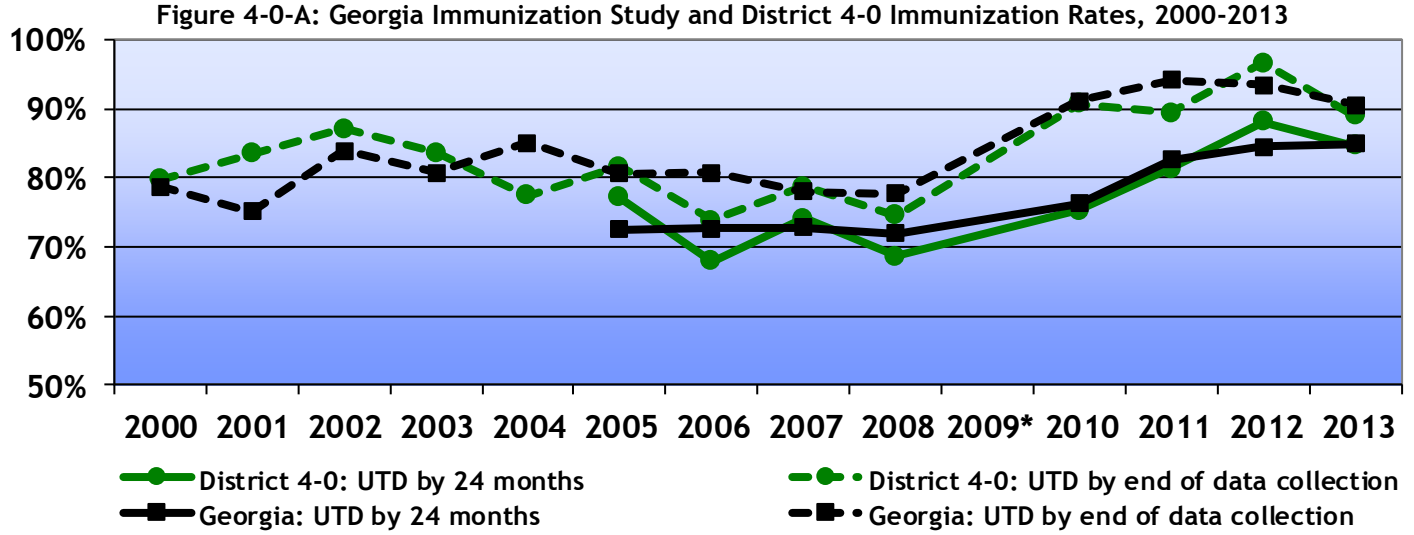
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 4-0-B: Immunization Summary by Series & Vaccine Antigen, District 4-0, 2013

	District 4-0 (%)	State Average (%)
UTD immunization rate** **by 24 months**	84.7	85.0
UTD immunization rate** **Based on GRITS alone**	80.4	80.2
UTD immunization rate** **by end of data collection**††	89.0	90.6
4 DTaP by 24 months	84.7	84.6
3 DTaP by 24 months	97.5	96.6
3 IPV by 24 months	95.1	95.7
1 MMR by 24 months	89.0	92.7
UTD Hib by 24 months	97.5	96.3
3 Hep B by 24 months	95.7	95.9
1 Varicella by 24 months	91.4	93.5
UTD PCV by 24 months	84.0	84.5
2 Rotavirus by 24 months	84.7	83.5
2 Hep A by 24 months	57.1	57.3
1+ Influenza by 24 months	23.9	29.3

†† 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 4-0-A: Georgia Immunization Study and District 4-0 Immunization Rates, 2000-2013



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

District 4-0, Georgia Immunization Study Report, p3

Table 4-0-C: UTD Immunization Rates by Demographic Group, District 4-0, 2013

	State Avg. UTD by 24 months (%)	4-0—UTD by 24 months (%)	*4-0—UTD by end of d.c.[β] (%)*
District 4-0 Sample (n=163)	85.0	84.7	89.0
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=81)	86.4	**88.9**	*90.1*
White, Hispanic (n=0)	90.6	**N/A**	*N/A*
Black (n=61)	81.4	**80.3**	*88.5*
Unspecified, Hispanic (n=9)	90.5	**88.9**	*88.9*
Asian (n=2)	91.3	**50.0**	*50.0*
Multiracial (n=2)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=82)	86.7	**86.6**	*89.0*
HS Diploma/GED (n=43)	82.1	**76.7**	*86.0*
9th-11th grade (n=24)	82.3	**91.7**	*95.8*
<9th grade (n=3)	90.1	**100.0**	*100.0*
WIC[θ]			
Non-WIC (n=65)	85.1	**87.7**	*89.2*
WIC (n=98)	84.9	**82.7**	*88.8*
Maternal Age[‡]			
<25 years (n=71)	82.9	**80.3**	*85.9*
25-34 years (n=73)	86.0	**86.3**	*90.4*
35+ years (n=19)	88.1	**94.7**	*94.7*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=33)	89.2	**87.9**	*90.9*
Unmarried, First Birth (n=41)	87.9	**87.8**	*90.2*
Married, Repeat Birth (n=47)	85.5	**87.2**	*89.4*
Unmarried, Repeat Birth (n=42)	79.2	**76.2**	*85.7*
Gestational Age[‡]			
<37 weeks (n=14)	81.2	**64.3**	*78.6*
37+ weeks (n=149)	85.4	**86.6**	*89.9*
Provider Type[†]			
Public Sector Only (n=3)	81.3	**66.7**	*100.0*
Private Sector Only (n=134)	87.2	**85.8**	*89.6*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth[‡,†]			
Government Assist (n=79)	82.3	**79.7**	*86.1*
Private Insurance (n=63)	89.4	**90.5**	*92.1*
Other (n=8)	84.5	**100.0**	*100.0*
Self Pay (n=1)	84.2	**100.0**	*100.0*

UTD Immunization Rates by Demographic Group: In District 4-0, the UTD by 24 months immunization rate for children of white, non-Hispanic mothers, was above the state average (88.9% vs. 86.4%). The UTD by 24 months immunization rate for blacks was below the state average (80.3% vs. 81.4%) The other race/ethnicity group sample sizes were too small to draw any definite conclusions (Table 4-0-C).

In terms of maternal education, children of mothers with a high school diploma/GED or some college education were the least often UTD by 24 months among the maternal education groups (76.7% and 86.6%, respectively).

In terms of maternal age, children of mothers in the <25 years age group were least often UTD by 24 months of age (80.3%). In terms of maternal marital status and repeat births, children of unmarried mothers with previous children were least often UTD by 24 months (76.2%) (see Table 4-0-C).

Children whose birth costs were covered by private insurance were more likely to be UTD at 24 months than those whose birth costs were covered by government assisted insurance (90.5% vs. 79.7%).

In District 4-0, children with one healthcare provider were as often UTD by 24 months than those with two

	State Avg. UTD by 24 months (%)	4-0—UTD by 24 months (%)	*4-0—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=91)	**86.2**	**84.6**	*86.8*
2 (n=38)	**85.1**	**84.2**	*89.5*
3+ (n=17)	**83.9**	**82.4**	*88.2*
Child's Gender[‡]			
Male (n=77)	**79.4**	**85.7**	*90.9*
Female (n=86)	**81.0**	**83.7**	*87.2*
Metro Residence[θ]			
Metro (n=139)	**84.5**	**84.2**	*88.5*
Non-metro (n=24)	**86.7**	**87.5**	*91.7*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

providers (84.6% vs. 84.2%). In addition, children living in metro counties (see page 1 of District 4-0 Immunization Report) were less often UTD by 24 months than those living in non-metro counties (84.2% vs. 87.5%).

Although many demographic-related disparities resolved by the end of data collection, some still remained (Table 4-0-C, *column in italics*).

For example, children of mothers with a high school diploma/GED or some college education remained the least often UTD by the end of the data collection (86.0% vs. 89.0%, respectively).

Children residing in metro counties remained slightly less often UTD by the end of the data collection than children living in non-metro counties (88.5% vs. 91.7%).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 black mothers
- Children whose mothers have a high school, GED or college education
- Children of mothers <25 years of age
- Children of unmarried mothers with previous children
- Children with three or more healthcare providers
- Children living in metro counties (see page 1 of District 4-0 Immunization Report)

Figure 4-0-B: Immunizations Administered in Private VS Public Sector, District 4-0, 2013 (n=2,976)

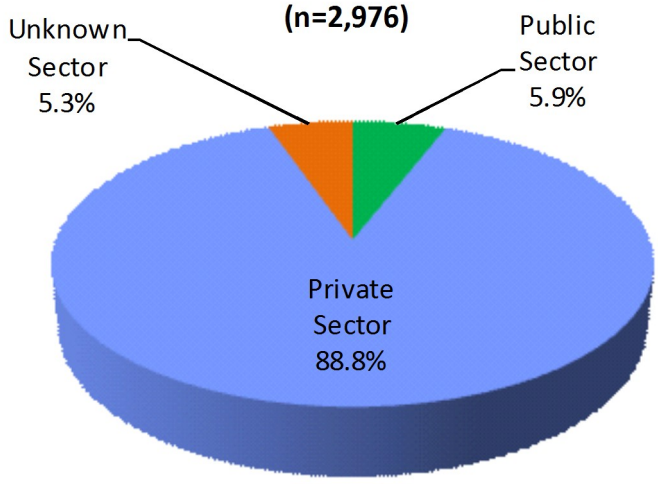


Table 4-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 4-0, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	71.7	78.2	74.6	88.5	84.2	89.4	84.7
3 Polio by 24 months	88.0	92.4	85.4	96.6	97.1	97.4	95.1
1 MMR by 24 months	80.4	84.0	86.0	87.9	92.4	96.7	89.0
UTD Hib by 24 months	83.7	88.4	81.6	87.9	94.7	98.7	97.5
3 Hepatitis B by 24 months	89.1	91.6	86.5	97.1	97.1	98.7	95.7
1 Varicella by 24 months	82.1	85.8	84.3	89.7	93.0	98.7	91.4
UTD PCV by 24 months	66.3	80.0	81.1	89.7	96.5	96.1	84.0
2 Rotavirus	-	-	-	69.5	79.5	66.2	84.7
1 Influenza by 24 months	-	-	-	56.9	57.9	51.7	23.9

Immunization Rates by Vaccine Antigen: In District 4-0, the UTD immunization rate by 24 months for most vaccine antigens remained steady from 2005 to 2008, increased steadily through 2012, but then decreased in 2013 (Table 4-0-D).

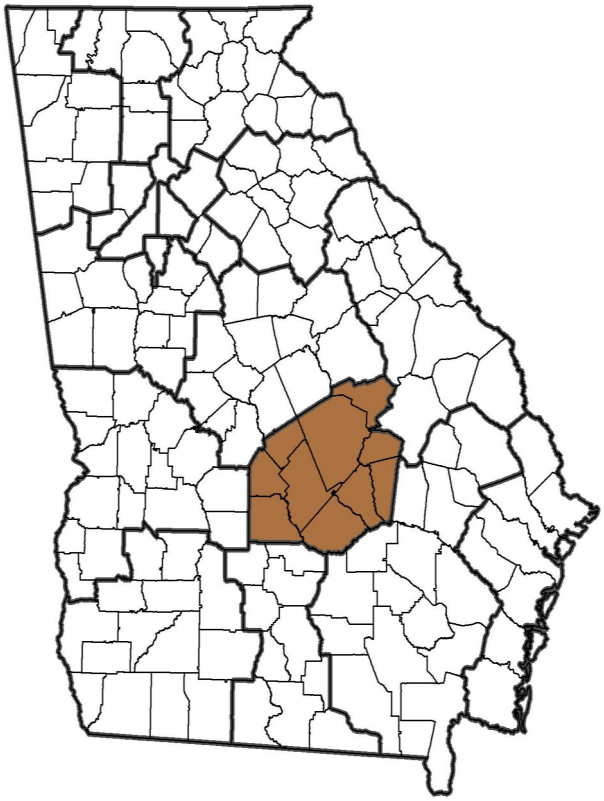
Among District 4-0 immunization rates by vaccine antigen in 2013, the UTD immunization rate for PCV was lowest at 84.0%, a decline from 96.1% in 2012. The UTD immunization rate for DTaP vaccine was the second-lowest down from 89.4% in 2012. The rate for MMR also dropped markedly from 96.7% to 89.0%.

Among District 4-0 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 51.7% in 2012 to 23.9% in 2013. This may reflect a data capture error, and is currently being investigated.

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

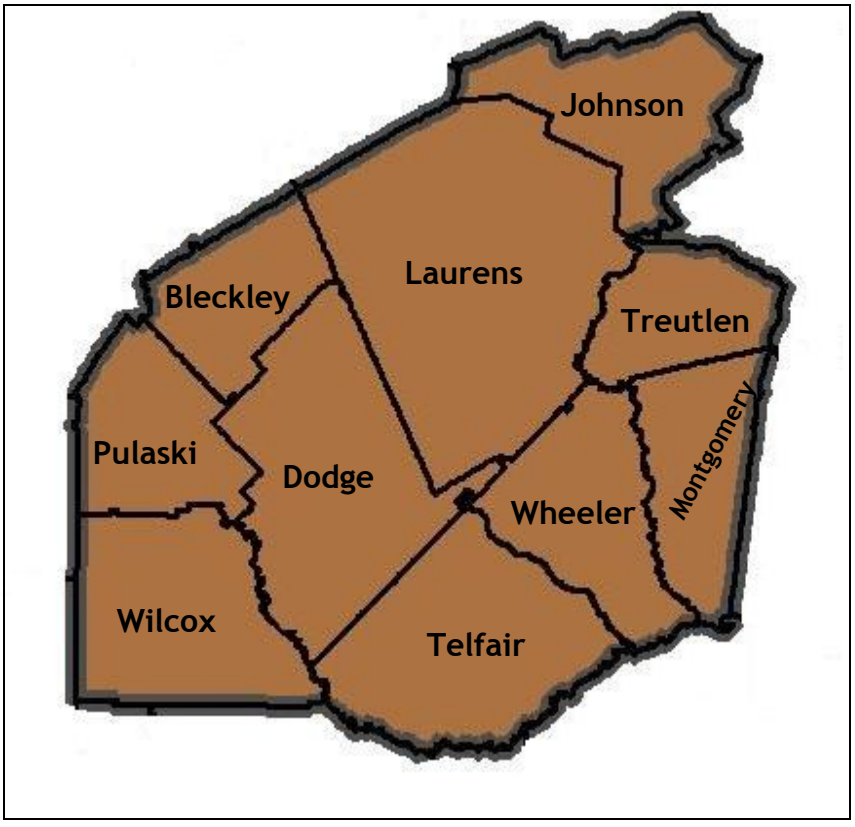
District 5-1

2013 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	Metro
Bleckley	10	Nonmetro
Dodge	10	Nonmetro
Johnson	5	Nonmetro
Laurens	23	Nonmetro
Montgomery	5	Nonmetro
Pulaski	3	Metro
Telfair	3	Nonmetro
Treutlen	6	Nonmetro
Wheeler	4	Nonmetro
Wilcox	5	Nonmetro
District 5-1	**74**	
District UTD by 24 months Immunization Rate	**86.5%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 5-1

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 5-1 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 4.1% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (86.5% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained higher than the state rate (95.9% vs. 90.6%) (Table 5-1-B).

From 2012 to 2013: The District 5-1 UTD immunization rate by 24 months increased by 11.0% from 2012 to 2013. The District UTD immunization rate by the end of data collection increased by 2.6% from 2012 to 2013 (Figure 5-1-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 5-1-A: GIS Sampling Scheme, District 5-1, 2013

	District 5-1 (n)	State (n)
Original Sample	86	2,813
Ineligible	1	181
(Refused to Participate)	(0)	(20)
Eligible Sample	85	2,632
Unable to Locate†	11	143
Final Sample	74	2,489
Response Rate (%)	87.1	94.6

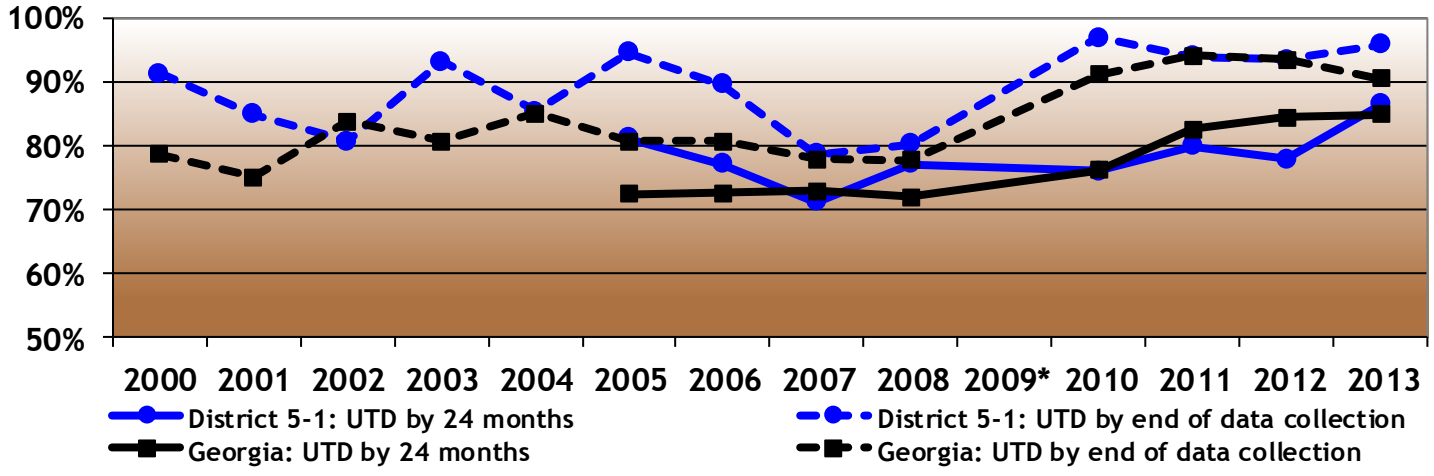
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 5-1-B: Immunization Summary by Series & Vaccine Antigen, District 5-1, 2013

	District 5-1 (%)	State Average (%)
UTD immunization rate** **by 24 months**	86.5	85.0
UTD immunization rate** **Based on GRITS alone**	82.4	80.2
UTD immunization rate** **by end of data collection**††	95.9	90.6
4 DTaP by 24 months	79.7	84.6
3 DTaP by 24 months	98.6	96.6
3 IPV by 24 months	98.6	95.7
1 MMR by 24 months	95.9	92.7
UTD Hib by 24 months	98.6	96.3
3 Hep B by 24 months	97.3	95.9
1 Varicella by 24 months	95.9	93.5
UTD PCV by 24 months	81.1	84.5
2 Rotavirus by 24 months	70.3	83.5
2 Hep A by 24 months	58.1	57.3
1+ Influenza by 24 months	18.9	29.3

†† 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 5-1-A: Georgia Immunization Study and District 5-1 Immunization Rates, 2000-2013



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

District 5-1, Georgia Immunization Study Report, p3

Table 5-1-C: UTD Immunization Rates by Demographic Group, District 5-1, 2013

	State Avg. UTD by 24 months (%)	5-1—UTD by 24 months (%)	*5-1—UTD by end of d.c.[β] (%)*
District 5-1 Sample (n=74)	85.0	86.5	95.9
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=41)	86.4	**90.2**	*97.6*
White, Hispanic (n=1)	90.6	**0.0**	*0.0*
Black (n=24)	81.4	**83.3**	*91.7*
Unspecified, Hispanic (n=3)	90.5	**66.7**	*100.0*
Asian (n=1)	91.3	**100.0**	*100.0*
Multiracial (n=3)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=26)	86.7	**88.5**	*96.2*
HS Diploma/GED (n=27)	82.1	**74.1**	*92.6*
9th-11th grade (n=13)	82.3	**100.0**	*100.0*
<9th grade (n=3)	90.1	**100.0**	*100.0*
WIC[θ]			
Non-WIC (n=20)	85.1	**90.0**	*100.0*
WIC (n=54)	84.9	**85.2**	*94.4*
Maternal Age[‡]			
<25 years (n=46)	82.9	**87.0**	*95.7*
25-34 years (n=24)	86.0	**91.7**	*100.0*
35+ years (n=4)	88.1	**50.0**	*75.0*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=16)	89.2	**81.3**	*87.5*
Unmarried, First Birth (n=27)	87.9	**96.3**	*100.0*
Married, Repeat Birth (n=17)	85.5	**76.5**	*94.1*
Unmarried, Repeat Birth (n=13)	79.2	**84.6**	*100.0*
Gestational Age[‡]			
<37 weeks (n=9)	81.2	**88.9**	*100.0*
37+ weeks (n=65)	85.4	**86.2**	*95.4*
Provider Type[†]			
Public Sector Only (n=0)	81.3	**N/A**	**N/A**
Private Sector Only (n=66)	87.2	**84.8**	*95.5*
Both (n=0)	88.9	**N/A**	**N/A**
Payment at Birth[‡,†]			
Government Assist (n=51)	82.3	**86.3**	*94.1*
Private Insurance (n=18)	89.4	**88.9**	*100.0*
Other (n=4)	84.5	**75.0**	*100.0*
Self Pay (n=0)	84.2	**N/A**	*N/A*

UTD Immunization Rates by Demographic Group: In District 5-1, the UTD by 24 months immunization rate for children of white, non-Hispanic mothers was above the state average as well as the District rate as a whole (Table 5-1-C). In contrast, UTD by 24 months immunization rate for children of black mothers was below the District rate (83.3% vs. 86.5%).

In terms of maternal education, children of mothers with a high school diploma/GED were the least often UTD by 24 months (74.1%).

In terms of WIC enrollment, children not enrolled in WIC were more often UTD by 24 months than those enrolled in WIC (90.0% vs. 85.2%).

In terms of maternal age, children of mothers <25 years were the least often UTD by 24 months (87.0%) although the 35+ years age group was small. In terms of maternal marital status and repeat births, children of unmarried mothers with first birth children were the most often UTD by 24 months (96.3%).

Children whose birth costs were covered by private insurance were more likely to be UTD by 24 months (88.9%) than those whose birth costs were covered through government assisted insurance (86.3%).

	State Avg. UTD by 24 months (%)	5-1—UTD by 24 months (%)	*5-1—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=38)	**86.2**	**89.5**	*94.7*
2 (n=20)	**85.1**	**90.0**	*95.0*
3+ (n=9)	**83.9**	**66.7**	*100.0*
Child's Gender[‡]			
Male (n=38)	**79.4**	**89.5**	*97.4*
Female (n=36)	**81.0**	**83.3**	*94.4*
Metro Residence[θ]			
Metro (n=3)	**84.5**	66.7	*100.0*
Non-metro (n=71)	**86.7**	**87.3**	*95.8*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

The District 5-2 data showed that children who had two providers (Number of Providers) were most often UTD by 24 months (90.0%).

Although many demographic-related disparities resolved by the end of data collection, some still remained and a new one was identified (Table 5-1-C, *column in italics*).

Children of black mothers remained less often UTD than children of other racial/ethnic groups.

Oddly, children with one provider remained less often UTD than children with two providers by the end of data collection (93.9% vs. 100.0%).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 whose mothers have a high school/GED level of education
- Children enrolled in the WIC program
- Children of mothers <25 years of age
- Children of married mothers with previous children
- Children whose birth costs were covered by government-assisted insurance
- Children with three or more providers administering immunizations

Figure 5-1-B: Immunizations Administered in Private VS Public Sector, District 5-1, 2013 (n=1,288)

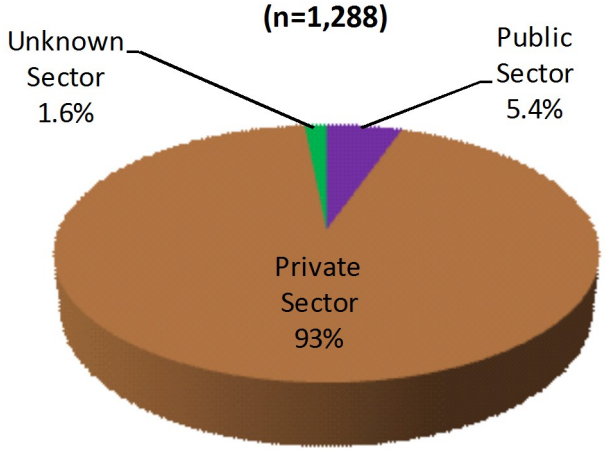


Table 5-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 5-1, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	81.3	74.2	78.7	85.1	80.0	79.2	79.7
3 Polio by 24 months	91.7	95.5	93.4	95.5	94.0	92.2	98.6
1 MMR by 24 months	97.9	84.9	90.2	92.5	94.0	85.7	95.9
UTD Hib by 24 months	89.6	86.4	86.9	89.6	90.0	90.9	98.6
3 Hepatitis B by 24 months	97.9	92.4	98.4	98.5	98.0	96.1	97.3
1 Varicella by 24 months	89.6	86.4	90.2	94.0	96.0	87.0	95.9
UTD PCV by 24 months	85.4	74.2	86.9	95.5	96.0	89.6	81.1
2 Rotavirus	-	-	-	50.7	66.0	45.5	70.3
1 Influenza by 24 months	-	-	-	46.3	44.0	46.8	18.9

Immunization Rates by Vaccine Antigen: In District 5-1, the UTD immunization rate by 24 months for most vaccine antigens fluctuated from 2006 to 2012 and the increased in 2013 (Table 5-1-D).

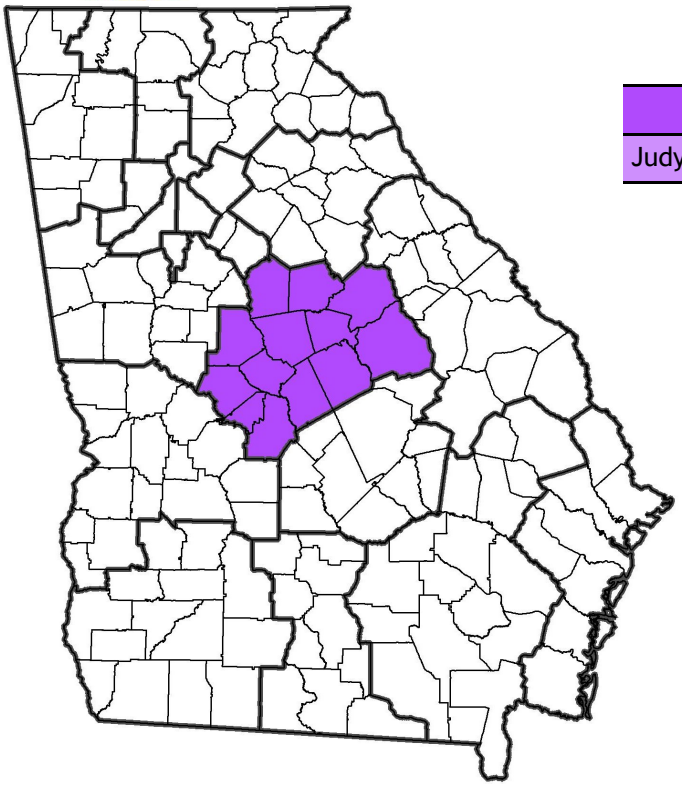
Among District 5-1 immunization rates by vaccine antigen in 2012, the UTD by 24 months of age immunization rate for DTaP was the lowest at 79.7%, slightly up from 79.2% in 2012. The UTD immunization rate for PCV was second-lowest at 81.1%, down from 89.6% in 2012.

Among District 5-1 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 46.8% in 2012 to 18.9% in 2013. This may reflect a data capture error, and is currently being investigated.

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

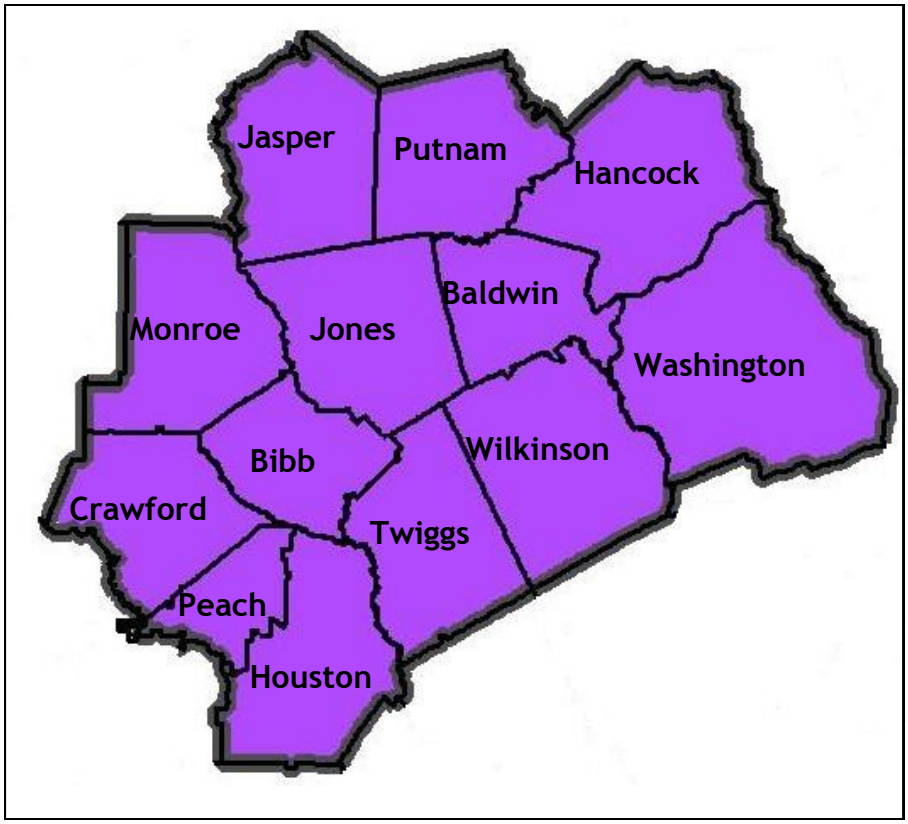
District 5-2

2013 Georgia Immunization Study Report



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

County	Number in Sample	Metro
Baldwin	15	Nonmetro
Bibb	55	Metro
Crawford	1	Metro
Hancock	3	Nonmetro
Houston	22	Metro
Jasper	3	Metro
Jones	5	Metro
Monroe	8	Metro
Peach	8	Metro
Putnam	5	Nonmetro
Twiggs	2	Metro
Washington	4	Nonmetro
Wilkinson	2	Nonmetro
District 5-2	**133**	
District UTD by 24 months Immunization Rate	**91.0%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 5-2

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 5-2 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 2.3% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (91.0% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained higher than the state rate (92.5% vs. 90.6%) (Table 5-2-B).

From 2012 to 2013: The District 5-2 UTD immunization rate by 24 months increased by 6.6% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 1.3% from 2012 to 2013 (Figure 5-2-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 5-2-A: GIS Sampling Scheme, District 5-2, 2013

	District 5-2 (n)	State (n)
Original Sample	150	2,813
Ineligible	4	181
(Refused to Participate)	(0)	(20)
Eligible Sample	146	2,632
Unable to Locate†	13	143
Final Sample	133	2,489
Response Rate (%)	91.1	94.6

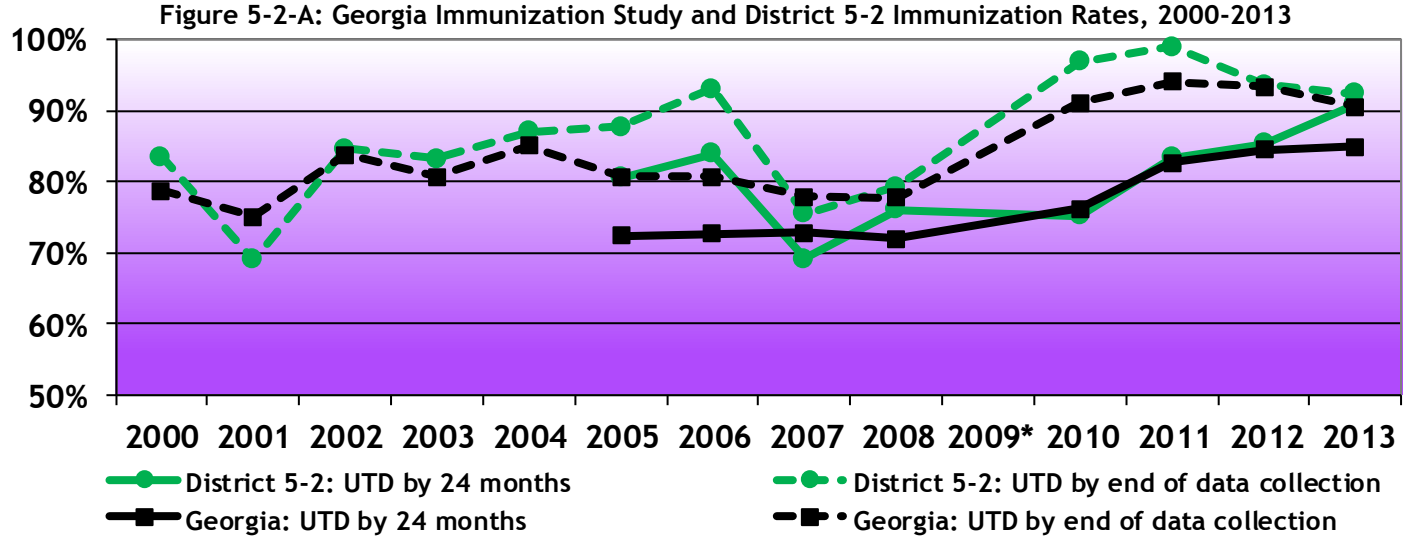
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 5-1-B: Immunization Summary by Series & Vaccine Antigen, District 5-1, 2013

	District 5-1 (%)	State Average (%)
UTD immunization rate** by 24 months	91.0	85.0
UTD immunization rate** Based on GRITS alone	88.7	80.2
UTD immunization rate** by end of data collection††	92.5	90.6
4 DTaP by 24 months	88.7	84.6
3 DTaP by 24 months	98.5	96.6
3 IPV by 24 months	97.7	95.7
1 MMR by 24 months	94.7	92.7
UTD Hib by 24 months	97.7	96.3
3 Hep B by 24 months	96.2	95.9
1 Varicella by 24 months	97.0	93.5
UTD PCV by 24 months	91.0	84.5
2 Rotavirus by 24 months	64.7	83.5
2 Hep A by 24 months	72.2	57.3
1+ Influenza by 24 months	22.6	29.3

†† 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 5-2-A: Georgia Immunization Study and District 5-2 Immunization Rates, 2000-2013



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

District 5-2, Georgia Immunization Study Report, p3

Table 5-2-C: UTD Immunization Rates by Demographic Group, District 5-2, 2013

	State Avg. UTD by 24 months (%)	5-2—UTD by 24 months (%)	*5-2—UTD by end of d.c.[β] (%)*
District 5-2 Sample (n=133)	85.0	91.0	92.5
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=49)	86.4	**91.8**	*93.9*
White, Hispanic (n=4)	90.6	**100.0**	*100.0*
Black (n=76)	81.4	**90.8**	*92.1*
Unspecified, Hispanic (n=1)	90.5	**100.0**	*100.0*
Asian (n=1)	91.3	**100.0**	*100.0*
Multiracial (n=0)	86.7	**N/A**	*N/A*
Maternal Education[‡,†]			
Some College+ (n=57)	86.7	**89.5**	*91.2*
HS Diploma/GED (n=46)	82.1	**93.5**	*93.5*
9th-11th grade (n=27)	82.3	**88.9**	*92.6*
<9th grade (n=0)	90.1	**N/A**	*N/A*
WIC[θ]			
Non-WIC (n=36)	85.1	**91.7**	*91.7*
WIC (n=97)	84.9	**90.7**	*92.8*
Maternal Age[‡]			
<25 years (n=64)	82.9	**93.8**	*95.3*
25-34 years (n=50)	86.0	**86.0**	*86.0*
35+ years (n=19)	88.1	**94.7**	*100.0*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=16)	89.2	**87.5**	*87.5*
Unmarried, First Birth (n=41)	87.9	**97.6**	*97.6*
Married, Repeat Birth (n=35)	85.5	**94.3**	*94.3*
Unmarried, Repeat Birth (n=41)	79.2	**82.9**	*87.8*
Gestational Age[‡]			
<37 weeks (n=18)	81.2	**94.4**	*94.4*
37+ weeks (n=115)	85.4	**90.4**	*92.2*
Provider Type[†]			
Public Sector Only (n=0)	81.3	**N/A**	*N/A*
Private Sector Only (n=114)	87.2	**93.9**	*95.6*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth[‡,†]			
Government Assist (n=87)	82.3	**89.7**	*92.0*
Private Insurance (n=37)	89.4	**91.9**	*91.9*
Other (n=2)	84.5	**100.0**	*100.0*
Self Pay (n=1)	84.2	**100.0**	*100.0*

UTD Immunization Rates by Demographic Group: In District 5-2, children of white, non-Hispanic and black mothers were the largest demographic groups and had similar rates (91.8% and 90.8%, respectively) but both rates were higher than their respective state samples (86.4% vs. 81.4%) (Table 5-2-C).

In terms of maternal education, children of mothers with a high school diploma or GED and no college education were the most often UTD by 24 months among the maternal education groups (93.5%).

Children of mothers with maternal age between 25-34 years were least likely to be UTD by 24 months (86.0%). In terms of maternal marital status and repeat births, children of unmarried mothers with previous children were the least often UTD by 24 months (see Table 5-2-C).

The District data does not support the importance of a medical home; children who had one provider (Number of Providers) were less often UTD by 24 months than those with two providers (91.8% vs. 93.9%).

To varying degrees, demographic-related disparities improved by the end of data collection

	State Avg. UTD by 24 months (%)	5-2—UTD by 24 months (%)	*5-2—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=73)	**86.2**	**91.8**	*91.8*
2 (n=33)	**85.1**	**93.9**	*93.9*
3+ (n=6)	**83.9**	**100.0**	*100.0*
Child's Gender[‡]			
Male (n=72)	**79.4**	**93.1**	*94.4*
Female (n=61)	**81.0**	**88.5**	*90.2*
Metro Residence[θ]			
Metro (n=104)	**84.5**	**91.3**	*92.3*
Non-metro (n=29)	**86.7**	**89.7**	*93.1*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

(Table 5-2-C, *column in italics*).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 mothers with less than a high school level of education or some college.
- Children of mothers between 25-34 years of age
- Children of unmarried mothers with previous children
- Children receiving immunizations from only one provider

Figure 5-2-B: Immunizations Administered in Private VS Public Sector, District 5-2, 2013 (n=2,382)

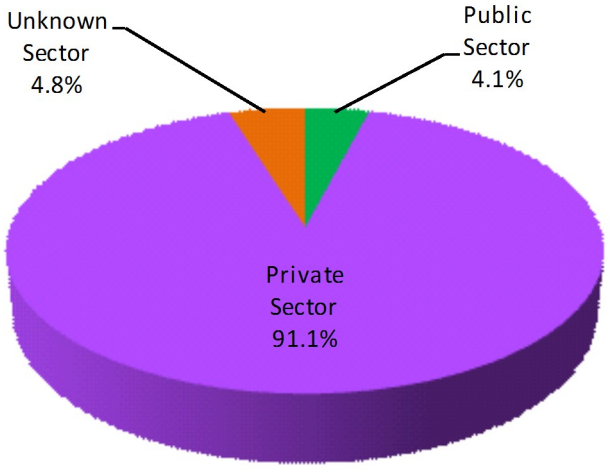


Table 5-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 5-2, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	86.3	76.9	81.3	81.2	87.6	86.1	88.7
3 Polio by 24 months	95.4	91.0	88.8	95.5	96.9	95.6	97.7
1 MMR by 24 months	93.1	84.6	89.6	93.2	96.9	93.0	94.7
UTD Hib by 24 months	92.4	82.1	85.8	90.2	94.9	95.6	97.7
3 Hepatitis B by 24 months	93.9	88.5	91.0	97.0	97.9	96.2	96.2
1 Varicella by 24 months	93.9	84.6	88.1	95.5	96.9	94.3	97.0
UTD PCV by 24 months	75.6	78.2	85.1	90.2	97.9	91.8	91.0
2 Rotavirus	-	-	-	65.4	68.0	52.5	64.7
1 Influenza by 24 months	-	-	-	49.6	53.6	50.6	22.6

Immunization Rates by Vaccine Antigen: In District 5-2, the UTD immunization rate by 24 months for most vaccine antigens fluctuated from 2006 to 2010, increased to the highest rates for most antigens in 2011, fell slightly in 2012, and then increased once more in 2013 (Table 5-2-D).

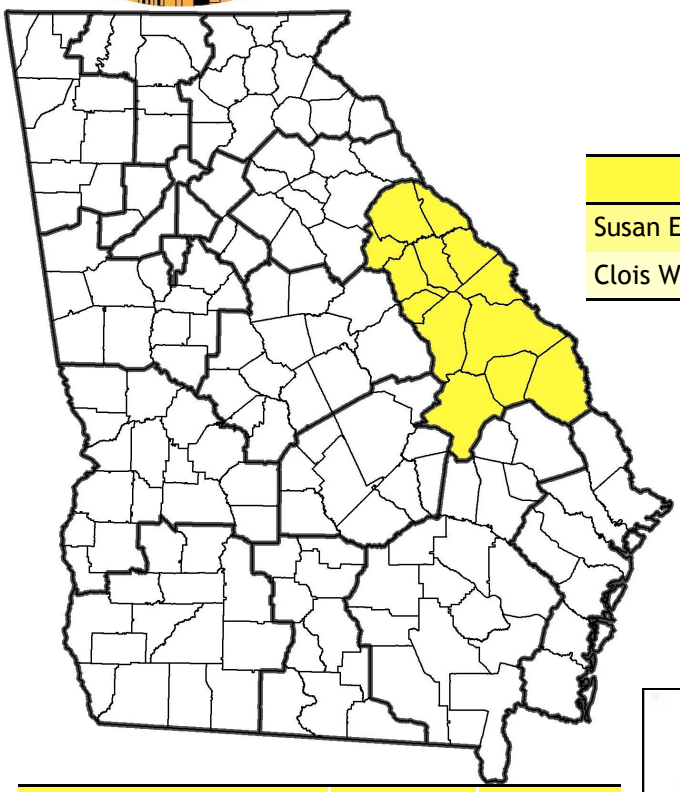
Among District 5-2 immunization rates by vaccine antigen in 2013, the UTD immunization rate for DTaP was the lowest at 88.7%, up from 86.1% in 2012. The UTD immunization rate for PCV was second-lowest at 91.0% in 2013, down from 91.8% in 2012.

Among District 5-2 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 50.6% in 2012 to 22.6% in 2013. This may reflect a data capture error, and is currently being investigated.

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

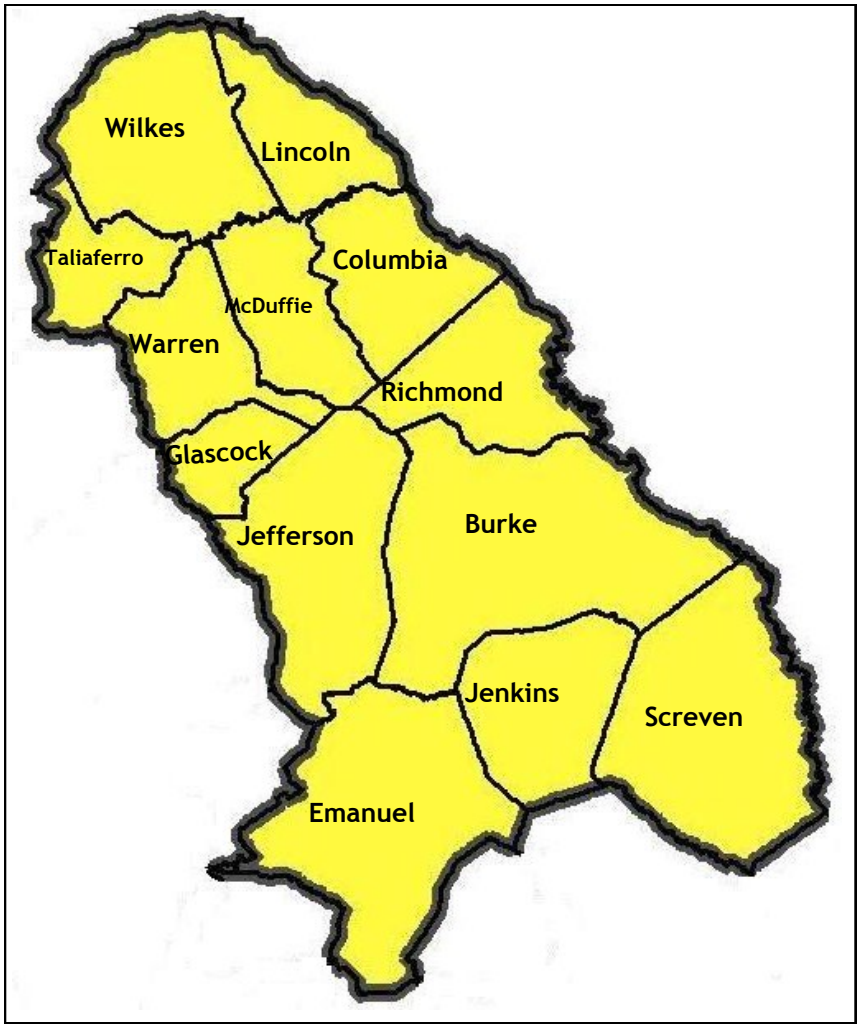
District 6-0

2013 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	Metro
Burke	10	Metro
Columbia	20	Metro
Emanuel	11	Nonmetro
Glascock	1	Nonmetro
Jefferson	12	Nonmetro
Jenkins	0	Nonmetro
Lincoln	3	Metro
McDuffie	11	Metro
Richmond	63	Metro
Screven	4	Nonmetro
Taliaferro	1	Nonmetro
Warren	6	Nonmetro
Wilkes	3	Nonmetro
District 6-0	**145**	
District UTD by 24 months Immunization Rate	**86.2%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 6-0

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 6-0 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 5.5% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (86.2% vs. 85.0%). By the end of data collection, the District UTD immunization rate was higher than the state rate (96.6% vs. 90.6%) (Table 6-0-B).

From 2012 to 2013: The District 6-0 UTD immunization rate by 24 months decreased by 5.3% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 2.1% from 2012 to 2013 (Figure 6-0-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 6-0-A: GIS Sampling Scheme, District 6-0, 2013

	District 6-0 (n)	State (n)
Original Sample	158	2,813
Ineligible	13	181
(Refused to Participate)	(1)	(20)
Eligible Sample	145	2,632
Unable to Locate†	0	143
Final Sample	145	2,489
Response Rate (%)	100.0	94.6

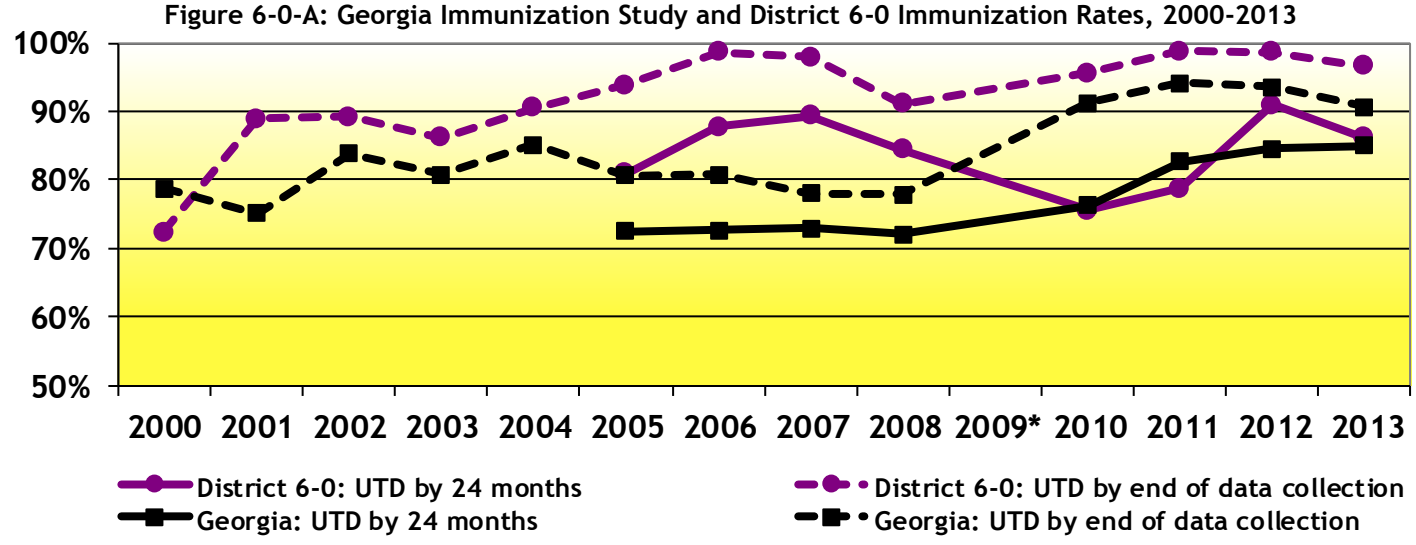
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 6-0-B: Immunization Summary by Series & Vaccine Antigen, District 6-0, 2013

	District 6-0 (%)	State Average (%)
UTD immunization rate** **by 24 months**	86.2	85.0
UTD immunization rate** **Based on GRITS alone**	80.7	80.2
UTD immunization rate** **by end of data collection**††	96.6	90.6
4 DTaP by 24 months	84.1	84.6
3 DTaP by 24 months	97.9	96.6
3 IPV by 24 months	97.9	95.7
1 MMR by 24 months	97.9	92.7
UTD Hib by 24 months	98.6	96.3
3 Hep B by 24 months	98.6	95.9
1 Varicella by 24 months	97.2	93.5
UTD PCV by 24 months	83.4	84.5
2 Rotavirus by 24 months	82.8	83.5
2 Hep A by 24 months	52.4	57.3
1+ Influenza by 24 months	23.4	29.3

†† 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 6-0-A: Georgia Immunization Study and District 6-0 Immunization Rates, 2000-2013



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

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Table 6-0-C: UTD Immunization Rates by Demographic Group, District 6-0, 2013

	State Avg. UTD by 24 months (%)	**6-0—UTD by 24 months (%)**	*6-0—UTD by end of d.c.[β] (%)*
District 6-0 Sample (n=145)	85.0	**86.2**	*96.6*
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=57)	86.4	**89.5**	*93.0*
White, Hispanic (n=3)	90.6	**66.7**	*100.0*
Black (n=75)	81.4	**84.0**	*98.7*
Unspecified, Hispanic (n=4)	90.5	**100.0**	*100.0*
Asian (n=2)	91.3	**100.0**	*100.0*
Multiracial (n=2)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=49)	86.7	**85.7**	*89.8*
HS Diploma/GED (n=65)	82.1	**84.6**	*100.0*
9th-11th grade (n=25)	82.3	**88.0**	*100.0*
<9th grade (n=4)	90.1	**100.0**	*100.0*
WIC[θ]			
Non-WIC (n=37)	85.1	**83.8**	*91.9*
WIC (n=108)	84.9	**87.0**	*98.1*
Maternal Age[‡]			
<25 years (n=80)	82.9	**85.0**	*98.8*
25-34 years (n=58)	86.0	**86.2**	*93.1*
35+ years (n=7)	88.1	**100.0**	*100.0*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=13)	89.2	**92.3**	*92.3*
Unmarried, First Birth (n=54)	87.9	**85.2**	*100.0*
Married, Repeat Birth (n=35)	85.5	**91.4**	*100.0*
Unmarried, Repeat Birth (n=43)	79.2	**81.4**	*90.7*
Gestational Age[‡]			
<37 weeks (n=15)	81.2	**80.0**	*100.0*
37+ weeks (n=130)	85.4	**86.9**	*96.2*
Provider Type[†]			
Public Sector Only (n=2)	81.3	**50.0**	*100.0*
Private Sector Only (n=118)	87.2	**85.6**	*95.8*
Both (n=2)	88.9	**100.0**	*100.0*
Payment at Birth[‡,†]			
Government Assist (n=94)	82.3	**84.0**	*96.8*
Private Insurance (n=33)	89.4	**93.9**	*97.0*
Other (n=1)	84.5	**100.0**	*100.0*
Self Pay (n=3)	84.2	**33.3**	*66.7*

UTD Immunization Rates by Demographic Group: In District 6-0, children of black mothers were less often UTD by 24 months than children of white, non-Hispanic mothers (84.0% vs. 89.5%) and lower than the District rate as a whole (86.2%). The sample sizes for other race/ethnicity groups were too small to draw any definite conclusions (Table 6-0-C).

In terms of maternal education, children of mothers with a high school diploma/GED were least often UTD by 24 months (84.6%). In terms of maternal age, higher maternal age was associated with higher UTD immunization rates by 24 months of age (see Table 6-0-C).

In terms of the maternal marital status and repeat births, children of married mothers were more often UTD by 24 months than children of unmarried mothers (see Table 6-0-C).

Children whose birth costs were covered by government-assisted insurance were less likely to be UTD at 24 months and accounted for the majority of the children sampled in this District (84.0%).

The District data support the importance of a medical home; children who had one provider were more often UTD by 24 months than those with two

	State Avg. UTD by 24 months (%)	**6-0—UTD by 24 months (%)**	*6-0—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=64)	**86.2**	**87.5**	*96.9*
2 (n=45)	**85.1**	**80.0**	*93.3*
3+ (n=15)	**83.9**	**93.3**	*100.0*
Child's Gender[‡]			
Male (n=71)	**79.4**	**84.5**	*95.8*
Female (n=74)	**81.0**	**87.8**	*97.3*
Metro Residence[θ]			
Metro (n=107)	**84.5**	**84.1**	*96.3*
Non-metro (n=38)	**86.7**	**92.1**	*97.4*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

providers (87.5% vs. 80.0%).

Additionally, children residing in non-metro counties (see page 1 of District 6-0 Immunization Report) were more often UTD by 24 months than those residing in metro counties (92.1% vs. 84.1%).

Although many demographic-related disparities resolved by the end of data collection, some still remained and a new one was identified (Table 6-0-C, *column in italics*).

These were among children of unmarried mothers with previous children, children whose birth costs were covered by government-assisted insurance, and children living in metro counties (see page 1 of District 6-0 Immunization Report).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 black mothers
- Children of mothers with a high school diploma/ GED education or greater
- Children with mothers under 25 years of age
- Children of unmarried mothers with previous children
- Children whose birth costs were covered by government-assisted insurance
- Children who receive immunizations from 2 providers instead of one
- Children residing in metro counties (see page 1 of District 6-0 Immunization Report)

Figure 6-0-B: Immunizations Administered in Private VS Public Sector, District 6-0, 2013 (n=2,679)

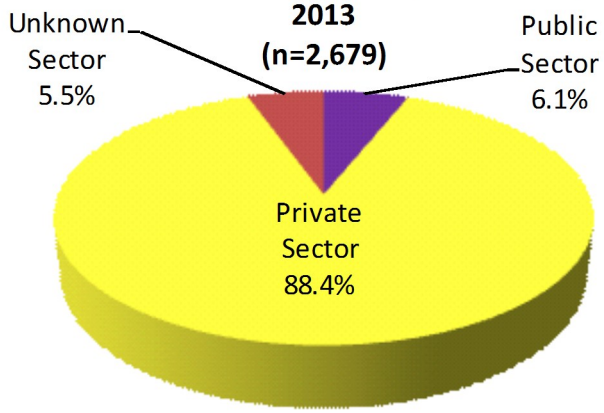


Table 6-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 6-0, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	89.2	89.4	84.4	80.0	80.0	84.3	84.1
3 Polio by 24 months	98.7	97.9	100	95.6	97.7	95.6	97.9
1 MMR by 24 months	93.2	95.7	95.6	93.3	91.8	89.9	97.9
UTD Hib by 24 months	94.6	97.9	97.8	91.1	95.3	93.7	98.6
3 Hepatitis B by 24 months	100	97.9	100	93.3	98.8	93.7	98.6
1 Varicella by 24 months	96.0	97.9	91.1	93.3	94.1	91.8	97.2
UTD PCV by 24 months	91.9	93.6	95.6	84.4	98.8	88.1	83.4
2 Rotavirus	-	-	-	60.0	75.3	62.9	82.8
1 Influenza by 24 months	-	-	-	53.3	61.2	52.2	23.4

Immunization Rates by Vaccine Antigen: In District 6-0, the UTD immunization rate by 24 months for most vaccine antigens remained somewhat steady from 2006 to 2011. The remainder of the antigen-specific immunization rates fell in 2012, but increased in 2013 (Table 6-0-D).

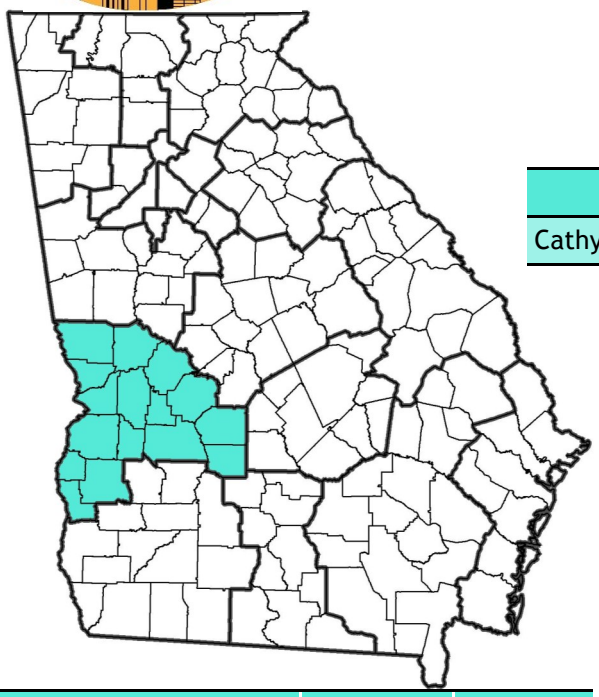
Among District 6-0 immunization rates by vaccine antigen in 2013, the UTD immunization rate for PCV was the lowest at 83.4%, down from 88.1% in 2012. The UTD immunization rate for DTaP was second-lowest at 84.1%, slightly down from 84.3% in 2012.

Among District 6-0 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 52.2% in 2012 to 23.4% in 2013. This may reflect a data capture error, and is currently being investigated.

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

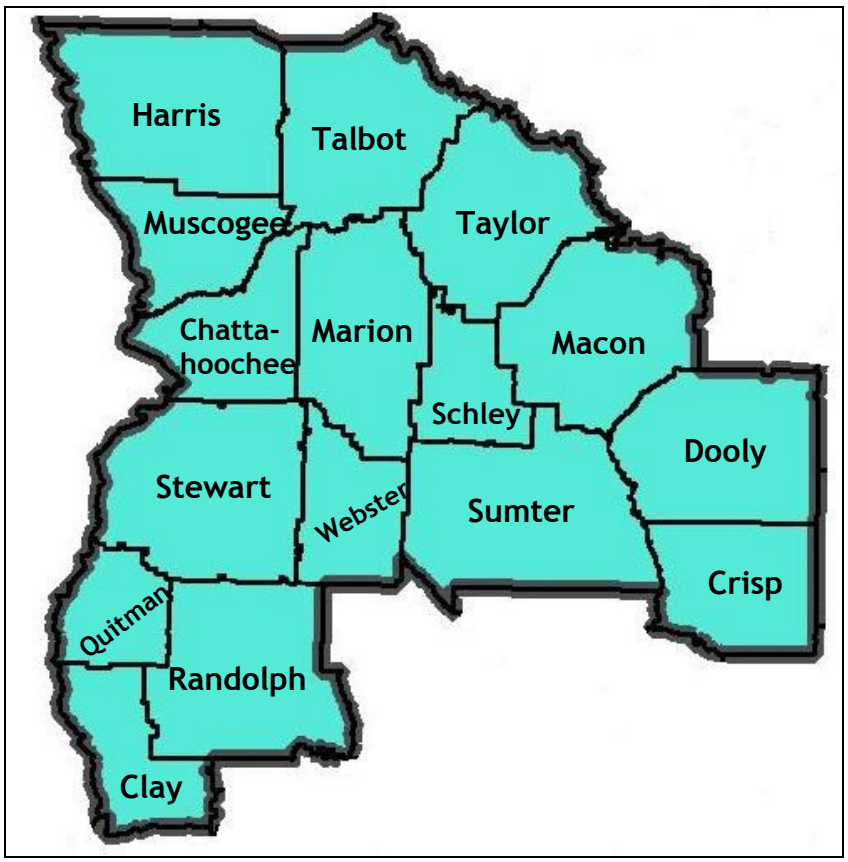
District 7-0

2013 Georgia Immunization Study Report



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

County	Number in Sample	Metro
Chattahoochee	1	Metro
Clay	1	Nonmetro
Crisp	16	Nonmetro
Dooly	6	Nonmetro
Harris	4	Metro
Macon	3	Nonmetro
Marion	3	Metro
Muscogee	64	Metro
Quitman	0	Nonmetro
Randolph	2	Nonmetro
Schley	0	Nonmetro
Stewart	0	Metro
Sumter	6	Nonmetro
Talbot	1	Nonmetro
Taylor	1	Nonmetro
Webster	0	Metro
District 7-0	**108**	
District UTD by 24 months Immunization Rate	**89.8%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 7-0

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 7-0 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 6.5% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (89.8% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained higher than the state rate (93.5% vs. 90.6%) (Table 7-0-B).

From 2012 to 2013: The District 7-0 UTD immunization rate by 24 months increased by 1.0% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 2.9% from 2012 to 2013 (Figure 7-0-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 7-0-A: GIS Sampling Scheme, District 7-0, 2013

	District 7-0 (n)	State (n)
Original Sample	129	2,813
Ineligible	16	181
(Refused to Participate)	(0)	(20)
Eligible Sample	113	2,632
Unable to Locate†	5	143
Final Sample	108	2,489
Response Rate (%)	95.6	94.6

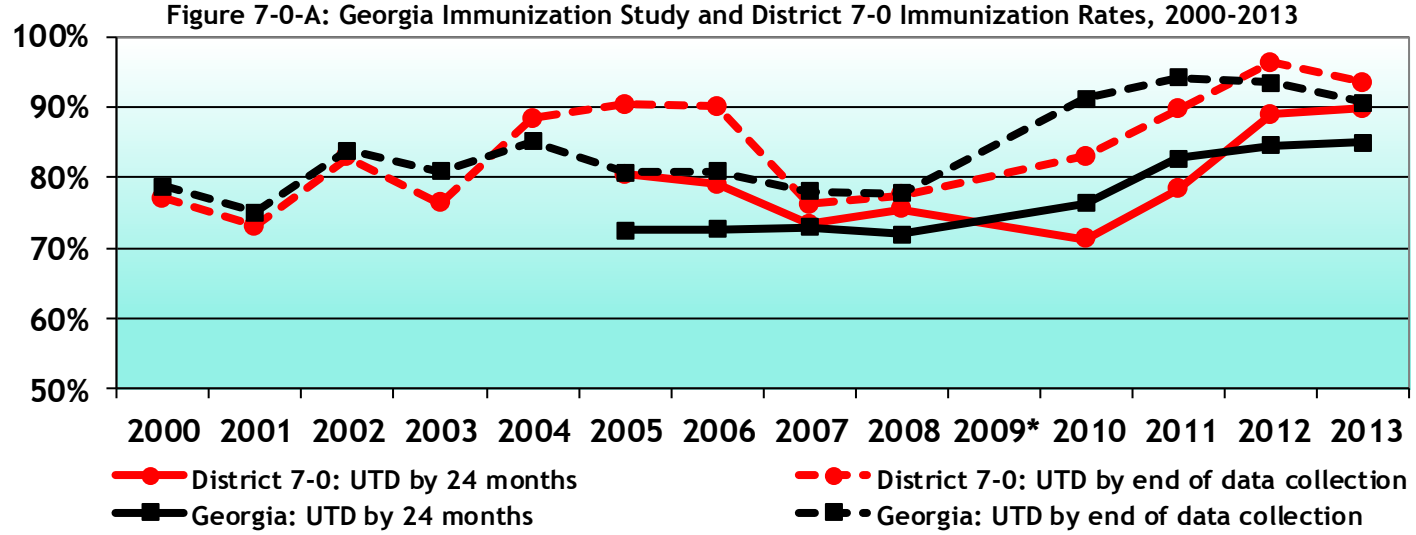
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 7-0-B: Immunization Summary by Series & Vaccine Antigen, District 7-0, 2013

	District 7-0 (%)	State Average (%)
UTD immunization rate** **by 24 months**	89.8	85.0
UTD immunization rate** **Based on GRITS alone**	83.3	80.2
UTD immunization rate** **by end of data collection**††	93.5	90.6
4 DTaP by 24 months	90.7	84.6
3 DTaP by 24 months	97.2	96.6
3 IPV by 24 months	97.2	95.7
1 MMR by 24 months	93.5	92.7
UTD Hib by 24 months	97.2	96.3
3 Hep B by 24 months	98.1	95.9
1 Varicella by 24 months	92.6	93.5
UTD PCV by 24 months	88.0	84.5
2 Rotavirus by 24 months	85.2	83.5
2 Hep A by 24 months	50.9	57.3
1+ Influenza by 24 months	21.3	29.3

†† 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, 2000-2013



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

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Table 7-0-C: UTD Immunization Rates by Demographic Group, District 7-0, 2013

	State Avg. UTD by 24 months (%)	7-0—UTD by 24 months (%)	*7-0—UTD by end of d.c.[β] (%)*
District 7-0 Sample (n=108)	85.0	89.8	93.5
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=41)	86.4	**90.2**	*90.2*
White, Hispanic (n=1)	90.6	**100.0**	*100.0*
Black (n=61)	81.4	**90.2**	*95.1*
Unspecified, Hispanic (n=3)	90.5	**66.7**	*100.0*
Asian (n=0)	91.3	**N/A**	*N/A*
Multiracial (n=1)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=45)	86.7	**91.1**	*95.6*
HS Diploma/GED (n=39)	82.1	**89.7**	*92.3*
9th-11th grade (n=19)	82.3	**94.7**	*94.7*
<9th grade (n=3)	90.1	**33.3**	*66.7*
WIC[θ]			
Non-WIC (n=28)	85.1	**85.7**	*89.3*
WIC (n=80)	84.9	**91.3**	*95.0*
Maternal Age[‡]			
<25 years (n=56)	82.9	**89.3**	*94.6*
25-34 years (n=44)	86.0	**90.9**	*93.2*
35+ years (n=8)	88.1	**87.5**	*87.5*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=14)	89.2	**85.7**	*85.7*
Unmarried, First Birth (n=31)	87.9	**93.5**	*100.0*
Married, Repeat Birth (n=18)	85.5	**94.4**	*94.4*
Unmarried, Repeat Birth (n=44)	79.2	**86.4**	*90.9*
Gestational Age[‡]			
<37 weeks (n=10)	81.2	**80.0**	*90.0*
37+ weeks (n=98)	85.4	**90.8**	*93.9*
Provider Type[†]			
Public Sector Only (n=0)	81.3	**N/A**	*N/A*
Private Sector Only (n=99)	87.2	**90.9**	*93.9*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth[‡,†]			
Government Assist (n=67)	82.3	**89.6**	*94.0*
Private Insurance (n=21)	89.4	**95.2**	*95.2*
Other (n=10)	84.5	**90.0**	*90.0*
Self Pay (n=6)	84.2	**66.7**	*83.3*

UTD Immunization Rates by Demographic Group: In District 7-0, the UTD by 24 months immunization rate for children of black mothers was equal to that for children of white, non-Hispanic mothers (90.2%) and similar to the District rate as a whole (89.8%). The other race/ethnicity group sample sizes were too small to draw any definite conclusions (Table 7-0-C).

Children of mothers with a high school diploma/GED were less often UTD by 24 months when compared to children whose mothers had some college education (89.7% vs. 91.1%)

In terms of maternal age, children of mothers 35+ years of age were the least often UTD by 24 months (87.5%). In terms of maternal marital status and repeat births, children of married mothers without previous children were slightly least often UTD by 24 months but this group was also the smallest (see Table 7-0-C).

Children whose birth costs were covered by government-assisted insurance were less often UTD by 24 months than those whose birth was covered by private insurance (89.6% vs. 95.2%).

Children living in metro counties (see page 1 of District 7-0 Immunization Report) were more often

	State Avg. UTD by 24 months %	7-0—UTD by 24 months (%)	*7-0—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=49)	**86.2**	**93.9**	*95.9*
2 (n=27)	**85.1**	**88.9**	*92.6*
3+ (n=13)	**83.9**	**84.6**	*84.6*
Child's Gender[‡]			
Male (n=56)	**79.4**	**91.1**	*92.9*
Female (n=52)	**81.0**	**88.5**	*94.2*
Metro Residence[θ]			
Metro (n=72)	**84.5**	**91.7**	*94.4*
Non-metro (n=36)	**86.7**	**86.1**	*91.7*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

UTD by 24 months of age than children living in non-metro counties (91.7% vs. 86.1%).

The District data support the importance of a medical home; children who had one provider were more often UTD by 24 months than those with two providers (93.9% vs. 88.9%).

Almost all demographic-related disparities resolved by the end of data collection (Table 7-0-C, *column in italics*).

Children of married mothers with no previous children remained slightly less likely to be UTD by the end of data collection than the District rate as a whole (85.7% vs. 93.5%).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 mothers with a high school diploma/GED level of education
- Children of mothers from <25 years of age
- Children of married mothers with no previous children
- Children living in non-metro counties (see page 1 of District 7-0 Immunization Report)

Figure 7-0-B: Immunizations Administered in Private VS Public Sector, District 7-0, 2013 (n=1,922)

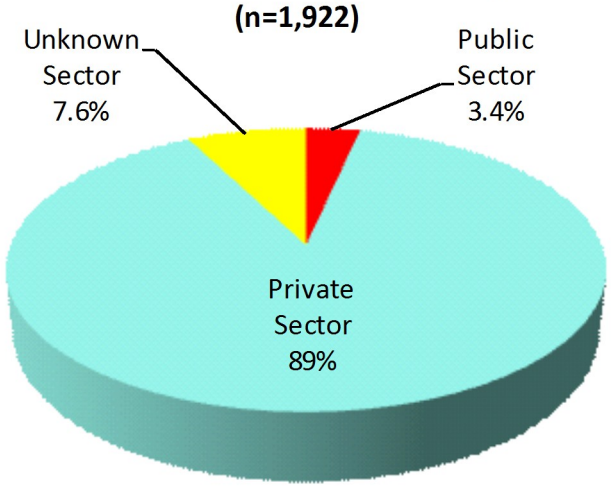


Table 7-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 7-0—2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	85.0	75.2	79.5	83.7	80.9	93.6	90.7
3 Polio by 24 months	94.0	84.8	90.7	95.4	95.7	98.7	97.2
1 MMR by 24 months	92.0	88.6	88.7	89.9	92.2	96.8	93.5
UTD Hib by 24 months	92.0	90.5	88.1	91.5	94.8	98.7	97.2
3 Hepatitis B by 24 months	95.0	89.5	88.1	93.0	98.3	99.4	98.1
1 Varicella by 24 months	94.0	87.6	88.7	93.0	93.0	96.2	92.6
UTD PCV by 24 months	75.0	81.0	84.1	86.8	95.7	95.5	88.0
2 Rotavirus	-	-	-	83.7	83.5	65.4	85.2
1 Influenza by 24 months	-	-	-	67.4	60.0	59.0	21.3

Immunization Rates by Vaccine Antigen: In District 7-0, the UTD immunization rate by 24 months for most vaccine antigens remained somewhat steady from 2006 to 2010, somewhat increased in 2011 and 2012, but then decreased in 2013 (Table 7-0-D).

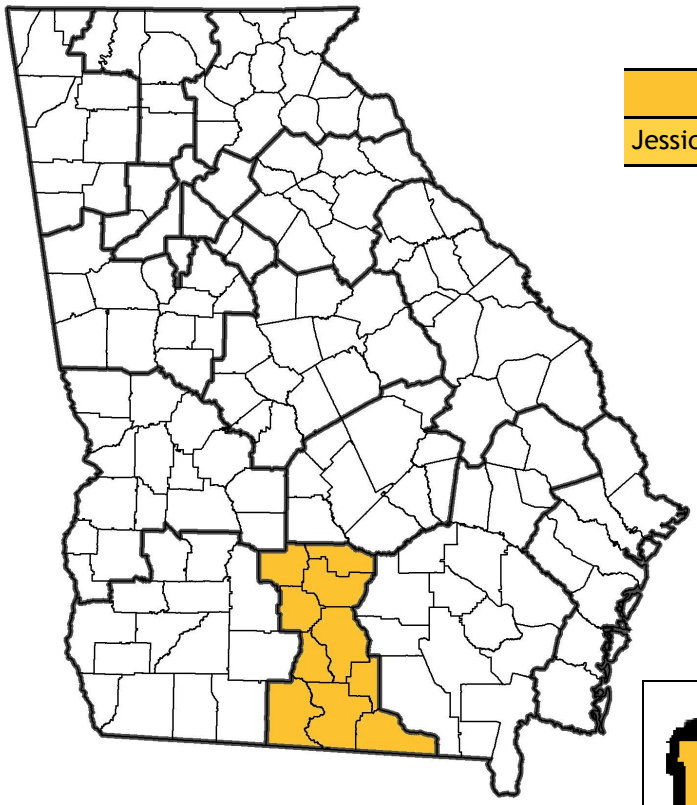
Among District 7-0 immunization rates by vaccine antigen in 2013, the UTD immunization rate for PCV was the lowest at 88.0% which dropped from 95.5% in 2012. The UTD immunization rate for DTaP was second -lowest at 90.7%, down from 93.6% in 2012.

Among District 7-0 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 59.0% in 2012 to 21.3% in 2013. This may reflect a data capture error, and is currently being investigated.

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

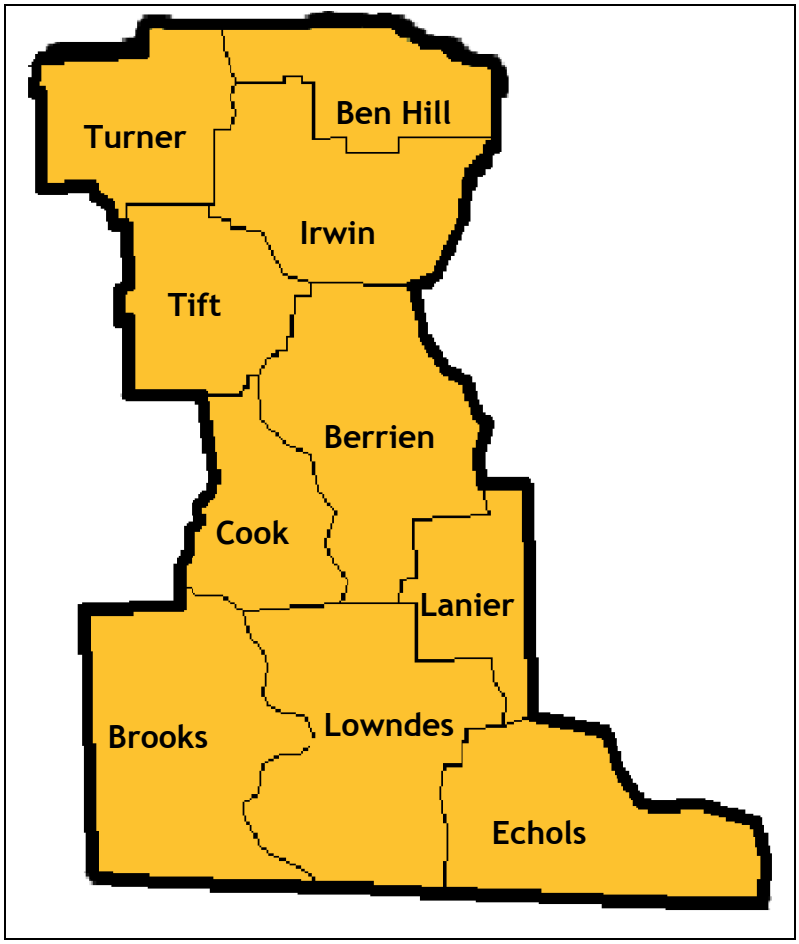
District 8-1

2013 Georgia Immunization Study Report



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

County	Number in Sample	Metro
Ben Hill	5	Nonmetro
Berrien	10	Nonmetro
Brooks	3	Metro
Cook	8	Nonmetro
Echols	0	Nonmetro
Irwin	3	Nonmetro
Lanier	3	Metro
Lowndes	48	Metro
Tift	21	Nonmetro
Turner	3	Nonmetro
District 8-1	**104**	
District UTD by 24 months Immunization Rate	**88.5%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 8-1

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 8-1 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 6.8% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (88.5% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained higher than the state rate (93.3% vs. 90.6%) (Table 8-1-B).

From 2012 to 2013: The District 8-1 UTD immunization rate by 24 months increased by 6.2% from 2012 to 2013. The District UTD immunization rate by the end of data collection increased by 5.3% from 2012 to 2013 (Figure 8-1-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 8-1-A: GIS Sampling Scheme, District 8-1, 2013

	District 8-1 (n)	State (n)
Original Sample	122	2,813
Ineligible	7	181
(Refused to Participate)	(0)	(20)
Eligible Sample	115	2,632
Unable to Locate†	11	143
Final Sample	104	2,489
Response Rate (%)	90.4	94.6

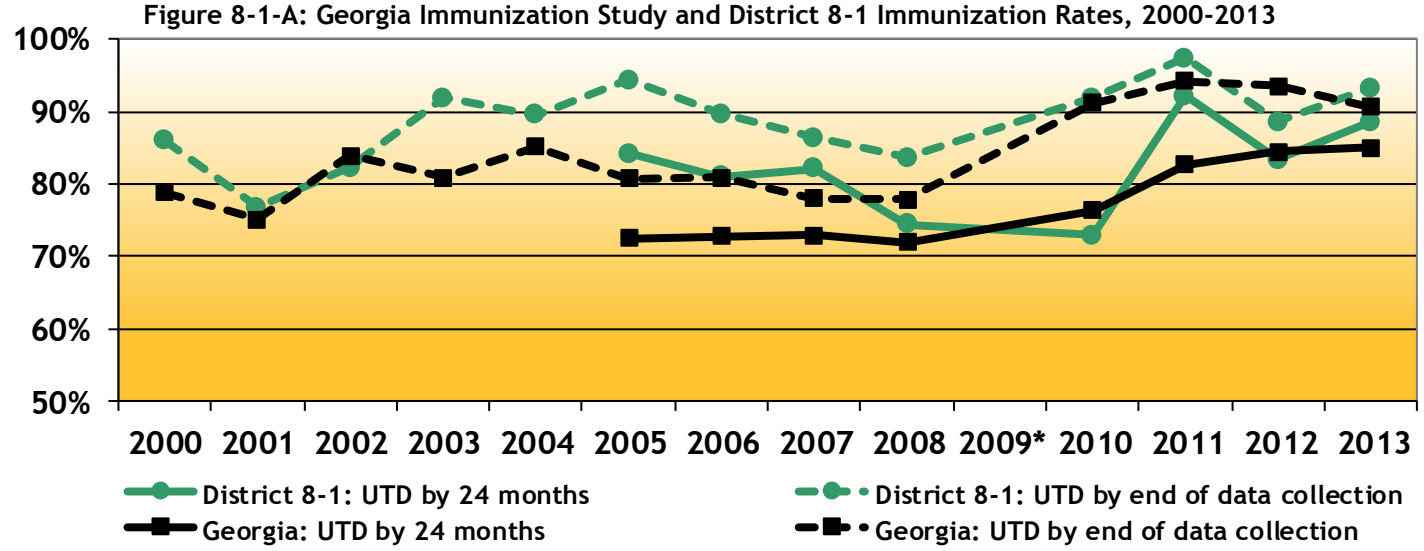
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 8-1-B: Immunization Summary by Series & Vaccine Antigen, District 8-1, 2013

	District 8-1 (%)	State Average (%)
UTD immunization rate** **by 24 months**	88.5	85.0
UTD immunization rate** **Based on GRITS alone**	81.7	80.2
UTD immunization rate** **by end of data collection**††	93.3	90.6
4 DTaP by 24 months	86.5	84.6
3 DTaP by 24 months	96.2	96.6
3 IPV by 24 months	96.2	95.7
1 MMR by 24 months	93.3	92.7
UTD Hib by 24 months	98.1	96.3
3 Hep B by 24 months	97.1	95.9
1 Varicella by 24 months	92.3	93.5
UTD PCV by 24 months	91.3	84.5
2 Rotavirus by 24 months	95.2	83.5
2 Hep A by 24 months	58.7	57.3
1+ Influenza by 24 months	20.2	29.3

†† 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 8-1-A: Georgia Immunization Study and District 8-1 Immunization Rates, 2000-2013



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

District 8-1, Georgia Immunization Study Report, p3

Table 8-1-C: UTD Immunization Rates by Demographic Group, District 8-1, 2013

	State Avg. UTD by 24 months %	8-1—UTD by 24 months (%)	*8-1—UTD by end of d.c.[β] (%)*
District 8-1 Sample (n=104)	85.0	88.5	93.3
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=35)	86.4	**94.3**	*94.3*
White, Hispanic (n=1)	90.6	**100.0**	*100.0*
Black (n=37)	81.4	**86.5**	*94.6*
Unspecified, Hispanic (n=8)	90.5	**100.0**	*100.0*
Asian (n=0)	91.3	**N/A**	*N/A*
Multiracial (n=0)	86.7	**N/A**	*N/A*
Maternal Education[‡,†]			
Some College+ (n=42)	86.7	**92.9**	*97.6*
HS Diploma/GED (n=41)	82.1	**87.8**	*90.2*
9th-11th grade (n=16)	82.3	**81.3**	*87.5*
<9th grade (n=5)	90.1	**80.0**	*100.0*
WIC[θ]			
Non-WIC (n=32)	85.1	**84.4**	*84.4*
WIC (n=72)	84.9	**90.3**	*97.2*
Maternal Age[‡]			
<25 years (n=34)	82.9	**88.2**	*94.1*
25-34 years (n=65)	86.0	**87.7**	*92.3*
35+ years (n=5)	88.1	**100.0**	*100.0*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=16)	89.2	**93.8**	*100.0*
Unmarried, First Birth (n=22)	87.9	**90.9**	*95.5*
Married, Repeat Birth (n=32)	85.5	**87.5**	*87.5*
Unmarried, Repeat Birth (n=34)	79.2	**85.3**	*94.1*
Gestational Age[‡]			
<37 weeks (n=15)	81.2	**86.7**	*93.3*
37+ weeks (n=89)	85.4	**88.8**	*93.3*
Provider Type[†]			
Public Sector Only (n=0)	81.3	**N/A**	*N/A*
Private Sector Only (n=92)	87.2	**88.0**	*93.5*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth[‡,†]			
Government Assist (n=78)	82.3	**88.5**	*94.9*
Private Insurance (n=23)	89.4	**87.0**	*87.0*
Other (n=0)	84.5	**N/A**	*N/A*
Self Pay (n=1)	84.2	**100.0**	*100.0*

UTD Immunization Rates by Demographic Group: In District 8-1, children of white, non-Hispanic mothers had a higher UTD immunization rate than children with black mothers (94.3% vs. 86.5%). The sample sizes for other race/ethnicity groups were too small to draw any definite conclusions (Table 8-1-C).

Children of mothers with some college education were most likely to be UTD at 24 months (92.9%) compared to those whose mothers had less education. Children of married mothers who were the firstborn children were the most often UTD by 24 months (93.8%).

Most children received government-assisted insurance at the time of birth, and this group had a slightly higher immunization rate by 24 months than those whose births were covered by private insurance (88.5% vs. 87.0%).

District 8-1 children with two providers were more often UTD than those with just one provider (92.0% vs. 88.9%).

To varying degrees, most demographic-related disparities resolved by the end of data collection, though some persisted (Table 8-1-C, *column in italics*).

	State Avg. UTD by 24 months %	8-1—UTD by 24 months (%)	*8-1—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=63)	**86.2**	**88.9**	*92.1*
2 (n=25)	**85.1**	**92.0**	*96.0*
3+ (n=5)	**83.9**	**60.0**	*100.0*
Child's Gender[‡]			
Male (n=52)	**79.4**	**92.3**	*94.2*
Female (n=52)	**81.0**	**84.6**	*92.3*
Metro Residence[θ]			
Metro (n=54)	**84.5**	**90.7**	*92.6*
Non-metro (n=50)	**86.7**	**86.0**	*94.0*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

For example, the immunization rate of children with mothers 25-34 years of age remained less UTD at the end of data collection (92.3%).

Children of married mothers with previous children had the lowest UTD rate by the end of data collection (87.5%) compared to children with mothers regardless of marital status or repeat births

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 mothers with no college education
- Children of mothers between 25-34 years of age
- Children of unmarried mothers with previous children
- Children receiving immunizations from 3+ providers
- Children residing in non-metro counties (see page 1 of District 8-1 Immunization Report)

Figure 8-1-B: Immunizations Administered in Private VS Public Sector, District 8-1, 2013 (n=1,859)

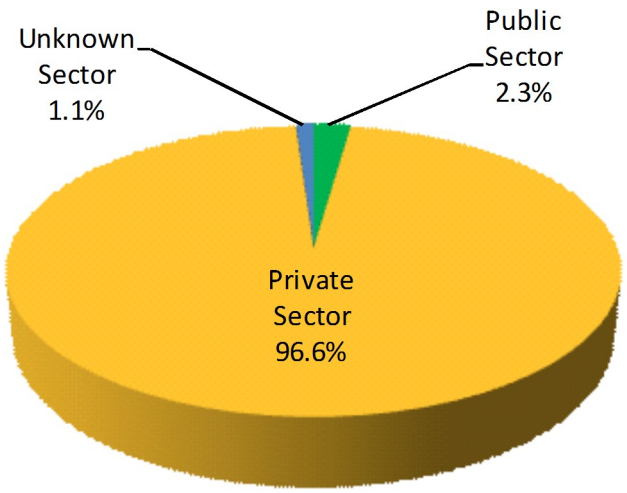


Table 8-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 8-1, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	81.0	83.2	79.5	84.7	94.8	90.1	86.5
3 Polio by 24 months	91.4	93.7	91.5	92.9	97.4	98.8	96.2
1 MMR by 24 months	86.2	90.5	85.5	88.2	96.1	95.1	93.3
UTD Hib by 24 months	89.7	96.8	92.3	92.9	96.1	95.1	98.1
3 Hepatitis B by 24 months	94.8	97.9	92.3	92.9	96.1	98.8	97.1
1 Varicella by 24 months	87.9	92.6	87.2	90.6	94.8	97.5	92.3
UTD PCV by 24 months	70.7	84.2	87.2	87.1	97.4	98.8	91.3
2 Rotavirus	-	-	-	83.5	92.2	84.0	83.5
1 Influenza by 24 months	-	-	-	60.0	61.0	58.0	20.2

Immunization Rates by Vaccine Antigen: In District 8-1, the UTD immunization rate by 24 months for most vaccine antigens decreased in 2013 (Table 8-1-D).

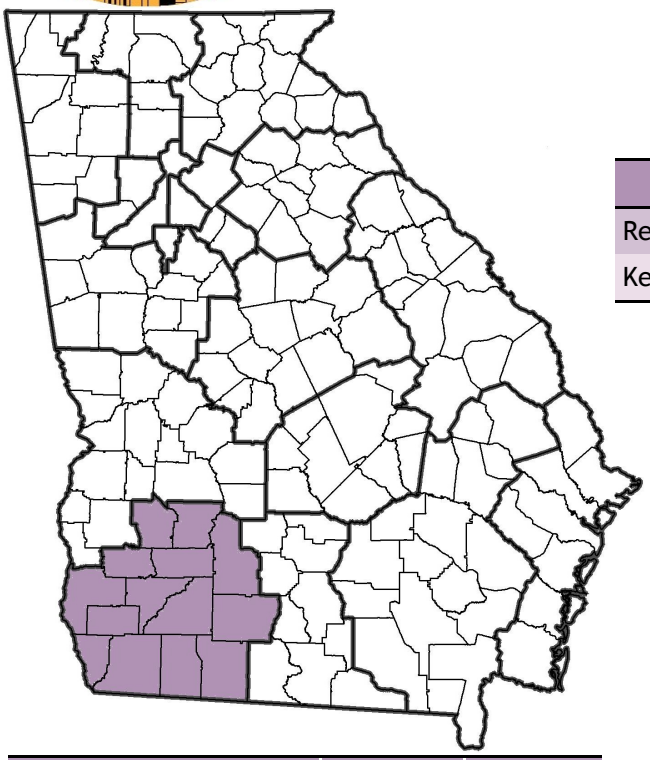
Among District 8-1 immunization rates by vaccine antigen in 2013, the UTD immunization rate for DTaP was lowest at 86.5%, down from 90.1% in 2012. The UTD immunization rate for PCV was second-lowest at 91.3%, down from 98.8% in 2012.

Among District 8-1 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 58.0% in 2012 to 20.2% in 2013. This may reflect a data capture error, and is currently being investigated.

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

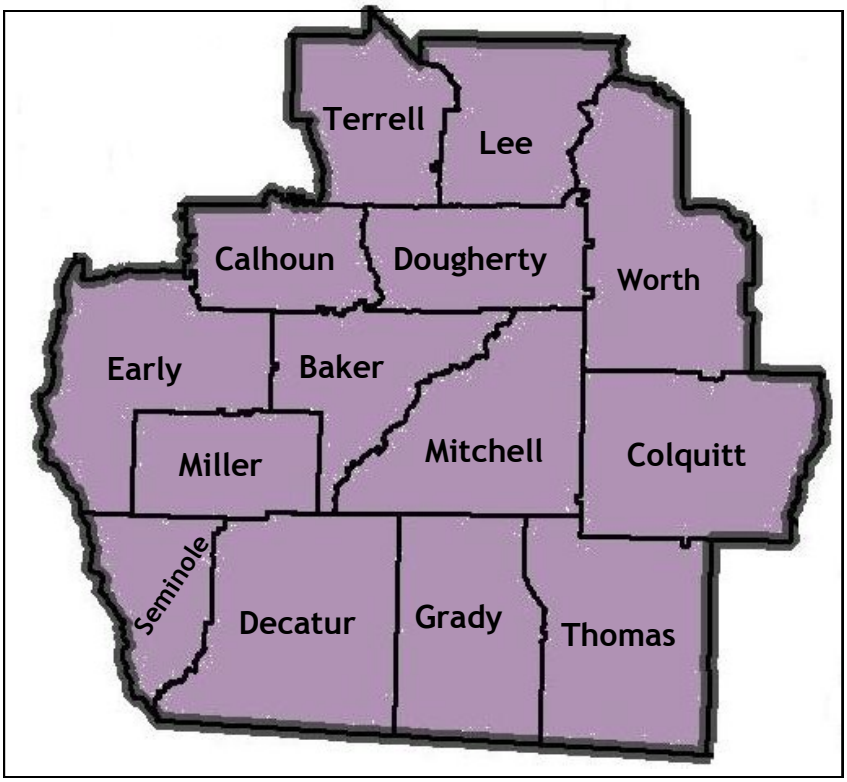
District 8-2

2013 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	Metro
Baker	2	Metro
Calhoun	3	Nonmetro
Colquitt	19	Nonmetro
Decatur	7	Nonmetro
Dougherty	49	Metro
Early	3	Nonmetro
Grady	11	Nonmetro
Lee	7	Metro
Miller	2	Nonmetro
Mitchell	7	Nonmetro
Seminole	5	Nonmetro
Terrell	4	Metro
Thomas	13	Nonmetro
Worth	4	Metro
District 8-2	**136**	
District UTD by 24 months Immunization Rate	**87.5%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 8-2

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 8-2 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 1.5% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (87.5% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained higher than the state rate (94.1% vs. 90.6%) (Table 8-2-B).

From 2012 to 2013: The District 8-2 UTD immunization rate by 24 months increased by 5.0% from 2012 to 2013. The District UTD immunization rate by the end of data collection increased by 6.2% from 2012 to 2013 (Figure 8-2-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 8-2-A: GIS Sampling Scheme, District 8-2, 2013

	District 8-2 (n)	State (n)
Original Sample	148	2,813
Ineligible	8	181
(Refused to Participate)	(0)	(20)
Eligible Sample	140	2,632
Unable to Locate†	4	143
Final Sample	136	2,489
Response Rate (%)	97.1	94.6

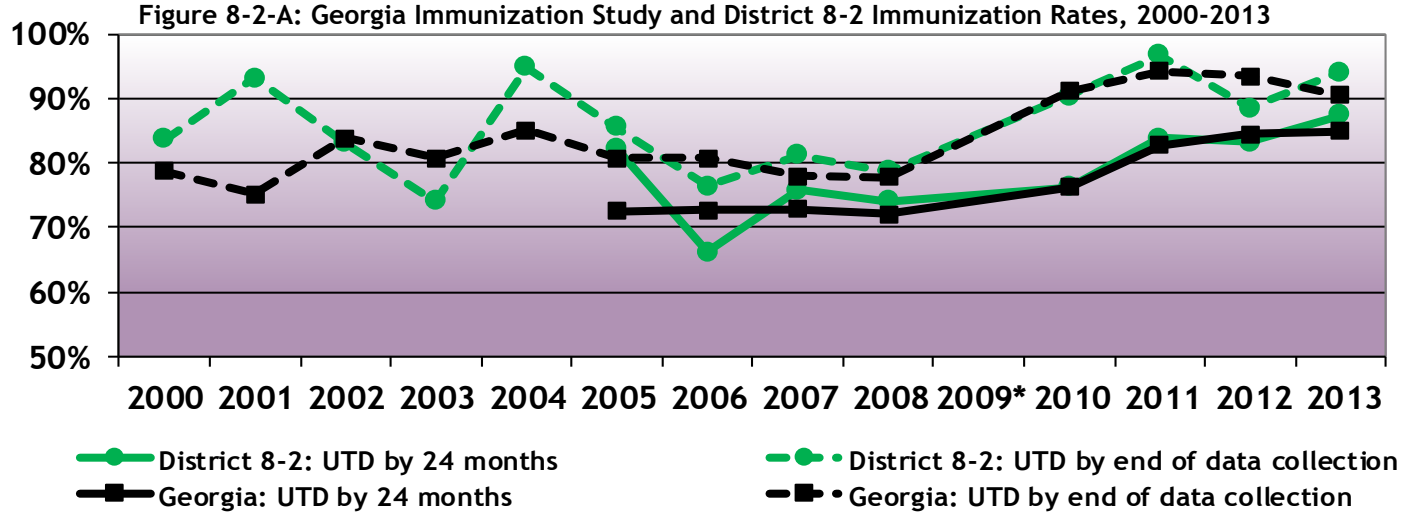
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 8-2-B: Immunization Summary by Series & Vaccine Antigen, District 8-2, 2013

	District 8-2 (%)	State Average (%)
UTD immunization rate** **by 24 months**	87.5	85.0
UTD immunization rate** **Based on GRITS alone**	86.0	80.2
UTD immunization rate** **by end of data collection**††	94.1	90.6
4 DTaP **by 24 months**	86.0	84.6
3 DTaP **by 24 months**	98.5	96.6
3 IPV **by 24 months**	97.1	95.7
1 MMR **by 24 months**	91.2	92.7
UTD Hib **by 24 months**	98.5	96.3
3 Hep B **by 24 months**	99.3	95.9
1 Varicella **by 24 months**	93.4	93.5
UTD PCV **by 24 months**	86.8	84.5
2 Rotavirus **by 24 months**	91.2	83.5
2 Hep A **by 24 months**	61.8	57.3
1+ Influenza **by 24 months**	32.4	29.3

†† 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, 2000-2013



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

District 8-2, Georgia Immunization Study Report, p3

Table 8-2-C: UTD Immunization Rates by Demographic Group, District 8-2, 2013

	State Avg. UTD by 24 months (%)	**8-2—UTD by 24 months (%)**	*8-2—UTD by end of d.c.[β] (%)*
District 8-2 Sample (n=136)	85.0	**87.5**	*94.1*
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=42)	86.4	**92.9**	*92.9*
White, Hispanic (n=5)	90.6	**80.0**	*100.0*
Black (n=76)	81.4	**85.5**	*94.7*
Unspecified, Hispanic (n=7)	90.5	**85.7**	*85.7*
Asian (n=0)	91.3	**N/A**	*N/A*
Multiracial (n=1)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=57)	86.7	**91.2**	*93.0*
HS Diploma/GED (n=35)	82.1	**88.6**	*94.3*
9th-11th grade (n=33)	82.3	**81.8**	*97.0*
<9th grade (n=9)	90.1	**77.8**	*88.9*
WIC[θ]			
Non-WIC (n=44)	85.1	**84.1**	*90.9*
WIC (n=92)	84.9	**89.1**	*95.7*
Maternal Age[‡]			
<25 years (n=72)	82.9	**88.9**	*95.8*
25-34 years (n=54)	86.0	**88.9**	*94.4*
35+ years (n=10)	88.1	**70.0**	*80.0*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=16)	89.2	**93.8**	*93.8*
Unmarried, First Birth (n=48)	87.9	**89.6**	*97.9*
Married, Repeat Birth (n=31)	85.5	**83.9**	*90.3*
Unmarried, Repeat Birth (n=40)	79.2	**85.0**	*92.5*
Gestational Age[‡]			
<37 weeks (n=16)	81.2	**81.3**	*87.5*
37+ weeks (n=120)	85.4	**88.3**	*95.0*
Provider Type[†]			
Public Sector Only (n=1)	81.3	**100.0**	*100.0*
Private Sector Only (n=113)	87.2	**87.6**	*94.7*
Both (n=1)	88.9	**100.0**	*100.0*
Payment at Birth[‡,†]			
Government Assist (n=51)	82.3	**90.2**	*96.1*
Private Insurance (n=9)	89.4	**100.0**	*100.0*
Other (n=0)	84.5	**N/A**	*N/A*
Self Pay (n=6)	84.2	**66.7**	*83.3*

UTD Immunization Rates by Demographic Group: In District 8-2, the UTD by 24 months immunization rate for children of black mothers was lowest at 85.5%; this was the largest maternal race/ethnicity demographic group. Children of white, non-Hispanic mothers had an UTD by 24 months immunization rate above the District as a whole (92.9% vs. 87.5%). The sample sizes for other race/ethnicity groups were too small to draw any definite conclusions (Table 8-2-C).

In District 8-2, higher maternal education was associated with higher UTD coverage rates by 24 months, although the sample size for the <9th grade maternal education group was too small to draw any conclusions (see Table 8-2-C).

In terms of maternal age, children of mothers <25 and 25-34 years of age were exactly as often UTD by 24 months (88.9%) while children of mothers 35+ years of age were lower (70.0%). In terms of the maternal marital status and repeat births, children of mothers with previous children were less often UTD by 24 months than children of mothers without previous children (see Table 8-2-C).

Most children's birth costs were covered by government-assisted insurance and as such were more likely to be UTD at 24 months than the state

	State Avg. UTD by 24 months (%)	**8-2—UTD by 24 months (%)**	*8-2—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=62)	**86.2**	**90.3**	*95.2*
2 (n=39)	**85.1**	**84.6**	*94.9*
3+ (n=11)	**83.9**	**81.8**	*90.9*
Child's Gender[‡]			
Male (n=69)	**79.4**	**88.4**	*98.6*
Female (n=67)	**81.0**	**86.6**	*89.6*
Metro Residence[θ]			
Metro (n=66)	**84.5**	**89.4**	*93.9*
Non-metro (n=70)	**86.7**	**85.7**	*94.3*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

sample (90.2% vs. 82.3%). The data also support the importance of a medical home as children with two providers were less likely to be UTD at 24 months than those with only one provider (84.6% vs. 90.3%).

Children living in metro counties (see page 1 of District 8-2 Immunization Report) were more likely to be UTD at 24 months than those living in non-metro counties (89.4% vs. 85.7%).

Several of these demographic-related disparities persisted through the end of data collection (Table 8-2-C, *column in italics*).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 less educated mothers
- Children of black mothers
- Children of mothers with previous children
- Children living in non-metro counties (see page 1 of District 8-2 Immunization Report)

Figure 8-2-B: Immunizations Administered in Private VS Public Sector, District 8-2, 2013 (n=2,341)

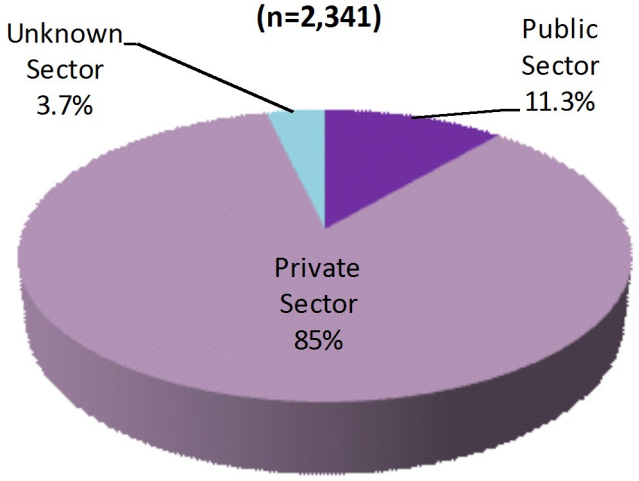


Table 8-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 8-2, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	71.7	78.2	78.4	86.8	86.0	86.4	86.0
3 Polio by 24 months	84.3	88.5	90.7	98.3	95.7	93.2	97.1
1 MMR by 24 months	85.0	88.5	87.1	92.1	94.6	91.7	91.2
UTD Hib by 24 months	91.3	89.7	82.7	90.4	93.6	95.5	98.5
3 Hepatitis B by 24 months	88.2	92.7	94.2	97.4	96.8	96.2	99.3
1 Varicella by 24 months	84.3	89.4	86.3	96.5	94.6	90.2	93.4
UTD PCV by 24 months	72.4	78.2	80.6	93.9	96.8	88.6	86.8
2 Rotavirus	-	-	-	83.3	90.3	78.8	91.2
1 Influenza by 24 months	-	-	-	62.3	58.1	56.8	32.4

Immunization Rates by Vaccine Antigen: In District 8-2, the UTD immunization rate by 24 months for most vaccine antigens dropped from 2006 to 2008 in District 8-2, then steadily increased between 2010 and 2013 (Table 8-2-D).

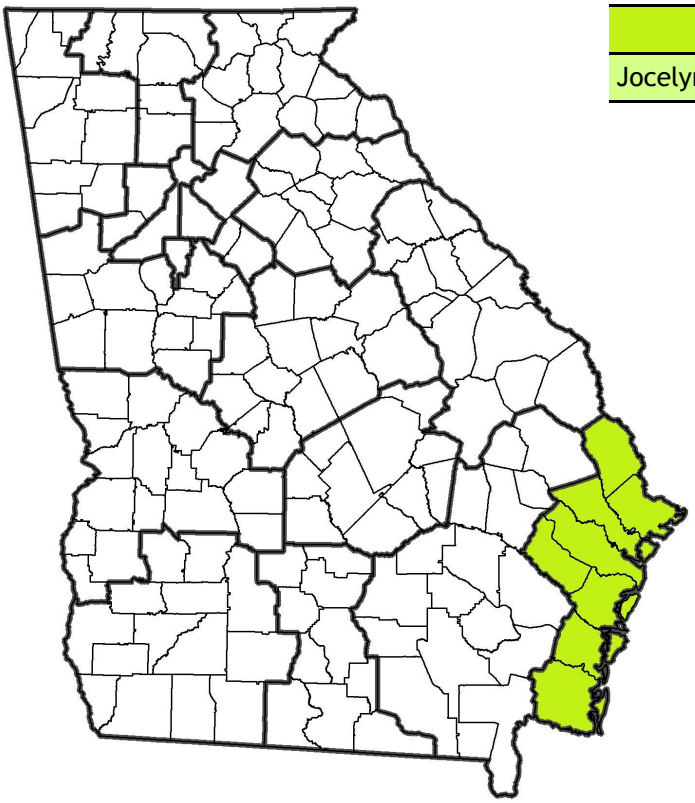
Among District 8-2 immunization rates by vaccine antigen in 2013, the UTD immunization rate for DTaP was the lowest at 86.0%, similar to 86.4% in 2012. The UTD immunization rate for PCV was second-lowest at 86.8%, down from 88.6% in 2012.

Among District 8-2 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 56.8% in 2012 to 32.4% in 2013. This may reflect a data capture error, and is currently being investigated.

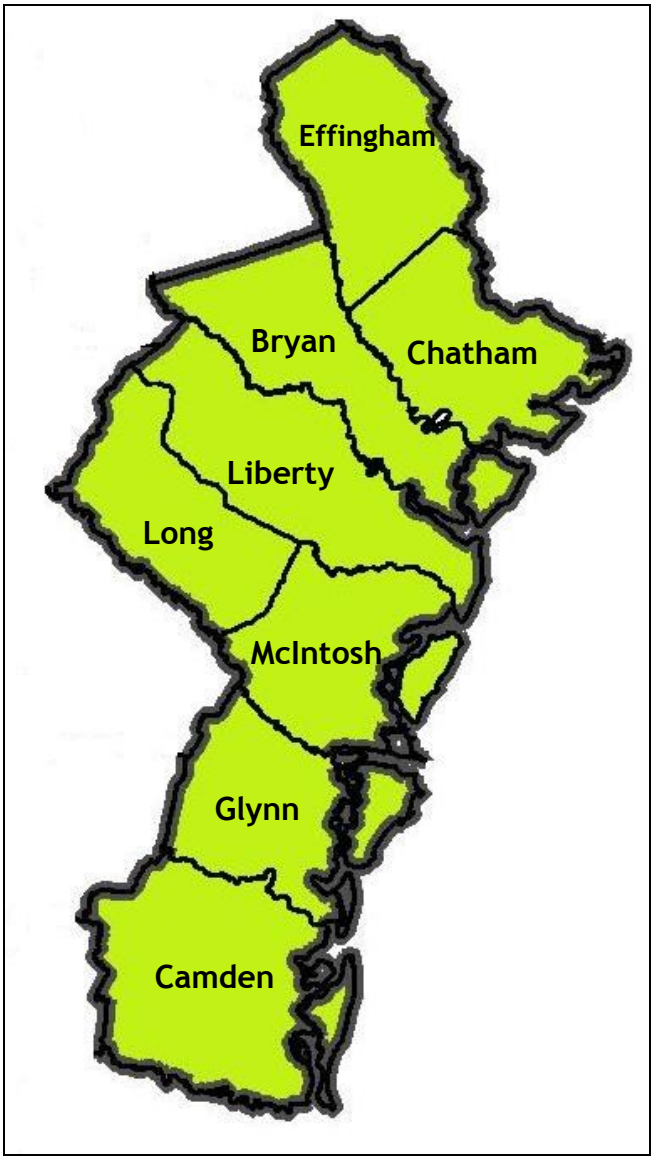
Vaccine Antigen-Specific Conclusions: The antigen specific data suggest that the DTaP vaccine and the PCV vaccine could reasonably be the primary focus of District and County-level immunization campaigns.

District 9-1

2013 Georgia Immunization Study Report



District 9-1 Data Collection Team	
Jocelyn Hall, RN, BSN	District Immunization Coordinator



County	Number in Sample	Metro
Bryan	4	Metro
Camden	6	Nonmetro
Chatham	95	Metro
Effingham	19	Metro
Glynn	32	Metro
Liberty	13	Metro
Long	0	Metro
McIntosh	2	Metro
District 9-1	**171**	
District UTD by 24 months Immunization Rate	**79.5%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	

District 9-1

Georgia Immunization Study Report, p2

From 24 Months to End of Data Collection: In the District 9-1 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 2.3% higher than the UTD immunization rate based on GRITS alone and lower than the state UTD by 24 months rate (79.5% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained lower than the state rate (87.1% vs. 90.6%) (Table 9-1-B).

From 2012 to 2013 The District 9-1 UTD immunization rate by 24 months decreased by 1.5% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 6.7% from 2012 to 2013 (Figure 9-1-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 9-1-A: GIS Sampling Scheme, District 9-1—2013

	District 9-1 (n)	State (n)
Original Sample	199	2,813
Ineligible	16	181
(Refused to Participate)	(0)	(20)
Eligible Sample	183	2,632
Unable to Locate†	12	143
Final Sample	171	2,489
Response Rate (%)	93.4	94.6

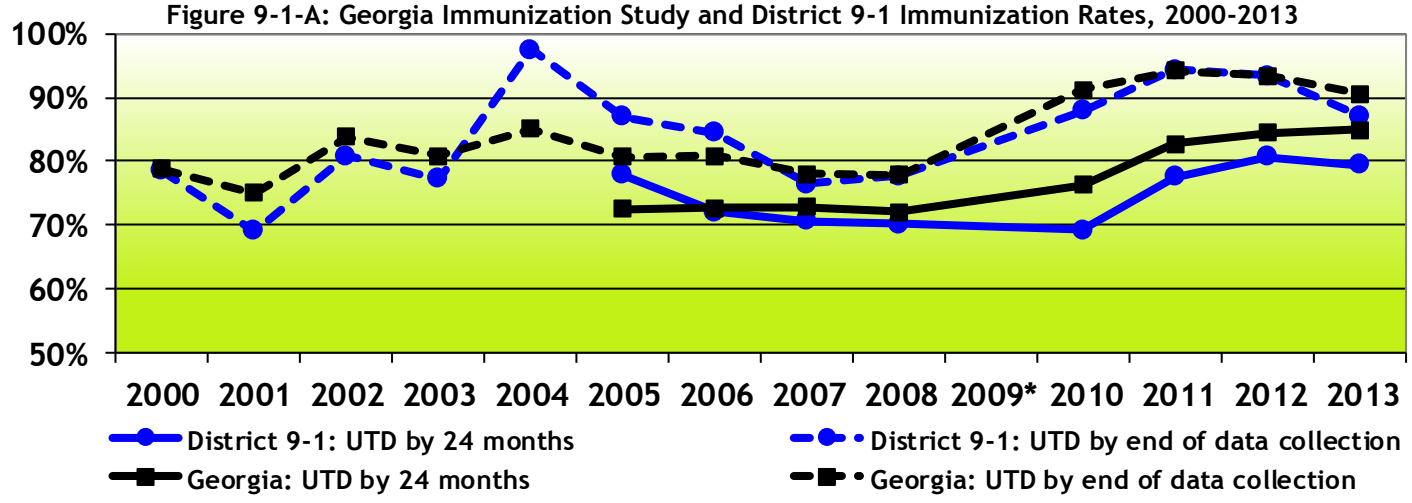
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 9-1-B: Immunization Summary by Series & Vaccine Antigen, District 9-1, 2013

	District 9-1 (%)	State Average (%)
UTD immunization rate** **by 24 months**	79.5	85.0
UTD immunization rate** **Based on GRITS alone**	77.2	80.2
UTD immunization rate** **by end of data collection**††	87.1	90.6
4 DTaP by 24 months	81.9	84.6
3 DTaP by 24 months	94.2	96.6
3 IPV by 24 months	93.6	95.7
1 MMR by 24 months	90.1	92.7
UTD Hib by 24 months	94.2	96.3
3 Hep B by 24 months	92.4	95.9
1 Varicella by 24 months	90.6	93.5
UTD PCV by 24 months	77.2	84.5
2 Rotavirus by 24 months	71.3	83.5
2 Hep A by 24 months	62.0	57.3
1+ Influenza by 24 months	31.0	29.3

†† 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 9-1-A: Georgia Immunization Study and District 9-1 Immunization Rates, 2000-2013



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

District 9-1, Georgia Immunization Study Report, p3

Table 9-1-C: UTD Immunization Rates by Demographic Group, District 9-1—2013

	State Avg. UTD by 24 months (%)	**9-1—UTD by 24 months (%)**	*9-1—UTD by end of d.c.[β] (%)*
District 9-1 Sample (n=171)	85.0	**79.5**	87.1
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=72)	86.4	**81.9**	*86.1*
White, Hispanic (n=7)	90.6	**71.4**	*85.7*
Black (n=78)	81.4	**78.2**	*88.5*
Unspecified, Hispanic (n=3)	90.5	**100.0**	*100.0*
Asian (n=1)	91.3	**100.0**	*100.0*
Multiracial (n=4)	86.7	**75.0**	*75.0*
Maternal Education[‡,†]			
Some College+ (n=70)	86.7	**78.6**	*87.1*
HS Diploma/GED (n=57)	82.1	**84.2**	*87.7*
9th-11th grade (n=39)	82.3	**71.8**	*84.6*
<9th grade (n=1)	90.1	**100.0**	*100.0*
WIC[θ]			
Non-WIC (n=58)	85.1	**79.3**	*82.8*
WIC (n=113)	84.9	**79.6**	*89.4*
Maternal Age[‡]			
<25 years (n=79)	82.9	**77.2**	*82.3*
25-34 years (n=76)	86.0	**82.9**	*90.8*
35+ years (n=16)	88.1	**75.0**	*93.8*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=23)	89.2	**95.7**	*95.7*
Unmarried, First Birth (n=55)	87.9	**80.0**	*83.6*
Married, Repeat Birth (n=31)	85.5	**83.9**	*87.1*
Unmarried, Repeat Birth (n=62)	79.2	**71.0**	*87.1*
Gestational Age[‡]			
<37 weeks (n=22)	81.2	**72.7**	*77.3*
37+ weeks (n=149)	85.4	**80.5**	*88.6*
Provider Type[†]			
Public Sector Only (n=9)	81.3	**88.9**	*100.0*
Private Sector Only (n=123)	87.2	**82.1**	*90.2*
Both (n=1)	88.9	**0.0**	*100.0*
Payment at Birth[‡,†]			
Government Assist (n=117)	82.3	**76.9**	*86.3*
Private Insurance (n=35)	89.4	**88.6**	*88.6*
Other (n=3)	84.5	**100.0**	*100.0*
Self Pay (n=9)	84.2	**66.7**	*77.8*

UTD Immunization Rates by Demographic Group: In District 9-1, the UTD by 24 months immunization rate for children of white, non-Hispanic mothers was low, but higher than that of children with black mothers (81.9% vs. 78.2%). The sample sizes for other race/ethnicity groups were too small to draw any definite conclusions (Table 9-1-C).

Children of mothers with a high school diploma/GED were the most often UTD by 24 months (84.2%) among the maternal education groups.

Children with mothers in the 35+ years age group were the least likely to be UTD by 24 months (75.0%).

Children of unmarried mothers with previous children were the least often UTD by 24 months of age (71.0%), followed by children of unmarried mothers with no previous children (80.0%).

In terms of payment at birth, District 9-1 children whose birth costs were covered by private insurance were more often UTD by 24 months than children whose birth costs were covered by government-assisted insurance (88.6% vs. 76.9%).

The District 9-1 data supported the importance of a medical home; children who had one provider

	State Avg. UTD by 24 months (%)	**9-1—UTD by 24 months (%)**	*9-1—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=72)	**86.2**	**81.9**	*87.5*
2 (n=43)	**85.1**	**74.4**	*88.4*
3+ (n=22)	**83.9**	**77.3**	*86.4*
Child's Gender[‡]			
Male (n=91)	**79.4**	**81.3**	*91.2*
Female (n=80)	**81.0**	**77.5**	*82.5*
Metro Residence[θ]			
Metro (n=165)	**84.5**	**78.8**	*86.7*
Non-metro (n=6)	**86.7**	**100.0**	*100.0*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

(Number of Providers) were more often UTD by 24 months than those with two providers (81.9% vs. 74.4%), but both rates were below the State rates.

Children living in metro counties (see page 1 of District 9-1 Immunization Report) were less likely to be UTD by 24 months than the metro demographic of the state sample (78.8% vs. 84.5%).

Although many demographic-related disparities resolved by the end of data collection, some still remained (Table 9-1-C).

For example, children of unmarried mothers remained less likely to be UTD by the end of data collection than children of married mothers.

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 mothers with a high school/GED level of education
- Children of mothers 35+ years of age
- Children of unmarried mothers with previous children
- Children of mothers who used government-assisted insurance for the birth event
- Children with two or more providers.
- Children residing in metro counties (see page 1 of District 9-1 Immunization Report)

Figure 9-1-B: Immunizations Administered in Private VS Public Sector, District 9-1, 2013 (n=2,833)

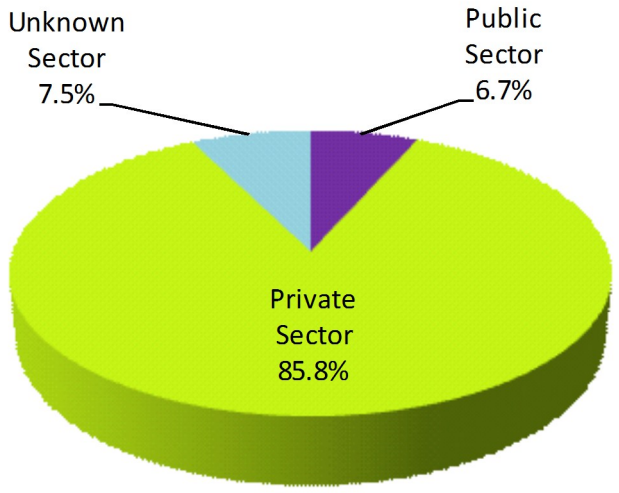


Table 9-1-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 9-1—2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	76.8	77.1	75.4	74.3	83.8	85.1	81.9
3 Polio by 24 months	92.3	87.9	88.6	92.1	98.6	98.3	93.6
1 MMR by 24 months	85.7	86.4	80.7	87.9	90.9	91.7	90.1
UTD Hib by 24 months	90.5	87.1	88.6	87.1	94.4	96.7	94.2
3 Hepatitis B by 24 months	92.3	87.1	89.5	91.4	94.4	98.9	92.4
1 Varicella by 24 months	89.9	86.4	83.3	90.0	93.7	94.5	90.6
UTD PCV by 24 months	69.6	77.9	80.7	89.3	94.4	90.1	77.2
2 Rotavirus	-	-	-	65.7	71.8	61.9	71.3
1 Influenza by 24 months	-	-	-	57.9	61.3	60.2	31.0

Immunization Rates by Vaccine Antigen: In District 9-1, the UTD immunization rate by 24 months for most vaccine antigens remained somewhat steady from 2006 to 2010, increased in 2011 and 2012, then decreased in 2013. (Table 9-1-D).

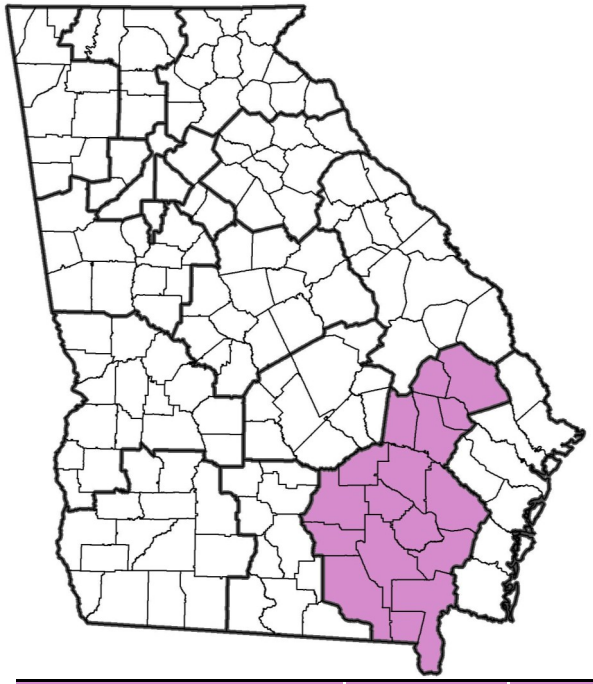
Among District 9-1 immunization rates by vaccine antigen in 2013, the UTD immunization rate for PCV was the lowest at 77.2%, down from 90.1% in 2012. The UTD immunization rate for DTaP was second-lowest at 81.9%, down from 85.1% in 2012.

Among District 7-0 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 60.2% in 2012 to 31.0% in 2013. This may reflect a data capture error, and is currently being investigated.

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

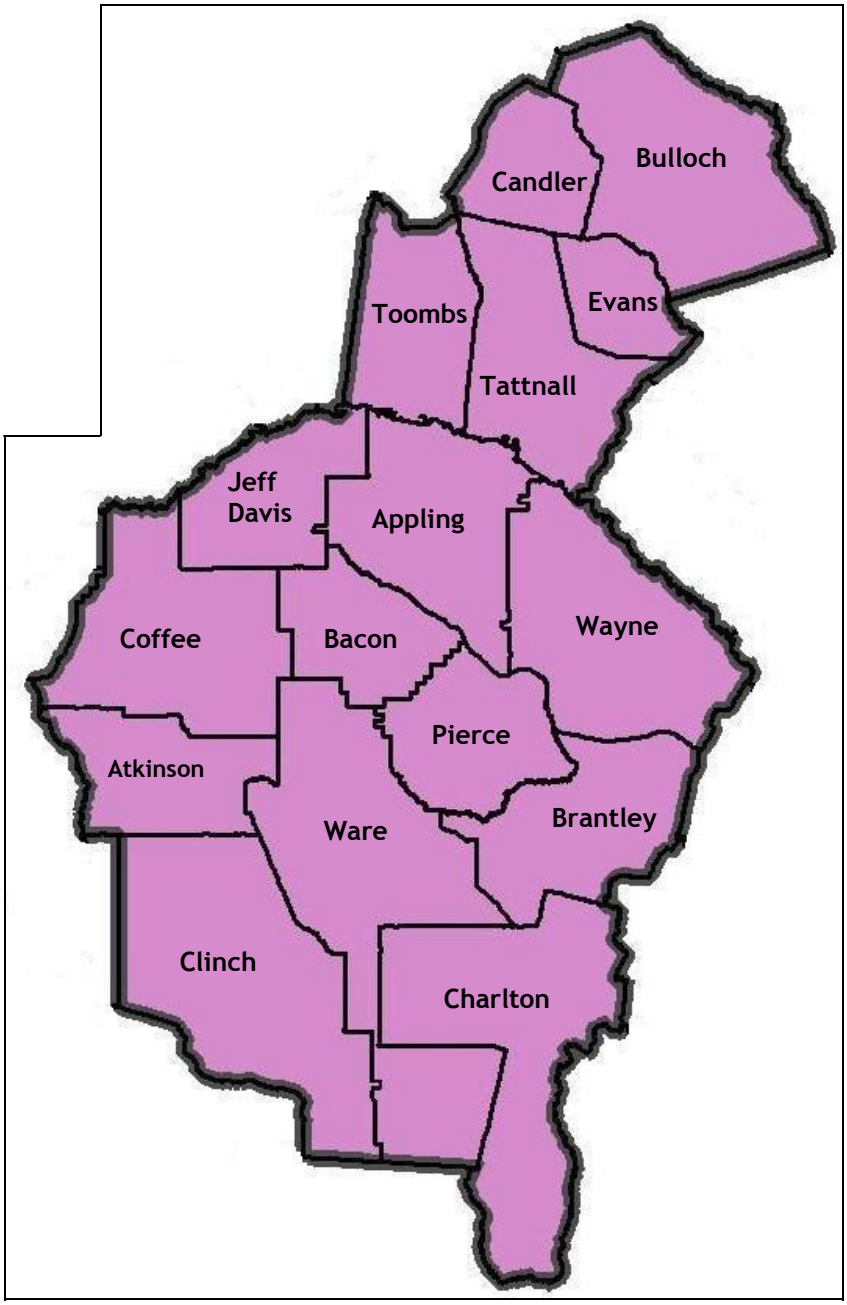
District 9-2

2013 Georgia Immunization Study Report



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

County	Number in Sample	Metro
Appling	10	Nonmetro
Atkinson	2	Nonmetro
Bacon	4	Nonmetro
Brantley	3	Metro
Bulloch	22	Nonmetro
Candler	5	Nonmetro
Charlton	1	Nonmetro
Clinch	2	Nonmetro
Coffee	25	Nonmetro
Evans	5	Nonmetro
Jeff Davis	2	Nonmetro
Pierce	4	Nonmetro
Tattnall	5	Nonmetro
Toombs	9	Nonmetro
Ware	14	Nonmetro
Wayne	10	Nonmetro
District 9-2	**123**	
District UTD by 24 months Immunization Rate	**86.2%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 9-2

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 9-2 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was equal to the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (86.2% vs. 85.0%). At the end of data collection, the District UTD immunization rate remained higher than the state rate (93.5% vs. 90.6%) (Table 9-2-B).

From 2012 to 2013: The District 9-2 UTD immunization rate by 24 months increased by 2.1% from 2012 to 2013. The District UTD immunization rate by the end of data collection decreased by 0.3% from 2012 to 2013 (Figure 9-2-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 9-2-A: GIS Sampling Scheme, District 9-2, 2013

	District 9-2 (n)	State (n)
Original Sample	137	2,813
Ineligible	11	181
(Refused to Participate)	(0)	(20)
Eligible Sample	126	2,632
Unable to Locate†	3	143
Final Sample	123	2,489
Response Rate (%)	97.6	94.6

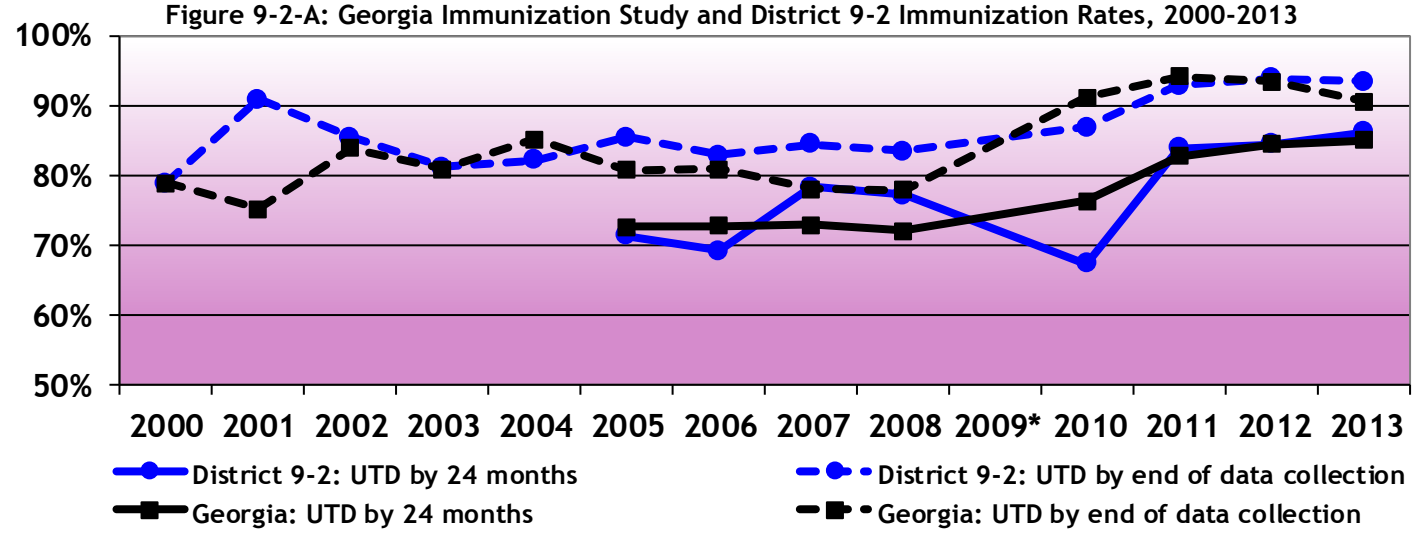
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 9-2-B: Immunization Summary by Series & Vaccine Antigen, District 9-2, 2013

	District 9-2 (%)	State Average (%)
UTD immunization rate** **by 24 months**	86.2	85.0
UTD immunization rate** **Based on GRITS alone**	86.2	80.2
UTD immunization rate** **by end of data collection**††**	93.5	90.6
4 DTaP by 24 months	87.0	84.6
3 DTaP by 24 months	98.4	96.6
3 IPV by 24 months	98.4	95.7
1 MMR by 24 months	95.1	92.7
UTD Hib by 24 months	97.6	96.3
3 Hep B by 24 months	100.0	95.9
1 Varicella by 24 months	96.7	93.5
UTD PCV by 24 months	87.0	84.5
2 Rotavirus by 24 months	88.6	83.5
2 Hep A by 24 months	67.5	57.3
1+ Influenza by 24 months	18.7	29.3

†† 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 9-2-A: Georgia Immunization Study and District 9-2 Immunization Rates, 2000-2013



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

District 9-2, Georgia Immunization Study Report, p3

Table 9-2-C: UTD Immunization Rates by Demographic Group, District 9-2, 2013

	State Avg. UTD by 24 months (%)	9-2—UTD by 24 months (%)	*9-2—UTD by end of d.c.[β] (%)*
District 9-2 Sample (n=123)	85.0	**86.2**	93.5
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=72)	86.4	87.5	*95.8*
White, Hispanic (n=6)	90.6	83.3	*83.3*
Black (n=31)	81.4	83.9	*90.3*
Unspecified, Hispanic (n=9)	90.5	77.8	*88.9*
Asian (n=0)	91.3	N/A	*N/A*
Multiracial (n=0)	86.7	N/A	*N/A*
Maternal Education[‡,†]			
Some College+ (n=43)	86.7	90.7	*100.0*
HS Diploma/GED (n=39)	82.1	82.1	*89.7*
9th-11th grade (n=28)	82.3	82.1	*89.3*
<9th grade (n=11)	90.1	90.9	*90.9*
WIC[θ]			
Non-WIC (n=21)	85.1	90.5	*95.2*
WIC (n=102)	84.9	85.3	*93.1*
Maternal Age[‡]			
<25 years (n=61)	82.9	82.0	*90.2*
25-34 years (n=49)	86.0	93.9	*95.9*
35+ years (n=11)	88.1	81.8	*100.0*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=13)	89.2	**92.3**	*100.0*
Unmarried, First Birth (n=26)	87.9	**87.0**	*88.5*
Married, Repeat Birth (n=45)	85.5	**86.7**	*95.6*
Unmarried, Repeat Birth (n=39)	79.2	**89.7**	*92.3*
Gestational Age[‡]			
<37 weeks (n=16)	81.2	**75.0**	*87.5*
37+ weeks (n=107)	85.4	**87.9**	*94.4*
Provider Type[†]			
Public Sector Only (n=1)	81.3	**100.0**	*100.0*
Private Sector Only (n=109)	87.2	**86.2**	*93.6*
Both (n=1)	88.9	**100.0**	*100.0*
Payment at Birth[‡,†]			
Government Assist (n=88)	82.3	**85.2**	*92.0*
Private Insurance (n=18)	89.4	**88.9**	*100.0*
Other (n=5)	84.5	**80.0**	*100.0*
Self Pay (n=10)	84.2	**90.0**	*90.0*

UTD Immunization Rates by Demographic Group: In District 9-2, the UTD by 24 months immunization rate for children of white, non-Hispanic mothers was higher than that for children of black mothers (87.5% vs. 83.9%) - the two largest racial/ethnic groups in District 9-2. The sample sizes for other race/ethnicity groups were too small to draw any definite conclusions (Table 9-2-C).

Maternal education was associated with higher UTD immunization rates by 24 months, with the exception of children whose mothers had less than a 9th grade education (see Table 9-2-C).

In terms of maternal age, children of mothers 25-34 years of age were most often UTD by 24 months of age (93.9%). Children of married mothers who had no previous children were more often UTD by 24 months (92.3%) than any of the other marital status and repeat birth categories (see Table 9-2-C).

District 9-2 children whose birth costs were covered by government-assisted insurance were less often UTD by 24 months than children whose birth costs were covered by private insurance (85.2% vs. 88.9%).

Children who received their immunizations from one provider were more likely to be UTD at 24

	State Avg. UTD by 24 months (%)	9-2—UTD by 24 months (%)	*9-2—UTD by end of d.c.[β] (%)*
Number of Providers[†]			
1 (n=50)	**86.2**	**88.0**	*92.0*
2 (n=47)	**85.1**	**83.0**	*97.9*
3+ (n=18)	**83.9**	**88.9**	*88.9*
Child's Gender[‡]			
Male (n=51)	**79.4**	**84.3**	*92.2*
Female (n=72)	**81.0**	**87.5**	*94.4*
Metro Residence[θ]			
Metro (n=3)	**84.5**	**100.0**	*100.0*
Non-metro (n=120)	**86.7**	**85.8**	*93.3*

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

months than those who had two providers (88.0% vs. 83.0%).

Although many demographic-related disparities resolved by the end of data collection, some still remained (Table 9-2-C, *column in italics*).

For example, children of black mothers remained less often UTD by the end of the data collection period than children of white, non-Hispanic mothers (90.3% vs. 95.8%).

Children whose birth costs were covered by government-assisted insurance remained less often UTD than children whose birth costs were covered by private insurance (92.0% vs. 100.0%).

Male children remained less often UTD by the end of data collection than female children (92.2% vs. 94.4%).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 mothers without college education
- Children of mothers <25 years of age and 35+ years of age
- Children of married mothers with previous children
- Children whose birth costs were covered by government-assisted insurance
- Children who received immunizations from two providers vs. a single provider

Figure 9-2-B: Immunizations Administered in Private VS Public Sector, District 9-2, 2013 (n=2,281)

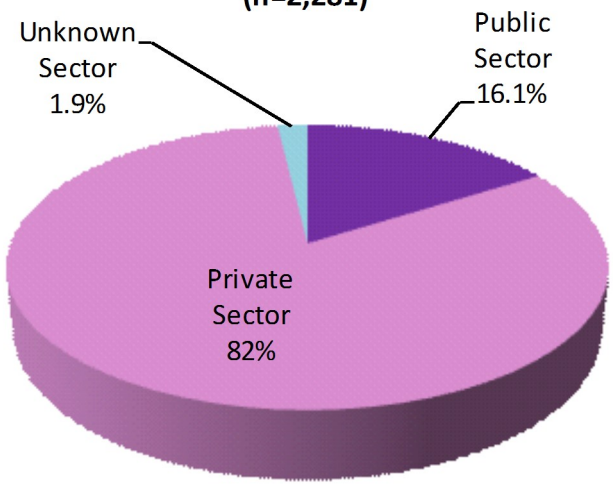


Table 9-2-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 9-2, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	73.2	81.4	79.5	75.7	85.6	83.6	87.0
3 Polio by 24 months	91.1	91.5	91.6	94.4	95.5	95.3	98.4
1 MMR by 24 months	83.7	87.6	88.0	86.9	94.6	94.5	95.1
UTD Hib by 24 months	84.6	88.4	88.0	82.2	92.8	96.1	97.6
3 Hepatitis B by 24 months	89.4	93.0	95.2	92.5	95.5	96.9	100.0
1 Varicella by 24 months	86.2	90.7	91.6	88.8	95.5	93.8	96.7
UTD PCV by 24 months	68.3	76.7	85.5	86.0	96.4	89.1	87.0
2 Rotavirus	-	-	-	73.8	81.1	64.1	88.6
1 Influenza by 24 months	-	-	-	51.4	49.6	60.9	18.7

Immunization Rates by Vaccine Antigen: In District 9-2, the UTD immunization rates by 24 months for most vaccine antigens fluctuated from 2006 to 2012, but rose in 2013 with the exception of the PCV vaccine (Table 9-2-D).

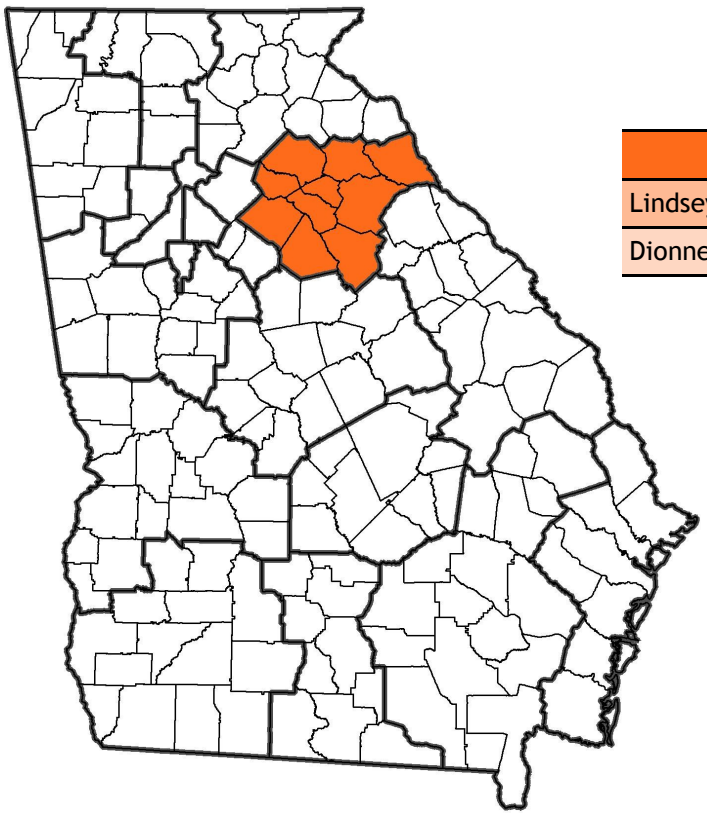
Among District 9-2 immunization rates by vaccine antigen in 2013, the UTD immunization rate for DTaP was the lowest at 87.0%, up from 83.6% in 2012. The UTD immunization rate for PCV was also the lowest at 87.0%, down from 89.1% in 2012.

Among District 9-2 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 60.9% in 2012 to 18.7% in 2013. This may reflect a data capture error, and is currently being investigated.

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

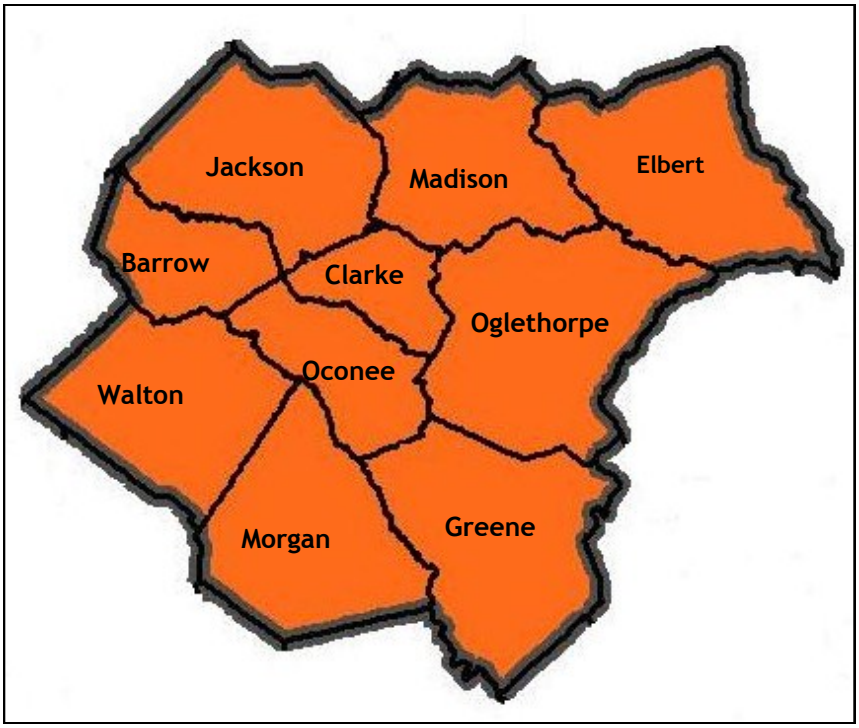
District 10-0

2013 Georgia Immunization Study Report



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

County	Number in Sample	Metro
Barrow	23	Metro
Clarke	34	Metro
Elbert	5	Nonmetro
Greene	1	Nonmetro
Jackson	26	Nonmetro
Madison	7	Metro
Morgan	2	Metro
Oconee	4	Metro
Oglethrope	4	Metro
Walton	22	Metro
District 10	**128**	
District UTD by 24 months Immunization Rate	**92.2%**	
State of Georgia	**2,489**	
State UTD by 24 months Immunization Rate	**85.0%**	



District 10-0

Georgia Immunization Study Report, p2

From 24 months to End of Data Collection: In the District 10 sample, the up-to-date (UTD) immunization rate of children by 24 months of age was 1.6% higher than the UTD immunization rate based on GRITS alone and higher than the state UTD by 24 months rate (92.2% vs. 85.0%). By the end of data collection, the District UTD immunization rate remained higher than the state rate (97.7% vs. 90.6%) (Table 10-0-B).

From 2012 to 2013: The District 10 UTD immunization rate by 24 months increased by 8.5% from 2012 to 2013. The District UTD immunization rate by the end of data collection also increased by 8.1% from 2012 to 2013 (Figure 10-0-A).

Sample population demographics for this District and their effect on up-to-date (UTD) immunization rates are discussed on the following pages.

Table 10-0-A: GIS Sampling Scheme, District 10-0, 2013

	District 10 (n)	State (n)
Original Sample	140	2,813
Ineligible	8	181
(Refused to Participate)	(3)	(20)
Eligible Sample	132	2,632
Unable to Locate†	4	143
Final Sample	128	2,489
Response Rate (%)	97.0	94.6

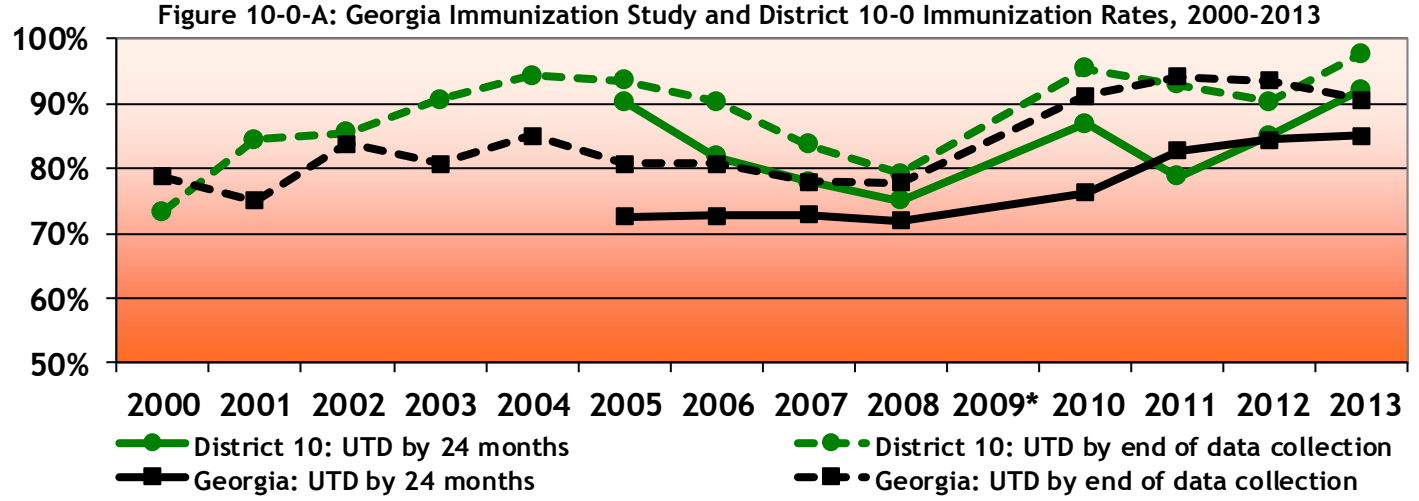
† Children were classified as "Unable to Locate" if every conceivable effort was made to locate and communicate with the child's guardian and the child's provider was either unknown or also unable to locate the guardian.

Table 10-0-B: Immunization Summary by Series & Vaccine Antigen, District 10-0, 2013

	District 10-0 (%)	State Average (%)
UTD immunization rate** **by 24 months**	92.2	85.0
UTD immunization rate** **Based on GRITS alone**	90.6	80.2
UTD immunization rate** **by end of data collection**††	97.7	90.6
4 DTaP by 24 months	88.3	84.6
3 DTaP by 24 months	100.0	96.6
3 IPV by 24 months	100.0	95.7
1 MMR by 24 months	94.5	92.7
UTD Hib by 24 months	100.0	96.3
3 Hep B by 24 months	99.2	95.9
1 Varicella by 24 months	95.3	93.5
UTD PCV by 24 months	87.5	84.5
2 Rotavirus by 24 months	86.7	83.5
2 Hep A by 24 months	62.5	57.3
1+ Influenza by 24 months	25.8	29.3

†† 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 10-0-A: Georgia Immunization Study and District 10-0 Immunization Rates, 2000-2013



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

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Table 10-0-C: UTD Immunization Rates by Demographic Group, District 10, 2013

	State Avg. UTD by 24 months (%)	10—UTD by 24 months (%)	*10—UTD by end of d.c.[β] (%)*
District 10 Sample (n=128)	85.0	**92.2**	*97.7*
Maternal Race/Ethnicity[‡,†]			
White, Non-Hispanic (n=78)	86.4	**89.7**	*97.4*
White, Hispanic (n=7)	90.6	**100.0**	*100.0*
Black (n=27)	81.4	**92.6**	*96.3*
Unspecified, Hispanic (n=10)	90.5	**100.0**	*100.0*
Asian (n=2)	91.3	**100.0**	*100.0*
Multiracial (n=3)	86.7	**100.0**	*100.0*
Maternal Education[‡,†]			
Some College+ (n=62)	86.7	**93.5**	*98.4*
HS Diploma/GED (n=31)	82.1	**90.3**	*96.8*
9th-11th grade (n=25)	82.3	**88.0**	*96.0*
<9th grade (n=6)	90.1	**100.0**	*100.0*
WIC[θ]			
Non-WIC (n=57)	85.1	**91.2**	*96.5*
WIC (n=71)	84.9	**93.0**	*98.6*
Maternal Age[‡]			
<25 years (n=40)	82.9	**87.5**	*95.0*
25-34 years (n=72)	86.0	**95.8**	*98.6*
35+ years (n=15)	88.1	**86.7**	*100.0*
Maternal Marital Status[‡] & Repeat Birth[‡] Combination			
Married, First Birth (n=23)	89.2	**95.7**	*95.7*
Unmarried, First Birth (n=26)	87.9	**92.3**	*100.0*
Married, Repeat Birth (n=55)	85.5	**90.9**	*98.2*
Unmarried, Repeat Birth (n=24)	79.2	**91.7**	*95.8*
Gestational Age[‡]			
<37 weeks (n=16)	81.2	**100.0**	*100.0*
37+ weeks (n=112)	85.4	**91.1**	*97.3*
Provider Type[†]			
Public Sector Only (n=0)	81.3	**N/A**	*N/A*
Private Sector Only (n=96)	87.2	**92.7**	*96.9*
Both (n=0)	88.9	**N/A**	*N/A*
Payment at Birth[‡,†]			
Government Assist (n=61)	82.3	**88.5**	*96.7*
Private Insurance (n=47)	89.4	**95.7**	*97.9*
Other (n=2)	84.5	**100.0**	*100.0*
Self Pay (n=8)	84.2	**100.0**	*100.0*
Number of Providers[†]			
1 (n=68)	**86.2**	**89.7**	*95.6*
2 (n=36)	**85.1**	**97.2**	*100.0*
3+ (n=10)	**83.9**	**90.0**	*100.0*
Child's Gender[‡]			
Male (n=51)	**79.4**	**90.2**	*94.1*
Female (n=77)	**81.0**	**93.5**	*100.0*
Metro Residence[θ]			
Metro (n=96)	**84.5**	**91.7**	*96.9*
Non-metro (n=32)	**86.7**	**93.8**	*100.0*

UTD Immunization Rates by Demographic Group: In District 10-0, children of white, non-Hispanic mothers were less likely to be UTD by 24 months compared to children of black mothers (89.7% vs. 92.6%); these were the largest demographic groups in District 10-0. The sample sizes for other race/ethnicity groups were too small to draw any definite conclusions (Table 10-0-C).

Higher maternal education was associated with UTD coverage rates, although the sample size for the <9th grade maternal education group was too small to draw any conclusions (see Table 10-0-C).

Children of mothers 35+ years of age were the least often UTD by 24 months (86.7%). Children of married mothers with previous children were least often UTD by 24 months (90.9%) but still higher than the state demographic rate 85.5%).

In terms of payment at birth, District 10 children whose birth costs were covered by government-assisted insurance were UTD by 24 months less often than children whose birth was covered by private insurance (88.5% vs. 95.7%).

Children who received their vaccinations from two providers were more often UTD by 24 months than children with only one provider (97.2% vs. 89.7%).

Footnotes

β "d.c." is an abbreviation for "data collection"

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

† Indicates that the sample size numbers for this variable may not add up to the total District sample size because the information was missing in some cases.

Θ Please see Appendix C for additional information regarding the methodology in obtaining this variable.

* Indicates that there were less than 10 children in this demographic category.

Although many demographic-related disparities resolved by the end of data collection, some still remained (Table 10-0-C, *column in italics*).

Demographic Conclusions: In spite of the small sample size and inherent limitations of the data (Methods, p 13), 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 mothers with less than a college education
- Children of mothers 35+ years of age
- Children of married mothers with previous children
- Children with only one provider

Figure 10-0-B: Immunizations Administered in Private VS Public Sector, District 10-0, 2013 (n=2,327)

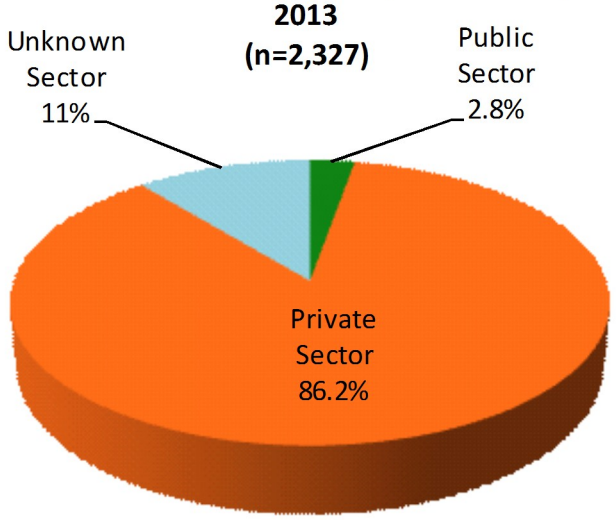

Table 10-0-D: Vaccine Antigen-Specific Immunization Coverage (%) by 24 months of age, District 10-0, 2006-2013

	2006	2007	2008	2010	2011	2012	2013
4 DTaP by 24 months	86.1	80.8	78.0	91.6	84.9	89.2	88.3
3 Polio by 24 months	93.1	86.5	87.1	97.7	96.0	95.8	100.0
1 MMR by 24 months	91.7	88.5	84.1	95.4	89.9	94.6	94.5
UTD Hib by 24 months	95.8	86.5	87.1	95.4	95.0	98.2	100.0
3 Hepatitis B by 24 months	93.1	88.5	87.9	97.0	95.0	95.2	99.2
1 Varicella by 24 months	91.7	89.4	85.6	97.0	93.9	95.8	95.3
UTD PCV by 24 months	76.4	79.8	84.1	97.7	95.0	97.0	87.5
2 Rotavirus	-	-	-	74.8	82.8	79.0	86.7
1 Influenza by 24 months	-	-	-	59.5	53.5	50.3	25.8

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 2010, decreased in 2011, and improved again in 2012 and 2013 (Table 10-0-D).

Among District 10-0 immunization rates by vaccine antigen in 2013, the UTD immunization rate for PCV was the lowest at 87.5%, markedly down from 97.0% in 2012. The UTD immunization rate for DTaP was the second-lowest at 88.3%, down from 89.2% in 2012.

Among District 10-0 immunization rates by vaccine antigen in 2013, the influenza vaccine coverage rate decreased from 50.3% in 2012 to 25.8% in 2013. This may reflect a data capture error, and is currently being investigated.

Vaccine Antigen-Specific Conclusions: The antigen specific data suggest that the and PCV and DTaP 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, 2013							
District	Final Sample (n)	Immunization Rate	1-Immunization Rate	Margin of Error*	95% Confidence Intervals		
1-1 Northwest (Rome)	90	84.4%	15.6%	3.8%	76.9%	-	91.9%
1-2 North Georgia (Dalton)	111	88.3%	11.7%	3.1%	82.3%	-	94.3%
2-0 North (Gainesville)	140	82.1%	17.9%	3.2%	75.7%	-	88.5%
3-1 Cobb-Douglas	176	79.0%	21.0%	3.1%	73.0%	-	85.0%
3-2 Fulton	205	83.9%	16.1%	2.6%	78.9%	-	88.9%
3-3 Clayton	137	67.9%	32.1%	4.0%	60.1%	-	75.7%
3-4 Gwinnett, Newton, Rockdale	183	86.3%	13.7%	2.5%	81.3%	-	91.3%
3-5 DeKalb	162	91.4%	8.6%	2.2%	87.1%	-	95.7%
4-0 LaGrange	163	84.7%	15.3%	2.8%	79.2%	-	90.2%
5-1 South Central (Dublin)	74	86.5%	13.5%	4.0%	78.7%	-	94.3%
5-2 North Central (Macon)	133	91.0%	9.0%	2.5%	86.1%	-	95.9%
6-0 East Central (Augusta)	145	86.2%	13.8%	2.9%	80.6%	-	91.8%
7-0 West Central (Columbus)	108	89.8%	10.2%	2.9%	84.1%	-	95.5%
8-1 South (Valdosta)	104	88.5%	11.5%	3.1%	82.4%	-	94.6%
8-2 Southwest (Albany)	136	87.5%	12.5%	2.8%	81.9%	-	93.1%
9-1 Coastal (Savannah)	171	79.5%	20.5%	3.1%	73.4%	-	85.6%
9-2 Southeast (Waycross)	123	86.2%	13.8%	3.1%	80.1%	-	92.3%
10-0 Northeast (Athens)	128	92.2%	7.8%	2.4%	87.6%	-	96.8%
Georgia	**2489**	**85.0%**	**15.0%**	**0.7%**	**83.6%**	**-**	**86.4%**

**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, 2013

District	Final Sample (n)	Immunization Rate	1-Immunization Rate	Margin of Error*	95% Confidence Intervals
1-1 Northwest (Rome)	90	91.1%	8.9%	3.0%	85.2% - 97.0%
1-2 North Georgia (Dalton)	111	92.8%	7.2%	2.5%	88.0% - 97.6%
2-0 North (Gainesville)	140	85.0%	15.0%	3.0%	79.1% - 90.9%
3-1 Cobb-Douglas	176	90.9%	9.1%	2.2%	86.7% - 95.1%
3-2 Fulton	205	87.8%	12.2%	2.3%	83.3% - 92.3%
3-3 Clayton	137	72.3%	27.7%	3.8%	64.8% - 79.8%
3-4 Gwinnett, Newton, Rockdale	183	91.3%	8.7%	2.1%	87.2% - 95.4%
3-5 DeKalb	162	93.8%	6.2%	1.9%	90.1% - 97.5%
4-0 LaGrange	163	89.0%	11.0%	2.5%	84.2% - 93.8%
5-1 South Central (Dublin)	74	95.9%	4.1%	2.3%	91.4% - 100.4%
5-2 North Central (Macon)	133	92.5%	7.5%	2.3%	88.0% - 97.0%
6-0 East Central (Augusta)	145	96.6%	3.4%	1.5%	93.7% - 99.5%
7-0 West Central (Columbus)	108	93.5%	6.5%	2.4%	88.9% - 98.1%
8-1 South (Valdosta)	104	93.3%	6.7%	2.5%	88.5% - 98.1%
8-2 Southwest (Albany)	136	94.1%	5.9%	2.0%	90.1% - 98.1%
9-1 Coastal (Savannah)	171	87.1%	12.9%	2.6%	82.1% - 92.1%
9-2 Southeast (Waycross)	123	93.5%	6.5%	2.2%	89.1% - 97.9%
10-0 Northeast (Athens)	128	97.7%	2.3%	1.3%	95.1% - 100.3%
Georgia	**2489**	**90.6%**	**9.4%**	**0.6%**	**89.5% - 91.7%**

**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	10.0%	Electronic Birth Records	Was combined with maternal ethnicity variable to form race/ethnicity category.
Maternal Ethnicity	5.7%	Electronic Birth Records	Only used in combination with white race and undefined race because the statewide sample had only 16 children for whom maternal race was defined, not "white", with Hispanic ethnicity.
Maternal Education	4.7%	Electronic Birth Records	Additional coding not needed; standard measure in GA Electronic Birth Records.
Maternal Age	0.3%	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.
Repeat Birth	0%	Electronic Birth Records	Additional coding not needed; standard measure in GA Electronic Birth Records. Combined with maternal marital status to limit possible effect modification or confounding between the two variables.
Gestational Age <37 weeks	0%	Electronic Birth Records	Additional coding not needed; standard measure in GA Electronic Birth Records.
Payment at Birth	9.4%	Electronic Birth Records	Additional coding was required to create "Government Assist" classification, combining all different codes involving Tricare, Medicare, and other Government -assisted programs.
Child's Gender	0%	Electronic Birth Records	Additional coding not needed; standard measure in GA Electronic Birth Records.
Provider Type	17.6%	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	14.4%	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.

Appendix B: Description of Demographic Variables, p2

Variable	Missing for State Sample (%)	Source	Additional Information
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.
Metro Residence	0%	2013 Rural-Urban Continuum Codes, Economic Research Service	R-U Continuum Code was assigned by child's residential county and later categorized as metro or non-metro using guide in below table.

	2013 Rural-Urban Continuum Codes*
	Metro Counties
1	Counties in metro areas of 1 million population or more
2	Counties in metro areas of 250,000 to 1 million population
3	Counties in metro areas of fewer than 250,000 population
	Non-Metro Counties
4	Urban population of 20,000 or more, adjacent to metro area
5	Urban population of 20,000 or more, not adjacent to metro area
6	Urban population 2,500 to 19,999, adjacent to metro area
7	Urban population 2,500 to 19,999, not adjacent to metro area
8	Completely rural or less than 2,500 population, adjacent to metro area
9	Completely rural or less than 2,500 population, not adjacent to metro area

* This coding scheme was originated in 1975 by David L. Brown, Fred K. Hines, and John M. Zimmer, then of the Economic Research Service, for a report *Social and Economic Characteristics of the Population in Metro and Nonmetro Counties: 1970*. It was updated after both the 1980 and 1990 censuses, with a somewhat more restrictive procedure for determining metro adjacency. The versions based on the 1970, 1980, and 1990 Censuses are all found on this ERS website: http://www.ers.usda.gov/briefing/rurality/ruralurbcon/

Appendix C: Reasons for Incomplete Immunization History

Appendix Table C: Frequency of Reasons for Incomplete Immunizations by End of Data Collection, Georgia, 2013

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

District	Sample	A	B	C	D	E	F	G	H	Total
1-1 Northwest (Rome)	90	0	0	0	0	4	0	2	2	**8**
1-2 North Georgia (Dalton)	111	4	0	0	2	1	0	1	0	**8**
2-0 North (Gainesville)	140	5	0	0	5	4	0	5	2	**21**
3-1 Cobb-Douglas	176	1	0	0	4	2	0	8	1	**16**
3-2 Fulton	205	0	0	0	1	3	2	1	18	**25**
3-3 Clayton	137	10	0	0	0	2	1	22	3	**38**
3-4 Gwinnett, Newton, Rockdale	183	1	0	0	4	1	2	4	4	**16**
3-5 DeKalb	162	1	0	0	0	0	0	3	6	**10**
4-0 LaGrange	163	0	0	0	2	3	0	10	3	**18**
5-1 South Central (Dublin)	74	0	0	0	1	0	0	1	1	**3**
5-2 North Central (Macon)	133	0	0	0	0	4	1	2	3	**10**
6-0 East Central (Augusta)	145	0	0	0	1	0	0	2	2	**5**
7-0 West Central (Columbus)	108	1	0	0	0	1	0	4	1	**7**
8-1 South (Valdosta)	104	0	0	0	1	2	0	0	4	**7**
8-2 Southwest (Albany)	136	0	1	0	0	2	0	4	1	**8**
9-1 Coastal (Savannah)	171	0	0	0	2	0	8	6	6	**22**
9-2 Southeast (Waycross)	123	0	0	0	0	1	1	3	3	**8**
10-0 Northeast (Athens)	128	0	0	0	0	2	0	0	1	**3**
Georgia	**2,489**	**23**	**1**	**0**	**23**	**32**	**15**	**78**	**61**	**233**

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

Table 1-1: Sample Population Demographics, District 1-1, 2013		
	District 1-1 Final %	State Final Sample %
District 1-1 Final Sample	n=90	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=62)	68.9	40.3
White, Hispanic (n=3)	3.3	3.8
Black (n=12)	13.3	38.2
Unspecified, Hispanic (n=5)	5.6	8.9
Asian (n=4)	4.4	2.8
Multiracial (n=1)	1.1	3.0
Maternal Education‡,†		
Some College+ (n=46)	51.1	44.3
HS Diploma/GED (n=25)	27.8	30.1
9th-11th grade (n=13)	14.4	16.1
<9th grade (n=4)	4.4	4.9
WIC$^{\theta}$		
Non-WIC (n=35)	38.9	34.8
WIC (n=55)	61.1	65.2
Metro Residence$^{\theta}$		
Metro (n=65)	72.2	78.0
Non-metro (n=25)	27.8	22.0
Maternal Marital Status‡		
Married (n=55)	61.1	48.1
Unmarried (n=35)	38.9	51.7
Repeat Birth‡		
First Child (n=42)	46.7	41.7
Repeat Birth (n=48)	53.3	58.3
Gestational Age‡		
<37 weeks (n=11)	12.2	10.9
37+ weeks (n=79)	87.8	89.1
Provider Type†,$^{\theta}$		
Public Sector Only (n=0)	0.0	1.9
Private Sector Only (n=72)	80.0	80.1
Both (n=1)	1.1	0.4
Payment at Birth‡		
Government Assist (n=46)	51.1	50.8
Private Insurance (n=34)	37.8	28.4
Other (n=5)	5.6	6.7
Self Pay (n=2)	2.2	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as white, non-Hispanic was greater for the District sample than for the overall state sample (68.9% vs. 40.3%), while the proportion of children with mothers classified as black was much lower (13.3% vs. 38.2%) (Table 1-1).

The District 1-1 sample had a higher proportion of children with mothers who had at least some college education compared to the state sample (51.1% vs. 44.3%).

A similar proportion of children were enrolled in WIC in the District sample compared to the proportion enrolled in WIC in the overall state sample (38.9% vs. 34.8%).

The District 1-1 sample had a greater proportion of children with married mothers when compared to the state sample (61.1% vs. 48.1%) as well as a greater proportion of children who were seen by only one provider (56.7% vs. 51.0%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 1-1 Final (%)	State Final Sample (%)
Child's Gender‡		
Male (n=47)	52.2	49.6
Female (n=43)	47.8	50.4
Number of Providers†,$^{\theta}$		
1 (n=51)	56.7	51.0
2 (n=23)	25.6	25.7
3+ (n=9)	10.0	9.0
Maternal Age‡		
<25 years (n=35)	38.9	38.8
25-34 years (n=44)	48.9	47.7
35+ years (n=10)	11.1	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 1-2: Sample Population Demographics, District 1-2,2013		
	District 1-2 Final %	State Final Sample %
District 1-2 Final Sample	n=111	*n=2,489*
Maternal Race/Ethnicity[‡,†]		
White, Non-Hispanic (n=79)	71.2	40.3
White, Hispanic (n=6)	5.4	3.8
Black (n=1)	0.9	38.2
Unspecified, Hispanic (n=15)	13.5	8.9
Asian (n=2)	1.8	2.8
Multiracial (n=2)	1.8	3.0
Maternal Education[‡,†]		
Some College+ (n=44)	39.6	44.3
HS Diploma/GED (n=22)	19.8	30.1
9th-11th grade (n=22)	19.8	16.1
<9th grade (n=7)	6.3	4.9
WIC[θ]		
Non-WIC (n=47)	42.3	34.8
WIC (n=64)	57.7	65.2
Metro Residence[†,θ]		
Metro (n=100)	90.1	78.0
Non-metro (n=11)	9.9	22.0
Maternal Marital Status [†,‡]		
Married (n=86)	77.5	48.1
Unmarried (n=25)	22.5	51.7
Repeat Birth[†,‡]		
First Child (n=40)	36.0	41.7
Repeat Birth (n=71)	64.0	58.3
Gestational Age[‡]		
<37 weeks (n=4)	3.6	10.9
37+ weeks (n=107)	96.4	89.1
Provider Type[†,θ]		
Public Sector Only (n=0)	0.0	1.9
Private Sector Only (n=93)	83.8	80.1
Both (n=0)	0.0	0.4
Payment at Birth[†,‡]		
Government Assist (n=32)	28.8	50.8
Private Insurance (n=46)	41.4	28.4
Other (n=11)	9.9	6.7
Self Pay (n=7)	6.3	4.6

Notable Demographic Findings: The proportion of children with mothers classified as white, non-Hispanic was greater for the District sample than for the overall state sample (71.2% vs. 40.3%), while the proportion of children with mothers classified as black was much lower (0.9% vs. 38.2%) (Table 1-2).

A smaller proportion of children in the District 1-2 sample had mothers with some college education compared to the state sample (39.6% vs. 44.3%) and mothers with a high school diploma/GED (19.8% vs. 30.1%). The proportion of children enrolled in WIC was less than that of the state sample (57.7% vs. 65.2%).

The District sample had a larger proportion of children whose mothers were married (77.5% vs. 48.1%), as well as a larger proportion of children who were born at a gestational age of 37+ weeks when compared to the overall state sample (96.4% vs. 89.1%).

For the District 1-2 sample, a larger proportion of children's birth costs were covered by private insurance (41.4% vs. 28.4%). A greater proportion of children were seen by only one provider in the District sample (64.0% vs. 51.0%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 1-2 Final (%)	State Final Sample (%)
Child's Gender[‡]		
Male (n=54)	48.6	49.6
Female (n=57)	51.4	50.4
Number of Providers[†,θ]		
1 (n=71)	64.0	51.0
2 (n=21)	18.9	25.7
3+ (n=9)	8.1	9.0
Maternal Age[‡]		
<25 years (n=33)	29.7	38.8
25-34 years (n=59)	53.1	47.7
35+ years (n=17)	15.3	12.5

θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 2-0: Sample Population Demographics, District 2-0, 2013		
	District 2-0 Final %	State Final Sample %
District 2-0 Final Sample	n=140	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=98)	70.0	40.3
White, Hispanic (n=20)	14.3	3.8
Black (n=4)	2.9	38.2
Unspecified, Hispanic (n=7)	5.0	8.9
Asian (n=4)	2.9	2.8
Multiracial (n=2)	1.4	3.0
Maternal Education‡,†		
Some College+ (n=69)	49.3	44.3
HS Diploma/GED (n=39)	27.9	30.1
9th-11th grade (n=8)	5.7	16.1
<9th grade (n=11)	7.9	4.9
WIC$^{\theta}$		
Non-WIC (n=50)	35.7	34.8
WIC (n=90)	64.3	65.2
Metro Residence$^{\theta}$		
Metro (n=104)	74.3	78.0
Non-metro (n=36)	25.7	22.0
Maternal Marital Status‡		
Married (n=88)	62.9	48.1
Unmarried (n=51)	36.4	51.7
Repeat Birth‡		
First Child (n=62)	44.3	41.7
Repeat Birth (n=78)	55.7	58.3
Gestational Age‡		
<37 weeks (n=15)	10.7	10.9
37+ weeks (n=125)	89.3	89.1
Provider Type†		
Public Sector Only (n=27)	19.3	1.9
Private Sector Only (n=83)	59.3	80.1
Both (n=0)	0.0	0.4
Payment at Birth†,‡		
Government Assist (n=61)	43.6	50.8
Private Insurance (n=45)	32.1	28.4
Other (n=20)	14.3	6.7
Self Pay (n=7)	5.0	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as white, non-Hispanic was greater for the District sample than for the overall state sample as a whole(70.0% vs. 40.3%) while the proportion of children with mothers classified as black was much lower (2.9% vs. 38.2%) (Table 2-0).

The District sample had a higher proportion of children whose mothers had some college education than the state sample (49.3% vs. 44.3%). The proportion of children enrolled in WIC was similar to the state sample (64.3% vs. 65.2%).

There was a larger proportion of children of married mothers in the District than the state sample (62.9% vs. 48.1%). Similarly, there was a larger proportion of children in the District whose provider was in the public sector than the state sample (19.3% vs. 1.9%).

There was a larger proportion of children whose mothers were 25-34 years of age in the District sample than the state sample (57.1% vs. 47.7%).

Other demographic measures for this District were similar to findings for the state sample.

	District 2-0 Final (%)	State Final Sample (%)
Child's Gender‡		
Male (n=68)	48.6	49.6
Female (n=72)	51.4	50.4
Number of Providers†		
1 (n=77)	55.0	51.0
2 (n=36)	25.7	25.7
3+ (n=6)	4.3	9.0
Maternal Age‡		
<25 years (n=42)	30.0	38.8
25-34 years (n=80)	57.1	47.7
35+ years (n=18)	12.9	12.5

Θ Please see Appendix **B** for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 3-1: Sample Population Demographics, District 3-1, 2013		
	District 3-1 Final %	State Final Sample %
District 3-1 Final Sample	n=176	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=77)	43.8	40.3
White, Hispanic (n=14)	8.0	3.8
Black (n=52)	29.5	38.2
Unspecified, Hispanic (n=13)	7.4	8.9
Asian (n=7)	4.0	2.8
Multiracial (n=2)	1.1	3.0
Maternal Education‡,†		
Some College+ (n=91)	51.7	44.3
HS Diploma/GED (n=47)	26.7	30.1
9th-11th grade (n=16)	9.1	16.1
<9th grade (n=9)	5.1	4.9
WIC$^{\theta}$		
Non-WIC (n=74)	42.0	34.8
WIC (n=102)	58.0	65.2
Metro Residence$^{\theta}$		
Metro (n=176)	100.0	78.0
Non-metro (n=0)	0.0	22.0
Maternal Marital Status‡		
Married (n=104)	59.1	48.1
Unmarried (n=72)	40.9	51.7
Repeat Birth‡		
First Child (n=66)	37.5	41.7
Repeat Birth (n=110)	62.5	58.3
Gestational Age‡		
<37 weeks (n=18)	10.2	10.9
37+ weeks (n=158)	89.8	89.1
Provider Type†		
Public Sector Only (n= 0)	0.0	1.9
Private Sector Only (n= 134)	76.1	80.1
Both (n= 0)	0.0	0.4
Payment at Birth†,‡		
Government Assist (n=68)	38.6	50.8
Private Insurance (n=82)	46.6	28.4
Other (n=13)	7.4	6.7
Self Pay (n=3)	1.7	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as white, non-Hispanic was similar between the District sample and the overall state sample(43.8% vs. 40.3%) while the proportion of children with mothers classified as black was much lower (29.5% vs. 38.2%) (Table 3-1).

A larger proportion of children in the District 3-1 sample had mothers with some college education than the state sample (51.7% vs. 44.3%).

The District sample had a smaller proportion of children enrolled in WIC than the state sample overall (58.0% vs. 65.2%).

A larger proportion of children in the District 3-1 sample had married mothers than the state sample (59.1% vs. 48.1%).

The District sample had a higher proportion of mothers who used private insurance as their payment for birth costs than the state sample (46.6%vs. 28.4%). The District also had a higher proportion of mothers aged 25-34 years than the state (56.8% vs. 47.7%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 3-1 Final (%)	State Final Sample (%)
Child's Gender‡		
Male (n=99)	56.3	49.6
Female (n=77)	43.7	50.4
Number of Providers†		
1 (n=89)	50.6	51.0
2 (n=45)	25.6	25.7
3+ (n=15)	8.5	9.0
Maternal Age‡		
<25 years (n=39)	22.2	38.8
25-34 years (n=100)	56.8	47.7
35+ years (n=37)	21.0	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 3-2: Sample Population Demographics, District 3-2, 2013		
	District 3-2 Final %	State Final Sample %
District 3-2 Final Sample	n=205	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=49)	23.9	40.3
White, Hispanic (n=1)	0.5	3.8
Black (n=120)	58.5	38.2
Unspecified, Hispanic (n=13)	6.3	8.9
Asian (n=9)	4.4	2.8
Multiracial (n=0)	N/A	3.0
Maternal Education‡,†		
Some College+ (n=111)	54.1	44.3
HS Diploma/GED (n=47)	22.9	30.1
9th-11th grade (n=30)	14.6	16.1
<9th grade (n=6)	2.9	4.9
WIC$^{\theta}$		
Non-WIC (n=92)	44.9	34.8
WIC (n=113)	55.1	65.2
Metro Residence$^{\theta}$		
Metro (n=205)	100.0	78.0
Non-metro (n=0)	0.0	22.0
Maternal Marital Status‡		
Married (n=99)	48.3	48.1
Unmarried (n=106)	51.7	51.7
Repeat Birth‡		
First Child (n=84)	41.0	41.7
Repeat Birth (n=121)	59.0	58.3
Gestational Age‡		
<37 weeks (n=18)	8.8	10.9
37+ weeks (n=187)	91.2	89.1
Provider Type†		
Public Sector Only (n=0)	0.0	1.9
Private Sector Only (n=166)	81.0	80.1
Both (n=0)	0.0	0.4
Payment at Birth†,‡		
Government Assist (n=73)	35.6	50.8
Private Insurance (n=77)	37.6	28.4
Other (n=31)	15.1	6.7
Self Pay (n=10)	4.9	4.6

Notable Demographic Findings: The proportion of children with mothers classified as black was greater for the District sample than for the overall state sample (58.5% vs. 38.2%) (Table 3-2). The proportion of children with mothers classified as white, non-Hispanic was smaller for the District sample than for the overall state sample (23.9% vs. 40.3%)

A larger proportion of children in the District 3-2 sample had mothers with some college education than the state sample (54.1% vs. 44.3%). A smaller proportion of children were enrolled in WIC than the total state sample (55.1% vs. 65.2%).

The District 3-2 sample had a larger proportion of children whose birth costs were covered by private insurance (37.6% vs. 28.4%) and a smaller proportion covered using government assistance (35.6% vs. 50.8%).

The District also had a greater proportion of children who were seen by only one provider (62.4% vs. 51.0%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 3-2 Final (%)	State Final Sample (%)
Child's Gender‡		
Male (n=107)	52.2	49.6
Female (n=98)	47.8	50.4
Number of Providers†		
1 (n=128)	62.4	51.0
2 (n=42)	20.5	25.7
3+ (n=9)	4.4	9.0
Maternal Age‡		
<25 years (n=62)	30.2	38.8
25-34 years (n=104)	50.7	47.7
35+ years (n=39)	19.0	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 3-3: Sample Population Demographics, District 3-3, 2013		
	District 3-3 Final %	State Final Sample %
District 3-3 Final Sample	n=137	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=9)	6.6	40.3
White, Hispanic (n=1)	0.7	3.8
Black (n=89)	65.0	38.2
Unspecified, Hispanic (n=30)	21.9	8.9
Asian (n=4)	2.9	2.8
Multiracial (n=0)	0.0	3.0
Maternal Education‡,†		
Some College+ (n=48)	35.0	44.3
HS Diploma/GED (n=47)	34.3	30.1
9th-11th grade (n=26)	19.0	16.1
<9th grade (n=13)	9.5	4.9
WIC$^{\theta}$		
Non-WIC (n=33)	24.1	34.8
WIC (n=104)	75.9	65.2
Metro Residence†,$^{\theta}$		
Metro (n=137)	100.0	78.0
Non-metro (n=0)	0.0	22.0
Maternal Marital Status†,‡		
Married (n=39)	28.5	48.1
Unmarried (n=97)	70.8	51.7
Repeat Birth†,‡		
First Child (n=39)	28.5	41.7
Repeat Birth (n=98)	71.5	58.3
Gestational Age‡		
<37 weeks (n=14)	10.2	10.9
37+ weeks (n=123)	89.8	89.1
Provider Type†		
Public Sector Only (n=1)	0.7	1.9
Private Sector Only (n=105)	76.6	80.1
Both (n=0)	0.0	0.4
Payment at Birth†,‡		
Government Assist (n=80)	58.4	50.8
Private Insurance (n=12)	8.8	28.4
Other (n=24)	17.5	6.7
Self Pay (n=12)	8.8	4.6

Notable Demographic Findings: The proportion of children with mothers classified as black was greater for the District sample than for the overall state sample (65.0% vs. 38.2%), as was the proportion of children with mothers classified as unspecified, Hispanic (21.9% vs. 8.9%) (Table 3-3). The proportion of children with mothers classified as white, non-Hispanic was much smaller for the District sample than for the overall state sample (6.6% vs. 40.3%)

A smaller proportion of children in the District 3-3 sample had mothers with some college education than the state sample (35.0% vs. 44.3%).

The proportion of children that were enrolled in WIC in the District sample was larger than the proportion in the total state sample (75.9% vs. 65.2%). Similarly, the proportion of children of mothers with repeat births in the District was higher than that of the state (71.5% vs. 58.3%).

The District 3-2 sample had a smaller proportion of children whose birth costs were covered by private insurance (8.8% vs. 28.4%) as well as a smaller proportion of children who were seen by only one provider (40.1% vs. 51.0%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 3-3 Final %	State Final Sample %
Child's Gender‡		
Male (n=80)	58.4	49.6
Female (n=57)	41.6	50.4
Number of Providers†		
1 (n=55)	40.1	51.0
2 (n=36)	26.3	25.7
3+ (n=14)	10.2	9.0
Maternal Age‡		
<25 years (n=50)	36.5	38.8
25-34 years (n=73)	53.3	47.7
35+ years (n=14)	10.2	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 3-4: Sample Population Demographics, District 3-4, 2013		
	District 3-4 Final %	State Final Sample %
District 3-4 Final Sample	n=183	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=51)	27.9	40.3
White, Hispanic (n=14)	7.7	3.8
Black (n=57)	31.1	38.2
Unspecified, Hispanic (n=19)	10.4	8.9
Asian (n=18)	9.8	2.8
Multiracial (n=7)	3.8	3.0
Maternal Education‡,†		
Some College+ (n=91)	49.7	44.3
HS Diploma/GED (n=53)	29.0	30.1
9th-11th grade (n=11)	6.0	16.1
<9th grade (n=11)	6.0	4.9
WIC$^{\theta}$		
Non-WIC (n=75)	41.0	34.8
WIC (n=108)	59.0	65.2
Metro Residence$^{\theta}$		
Metro (n=183)	100.0	78.0
Non-metro (n=0)	0.0	22.0
Maternal Marital Status‡		
Married (n=116)	63.4	48.1
Unmarried (n=67)	36.6	51.7
Repeat Birth‡		
First Child (n=69)	37.7	41.7
Repeat Birth (n=114)	62.3	58.3
Gestational Age‡		
<37 weeks (n=20)	10.9	10.9
37+ weeks (n=163)	89.1	89.1
Provider Type†		
Public Sector Only (n=2)	1.1	1.9
Private Sector Only (n=148)	80.9	80.1
Both (n=1)	0.5	0.4
Payment at Birth†,‡		
Government Assist (n=56)	30.6	50.8
Private Insurance (n=61)	33.3	28.4
Other (n=17)	9.3	6.7
Self Pay (n=9)	4.9	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as Asian was greater for the District sample than for the overall state sample (9.8% vs. 2.8%). The proportion of children whose mothers were classified as white, non-Hispanic was smaller for the District sample than for the state sample (27.9% vs. 40.3%) (Table 3-4).

The proportion of children that were enrolled in WIC in the District sample was slightly smaller than the proportion enrolled in WIC in the total state sample (59.0% vs. 65.2%).

The District sample had a larger proportion of children whose mothers were married than the state sample (63.4% vs. 48.1%). A much lower proportion of children were covered by government assistance at the time of birth than the state sample (30.6% vs. 50.8%).

The District 3-4 sample had a much larger proportion of mothers over 35 years of age than the state sample (22.4% vs. 12.5%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 3-4 Final %	State Final Sample %
Child's Gender‡		
Male (n=78)	42.6	49.6
Female (n=105)	57.4	50.4
Number of Providers†		
1 (n=99)	54.1	51.0
2 (n=37)	20.2	25.7
3+ (n=16)	8.7	9.0
Maternal Age‡		
<25 years (n=43)	23.5	38.8
25-34 years (n=99)	54.1	47.7
35+ years (n=41)	22.4	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 3-5: Sample Population Demographics, District 3-5, 2013		
	District 3-5 Final %	State Final Sample %
District 3-5 Final Sample	n=162	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=28)	17.3	40.3
White, Hispanic (n=1)	0.6	3.8
Black (n=82)	50.6	38.2
Unspecified, Hispanic (n=25)	15.4	8.9
Asian (n=10)	6.2	2.8
Multiracial (n=3)	1.9	3.0
Maternal Education‡,†		
Some College+ (n=69)	42.6	44.3
HS Diploma/GED (n=46)	28.4	30.1
9th-11th grade (n=25)	15.4	16.1
<9th grade (n=15)	9.3	4.9
WIC$^{\theta}$		
Non-WIC (n=61)	37.7	34.8
WIC (n=101)	62.3	65.2
Metro Residence$^{\theta}$		
Metro (n=162)	100.0	78.0
Non-metro (n=0)	0.0	22.0
Maternal Marital Status‡		
Married (n=82)	50.6	48.1
Unmarried (n=80)	49.4	51.7
Repeat Birth‡		
First Child (n=82)	50.6	41.7
Repeat Birth (n=80)	49.4	58.3
Gestational Age‡		
<37 weeks (n=20)	12.3	10.9
37+ weeks (n=142)	87.7	89.1
Provider Type†		
Public Sector Only (n=2)	1.2	1.9
Private Sector Only (n=129)	79.6	80.1
Both (n=2)	1.2	0.4
Payment at Birth‡		
Government Assist (n=76)	46.9	50.8
Private Insurance (n=47)	29.0	28.4
Other (n=12)	7.4	6.7
Self Pay (n=19)	11.7	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as white, non-Hispanic was much smaller for the District sample than for the overall state sample (17.3% vs. 40.3%). The proportion of children whose mothers were classified as black was greater for the District sample than for the state sample (50.6% vs. 38.2%) (Table 3-5).

The proportion of children that were enrolled in WIC in the District sample was similar to the proportion enrolled in WIC in the total state sample (62.3% vs. 65.2%).

The District sample had a larger proportion of first-born children compared to the state sample (50.6% vs. 41.7%).

The District sample had a similar proportion of children whose birth costs were covered by private insurance (29.0% vs. 28.4%) as well as a smaller proportion of children who were seen by only one provider (42.6% vs. 51.0%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 3-5 Final %	State Final Sample %
Child's Gender‡		
Male (n=73)	45.1	49.6
Female (n=89)	54.9	50.4
Number of Providers†		
1 (n=69)	42.6	51.0
2 (n=46)	28.4	25.7
3+ (n=19)	11.7	9.0
Maternal Age‡		
<25 years (n=58)	35.8	38.8
25-34 years (n=74)	45.7	47.7
35+ years (n=29)	17.9	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 4-0: Sample Population Demographics, District 4-0, 2013		
	District 4-0 Final %	State Final Sample %
District 4-0 Final Sample	n=163	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=81)	49.7	40.3
White, Hispanic (n=0)	0.0	3.8
Black (n=61)	37.4	38.2
Unspecified, Hispanic (n=9)	5.5	8.9
Asian (n=2)	1.2	2.8
Multiracial (n=2)	1.2	3.0
Maternal Education‡,†		
Some College+ (n=82)	50.3	44.3
HS Diploma/GED (n=43)	26.4	30.1
9th-11th grade (n=24)	14.7	16.1
<9th grade (n=3)	1.8	4.9
WIC[θ]		
Non-WIC (n=65)	39.9	34.8
WIC (n=98)	60.1	65.2
Metro Residence[θ]		
Metro (n=139)	85.3	78.0
Non-metro (n=24)	14.7	22.0
Maternal Marital Status‡		
Married (n=80)	49.1	48.1
Unmarried (n=83)	50.9	51.7
Repeat Birth‡		
First Child (n=74)	45.4	41.7
Repeat Birth (n=89)	54.6	58.3
Gestational Age‡		
<37 weeks (n=14)	8.6	10.9
37+ weeks (n=149)	91.4	89.1
Provider Type†		
Public Sector Only (n=3)	1.8	1.9
Private Sector Only (n=134)	82.2	80.1
Both (n=0)	0.0	0.4
Payment at Birth‡		
Government Assist (n=79)	48.5	50.8
Private Insurance (n=63)	38.7	28.4
Other (n=8)	4.9	6.7
Self Pay (n=1)	0.6	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as white, non-Hispanic was greater for the District sample than for the overall state sample (49.7% vs. 40.3%) (Table 4-0).

The District sample had a higher proportion of children whose mothers had some college education than the state sample (50.3% vs. 44.3%).

The proportion of children that were enrolled in WIC in the District sample was slightly less than the proportion enrolled in WIC in the total state sample (60.1% vs. 65.2%). In addition, the District sample had a greater proportion of children whose birth costs were covered by private insurance (38.7% vs. 28.4%) and a slightly smaller proportion of children whose births were covered by government assistance (48.5% vs. 50.8%) than the state sample.

The District also had a larger proportion of children whose provider was in the private sector (72.9% vs. 66.7%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 4-0 Final %	State Final Sample %
Child's Gender‡		
Male (n=77)	47.2	49.6
Female (n=86)	52.8	50.4
Number of Providers†		
1 (n=91)	55.8	51.0
2 (n=38)	23.3	25.7
3+ (n=17)	10.4	9.0
Maternal Age‡		
<25 years (n=71)	43.6	38.8
25-34 years (n=73)	44.8	47.7
35+ years (n=19)	11.7	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 5-1: Sample Population Demographics, District 5-1, 2013		
	District 5-1 Final %	State Final Sample %
District 5-1 Final Sample	n=74	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=41)	55.4	40.3
White, Hispanic (n=1)	1.4	3.8
Black (n=24)	32.4	38.2
Unspecified, Hispanic (n=3)	4.1	8.9
Asian (n=1)	1.4	2.8
Multiracial (n=3)	4.1	3.0
Maternal Education‡,†		
Some College+ (n=26)	35.1	44.3
HS Diploma/GED (n=27)	36.5	30.1
9th-11th grade (n=13)	17.6	16.1
<9th grade (n=3)	4.1	4.9
WIC$^{\theta}$		
Non-WIC (n=20)	27.0	34.8
WIC (n=54)	73.0	65.2
Metro Residence$^{\theta}$		
Metro (n=3)	4.1	78.0
Non-metro (n=71)	95.9	22.0
Maternal Marital Status‡		
Married (n=33)	44.6	48.1
Unmarried (n=40)	54.1	51.7
Repeat Birth‡		
First Child (n=43)	58.1	41.7
Repeat Birth (n=31)	41.9	58.3
Gestational Age‡		
<37 weeks (n=9)	12.2	10.9
37+ weeks (n=65)	87.8	89.1
Provider Type†		
Public Sector Only (n=0)	0.0	1.9
Private Sector Only (n=66)	89.2	80.1
Both (n=0)	0.0	0.4
Payment at Birth‡		
Government Assist (n=51)	68.9	50.8
Private Insurance (n=18)	24.3	28.4
Other (n=4)	5.4	6.7
Self Pay (n=0)	0.0	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as white, non-Hispanic was greater for the District sample than for the overall state sample (55.4 vs. 40.3%). (Table 5-1).

The District sample had a smaller proportion of children whose mothers had some college education than the overall state sample (35.1% vs. 44.3%).

The proportion of children that were enrolled in WIC in the District sample was larger when compared to the proportion in the total state sample (73.0% vs. 65.2%). In addition, the District sample had a higher proportion of mothers for whom this child was their first (58.1% vs. 41.7%).

The District sample had a larger proportion of children whose birth costs were covered by government assistance (68.9% vs. 50.8%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 5-1 Final %	State Final Sample %
Child's Gender‡		
Male (n=38)	51.4	49.6
Female (n=36)	48.6	50.4
Number of Providers†		
1 (n=38)	51.4	51.0
2 (n=20)	27.0	25.7
3+ (n=9)	12.2	9.0
Maternal Age‡		
<25 years (n=46)	62.2	38.8
25-34 years (n=24)	32.4	47.7
35+ years (n=4)	5.4	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 5-2: Sample Population Demographics, District 5-2, 2013		
	District 5-2 Final %	State Final Sample %
District 5-2 Final Sample	n=133	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=49)	36.8	40.3
White, Hispanic (n=4)	3.0	3.8
Black (n=76)	57.1	38.2
Unspecified, Hispanic (n=1)	0.8	8.9
Asian (n=1)	0.8	2.8
Multiracial (n=0)	0.0	3.0
Maternal Education‡,†		
Some College+ (n=57)	42.9	44.3
HS Diploma/GED (n=46)	34.6	30.1
9th-11th grade (n=27)	20.3	16.1
<9th grade (n=0)	0.0	4.9
WIC$^{\Theta}$		
Non-WIC (n=36)	27.1	34.8
WIC (n=97)	72.9	65.2
Metro Residence$^{\Theta}$		
Metro (n=104)	78.2	78.0
Non-metro (n=29)	21.8	22.0
Maternal Marital Status‡		
Married (n=51)	38.3	48.1
Unmarried (n=82)	61.7	51.7
Repeat Birth‡		
First Child (n=57)	42.9	41.7
Repeat Birth (n=76)	57.1	58.3
Gestational Age‡		
<37 weeks (n=18)	13.5	10.9
37+ weeks (n=115)	86.5	89.1
Provider Type†		
Public Sector Only (n=0)	0.0	1.9
Private Sector Only (n=114)	85.7	80.1
Both (n=0)	0.0	0.4
Payment at Birth‡		
Government Assist (n=87)	65.4	50.8
Private Insurance (n=37)	27.8	28.4
Other (n=2)	1.5	6.7
Self Pay (n=1)	0.8	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as black was greater for the District sample than for the overall state sample (57.1% vs. 38.2%) (Table 5-2).

The proportion of children that were enrolled in WIC in the District sample was higher when compared to the proportion in the total state sample (72.9% vs. 65.2%).

In District 5-2, a smaller proportion of children whose mothers were married compared to that of the state sample (38.3% vs. 48.1%).

A larger proportion of children in the District sample were covered through government assistance at birth than for the state sample as a whole (65.4% vs. 50.8%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 5-2 Final %	State Final Sample %
Child's Gender‡		
Male (n=72)	54.1	49.6
Female (n=61)	45.9	50.4
Number of Providers†		
1 (n=73)	54.9	51.0
2 (n=33)	24.8	25.7
3+ (n=6)	4.5	9.0
Maternal Age‡		
<25 years (n=64)	48.1	38.8
25-34 years (n=50)	37.6	47.7
35+ years (n=19)	14.3	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 6-0: Sample Population Demographics, District 6-0, 2013		
	District 6-0 Final %	State Final Sample %
District 6-0 Final Sample	n=145	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=57)	39.3	40.3
White, Hispanic (n=3)	2.1	3.8
Black (n=75)	51.7	38.2
Unspecified, Hispanic (n=4)	2.8	8.9
Asian (n=2)	1.4	2.8
Multiracial (n=2)	1.4	3.0
Maternal Education‡,†		
Some College+ (n=49)	33.8	44.3
HS Diploma/GED (n=65)	44.8	30.1
9th-11th grade (n=25)	17.2	16.1
<9th grade (n=4)	2.8	4.9
WIC$^{\theta}$		
Non-WIC (n=37)	25.5	34.8
WIC (n=108)	74.5	65.2
Metro Residence$^{\theta}$		
Metro (n=107)	73.8	78.0
Non-metro (n=38)	26.2	22.0
Maternal Marital Status‡		
Married (n=48)	33.1	48.1
Unmarried (n=97)	66.9	51.7
Repeat Birth‡		
First Child (n=67)	46.2	41.7
Repeat Birth (n=78)	53.8	58.3
Gestational Age‡		
<37 weeks (n=15)	10.3	10.9
37+ weeks (n=130)	89.7	89.1
Provider Type†		
Public Sector Only (n=2)	1.4	1.9
Private Sector Only (n=118)	81.4	80.1
Both (n=2)	1.4	0.4
Payment at Birth‡		
Government Assist (n=94)	64.8	50.8
Private Insurance (n=33)	22.8	28.4
Other (n=1)	0.7	6.7
Self Pay (n=3)	2.1	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as black was much higher for the District than for the overall state sample (51.7% vs. 38.2%) (Table 6-0) and slightly lower for white non-Hispanic and white Hispanic mothers (39.3% vs. 40.3%) and (2.1% vs. 3.8%) respectively.

The District 6-0 sample had a smaller proportion of mothers with some college+ education (33.8% vs. 44.3%). The proportion of children that were enrolled in WIC in the District sample was higher when compared to the proportion in the total state sample (74.5% vs. 65.2%).

In addition, the District sample had a smaller proportion of children whose mothers were married than the state sample (33.1% vs. 48.1%) and a much higher number of children whose birth costs were covered through government assistance (64.8% vs. 50.8%).

The District sample had a smaller proportion of children who were seen by only one provider (44.1% vs. 51.0%). Similarly, there was a larger proportion of children with mothers aged less than 25 years of age (55.2% vs. 38.8%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 6-0 Final %	State Final Sample %
Child's Gender‡		
Male (n=71)	49.0	49.6
Female (n=74)	51.0	50.4
Number of Providers†		
1 (n=64)	44.1	51.0
2 (n=45)	31.0	25.7
3+ (n=15)	10.3	9.0
Maternal Age‡		
<25 years (n=80)	55.2	38.8
25-34 years (n=58)	40.0	47.7
35+ years (n=7)	4.8	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 7-0: Sample Population Demographics, District 7-0, 2013		
	District 7-0 Final %	State Final Sample %
District 7-0 Final Sample	n=108	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=41)	38.0	40.3
White, Hispanic (n=1)	0.9	3.8
Black (n=61)	56.5	38.2
Unspecified, Hispanic (n=3)	2.8	8.9
Asian (n=0)	0.0	2.8
Multiracial (n=1)	0.9	3.0
Maternal Education‡,†		
Some College+ (n=45)	41.7	44.3
HS Diploma/GED (n=39)	36.1	30.1
9th-11th grade (n=19)	17.6	16.1
<9th grade (n=3)	2.8	4.9
WIC$^{\theta}$		
Non-WIC (n=28)	25.9	34.8
WIC (n=80)	74.1	65.2
Metro Residence$^{\theta}$		
Metro (n=72)	66.7	78.0
Non-metro (n=36)	33.3	22.0
Maternal Marital Status‡		
Married (n=32)	29.6	48.1
Unmarried (n=75)	69.4	51.7
Repeat Birth‡		
First Child (n=45)	41.7	41.7
Repeat Birth (n=63)	58.3	58.3
Gestational Age‡		
<37 weeks (n=10)	9.3	10.9
37+ weeks (n=98)	90.7	89.1
Provider Type†		
Public Sector Only (n=0)	0.0	1.9
Private Sector Only (n=99)	91.7	80.1
Both (n=0)	0.0	0.4
Payment at Birth‡		
Government Assist (n=67)	62.0	50.8
Private Insurance (n=21)	19.4	28.4
Other (n=10)	9.3	6.7
Self Pay (n=6)	5.6	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as black was greater for the District sample than for the overall state sample (56.5% vs. 38.2%) (Table 7-0).

The proportion of children that were enrolled in WIC in the District sample was higher than the proportion in the total state sample (74.1% vs. 65.2%).

The District sample also had a larger proportion of children with unmarried mothers than the overall state sample (69.4% vs. 51.7%).

The District 7-0 sample had a smaller proportion of children whose births were covered by private insurance compared to the state sample (19.4% vs. 28.4%) as well as a smaller proportion of children who were seen by only one provider (45.4% vs. 51.0%).

The District 7-0 sample had a larger proportion of children with mothers less than 25 years of age (51.9% vs. 38.8%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 7-0 Final %	State Final Sample %
Child's Gender‡		
Male (n=56)	51.9	49.6
Female (n=52)	48.1	50.4
Number of Providers†		
1 (n=49)	45.4	51.0
2 (n=27)	25.0	25.7
3+ (n=13)	12.0	9.0
Maternal Age‡		
<25 years (n=56)	51.9	38.8
25-34 years (n=44)	40.7	47.7
35+ years (n=8)	7.4	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 8-1: Sample Population Demographics, District 8-1, 2013		
	District 8-1 Final %	State Final Sample %
District 8-1 Final Sample	n=104	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=35)	33.7	40.3
White, Hispanic (n=1)	1.0	3.8
Black (n=37)	35.6	38.2
Unspecified, Hispanic (n=8)	7.7	8.9
Asian (n=0)	0.0	2.8
Multiracial (n=0)	0.0	3.0
Maternal Education‡,†		
Some College+ (n=42)	40.4	44.3
HS Diploma/GED (n=41)	39.4	30.1
9th-11th grade (n=16)	15.4	16.1
<9th grade (n=5)	4.8	4.9
WIC$^{\Theta}$		
Non-WIC (n=32)	30.8	34.8
WIC (n=72)	69.2	65.2
Metro Residence$^{\Theta}$		
Metro (n=54)	51.9	78.0
Non-metro (n=50)	48.1	22.0
Maternal Marital Status‡		
Married (n=48)	46.2	48.1
Unmarried (n=56)	53.8	51.7
Repeat Birth‡		
First Child (n=38)	36.5	41.7
Repeat Birth (n=66)	63.5	58.3
Gestational Age‡		
<37 weeks (n=15)	14.4	10.9
37+ weeks (n=89)	85.6	89.1
Provider Type†		
Public Sector Only (n=0)	0.0	1.9
Private Sector Only (n=92)	88.5	80.1
Both (n=0)	0.0	0.4
Payment at Birth‡		
Government Assist (n=78)	75.0	50.8
Private Insurance (n=23)	22.1	28.4
Other (n=0)	0.0	6.7
Self Pay (n=1)	1.0	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as black was slightly smaller for the District sample than for the overall state sample (35.6% vs. 38.2%) (Table 8-1).

A larger proportion of children in the District sample had mothers with a high school diploma or GED than the state sample (39.4% vs. 30.1%). The proportion of children that were enrolled in WIC in the District sample was slightly higher than the proportion in the total state sample (69.2% vs. 65.2%).

The District sample had a larger proportion of children who were repeat births than for the state sample (63.5% vs. 58.3%).

The District sample had a higher number of children who were covered through government assistance at the time of birth (75.0% vs. 50.8%) as well as a greater proportion of children who were seen by only one provider (60.6% vs. 51.0%). In addition, the District sample had a higher number of children with mothers between 25-34 years of age (62.5% vs. 47.7%) than the state sample.

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 8-1 Final %	State Final Sample %
Child's Gender‡		
Male (n=52)	50.0	49.6
Female (n=52)	50.0	50.4
Number of Providers†		
1 (n=63)	60.6	51.0
2 (n=25)	24.0	25.7
3+ (n=5)	4.8	9.0
Maternal Age‡		
<25 years (n=34)	32.7	38.8
25-34 years (n=65)	62.5	47.7
35+ years (n=5)	4.8	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 8-2: Sample Population Demographics, District 8-2, 2013		
	District 8-2 Final %	State Final Sample %
District 8-2 Final Sample	n=136	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=42)	30.9	40.3
White, Hispanic (n=5)	3.7	3.8
Black (n=76)	55.9	38.2
Unspecified, Hispanic (n=7)	5.1	8.9
Asian (n=0)	0.0	2.8
Multiracial (n=1)	0.7	3.0
Maternal Education‡,†		
Some College+ (n=57)	41.9	44.3
HS Diploma/GED (n=35)	25.7	30.1
9th-11th grade (n=33)	24.3	16.1
<9th grade (n=9)	6.6	4.9
WIC$^{\theta}$		
Non-WIC (n=44)	32.4	34.8
WIC (n=92)	67.6	65.2
Metro Residence$^{\theta}$		
Metro (n=66)	48.5	78.0
Non-metro (n=70)	51.5	22.0
Maternal Marital Status‡		
Married (n=47)	34.6	48.1
Unmarried (n=88)	64.7	51.7
Repeat Birth‡		
First Child (n=64)	47.1	41.7
Repeat Birth (n=72)	52.9	58.3
Gestational Age‡		
<37 weeks (n=16)	11.8	10.9
37+ weeks (n=120)	88.2	89.1
Provider Type†		
Public Sector Only (n=1)	0.7	1.9
Private Sector Only (n=113)	83.1	80.1
Both (n=1)	0.7	0.4
Payment at Birth‡†		
Government Assist (n=51)	37.5	50.8
Private Insurance (n=9)	6.6	28.4
Other (n=0)	0.0	6.7
Self Pay (n=6)	4.4	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as black was greater for the District sample than for the overall state sample (55.9% vs. 38.2%) (Table 8-2).

The proportion of children that were enrolled in WIC in the District sample was similar to the total state sample (67.6% vs. 65.2%). The District sample had a larger proportion of mothers who were unmarried (64.7% vs. 51.7%).

The District also had a large proportion of children who had payment at birth information missing (51.5%) for reasons that are unknown, which could account for the major difference in the proportion of children whose birth was covered by private insurance between the District and State samples (6.6% vs. 28.4%).

The District had a smaller proportion of children who were seen by only one provider (45.6% vs. 51.0%) than the state sample. In contrast, the District sample had a larger proportion of children whose mothers were <25 years age (52.9 vs. 38.8%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 8-2 Final %	State Final Sample %
Child's Gender‡		
Male (n=69)	50.7	49.6
Female (n=67)	49.3	50.4
Number of Providers†		
1 (n=62)	45.6	51.0
2 (n=39)	28.7	25.7
3+ (n=11)	8.1	9.0
Maternal Age‡		
<25 years (n=72)	52.9	38.8
25-34 years (n=54)	39.7	47.7
35+ years (n=10)	7.4	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 9-1: Sample Population Demographics, District 9-1—2013		
	District 9-1 Final %	State Final Sample %
District 9-1 Final Sample	n=171	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=72)	42.1	40.3
White, Hispanic (n=7)	4.1	3.8
Black (n=78)	45.6	38.2
Unspecified, Hispanic (n=3)	1.8	8.9
Asian (n=1)	0.6	2.8
Multiracial (n=4)	2.3	3.0
Maternal Education‡,†		
Some College+ (n=70)	40.9	44.3
HS Diploma/GED (n=57)	33.3	30.1
9th-11th grade (n=39)	22.8	16.1
<9th grade (n=1)	0.6	4.9
WIC$^{\theta}$		
Non-WIC (n=58)	33.9	34.8
WIC (n=113)	66.1	65.2
Metro Residence$^{\theta}$		
Metro (n=165)	96.5	78.0
Non-metro (n=6)	3.5	22.0
Maternal Marital Status‡		
Married (n=54)	31.6	48.1
Unmarried (n=117)	68.4	51.7
Repeat Birth‡		
First Child (n=78)	45.6	41.7
Repeat Birth (n=93)	54.4	58.3
Gestational Age‡		
<37 weeks (n=22)	12.9	10.9
37+ weeks (n=149)	87.1	89.1
Provider Type†		
Public Sector Only (n=9)	5.3	1.9
Private Sector Only (n=123)	71.9	80.1
Both (n=1)	0.6	0.4
Payment at Birth‡		
Government Assist (n=117)	68.4	50.8
Private Insurance (n=35)	20.5	28.4
Other (n=3)	1.8	6.7
Self Pay (n=9)	5.3	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as Hispanic was less for the District sample than for the overall state sample (5.9% vs. 12.7%) (Table 9-1).

The proportion of children that were enrolled in WIC in the District sample was similar to the proportion in the total state sample (66.1% vs. 65.2%).

A larger proportion of children in the District 9-1 sample had mothers who were unmarried than the state as a whole (68.4% vs. 51.7%). The District sample also had a higher number of infants whose births were covered by government assistance (68.4% vs. 50.8%) than the state sample.

The District had a smaller proportion of children who were seen by only one provider (42.1% vs. 51.0%) along with a higher proportion of mothers less than 25 years of age (46.2% vs. 38.8%) compared to the state sample.

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 9-1 Final %	State Final Sample %
Child's Gender‡		
Male (n=91)	53.2	49.6
Female (n=80)	46.8	50.4
Number of Providers†		
1 (n=72)	42.1	51.0
2 (n=43)	25.1	25.7
3+ (n=22)	12.9	9.0
Maternal Age‡		
<25 years (n=79)	46.2	38.8
25-34 years (n=76)	44.4	47.7
35+ years (n=16)	9.4	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 9-2: Sample Population Demographics, District 9-2, 2013		
	District 9-2 Final %	State Final Sample %
District 9-2 Final Sample	n=123	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=72)	58.5	40.3
White, Hispanic (n=6)	4.9	3.8
Black (n=31)	25.2	38.2
Unspecified, Hispanic (n=9)	7.3	8.9
Asian (n=0)	0.0	2.8
Multiracial (n=0)	0.0	3.0
Maternal Education‡,†		
Some College+ (n=43)	35.0	44.3
HS Diploma/GED (n=39)	31.7	30.1
9th-11th grade (n=28)	22.8	16.1
<9th grade (n=11)	8.9	4.9
WIC$^{\theta}$		
Non-WIC (n=21)	17.1	34.8
WIC (n=102)	82.9	65.2
Metro Residence$^{\theta}$		
Metro (n=3)	2.4	78.0
Non-metro (n=120)	97.6	22.0
Maternal Marital Status‡		
Married (n=58)	47.2	48.1
Unmarried (n=65)	52.8	51.7
Repeat Birth‡		
First Child (n=39)	31.7	41.7
Repeat Birth (n=84)	68.3	58.3
Gestational Age‡		
<37 weeks (n=16)	13.0	10.9
37+ weeks (n=107)	87.0	89.1
Provider Type†		
Public Sector Only (n=1)	0.8	1.9
Private Sector Only (n=109)	88.6	80.1
Both (n=1)	0.8	0.4
Payment at Birth‡†		
Government Assist (n=88)	71.5	50.8
Private Insurance (n=18)	14.6	28.4
Other (n=5)	4.1	6.7
Self Pay (n=10)	8.1	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as white, non-Hispanic was greater for the District sample than for the overall state sample (58.5% vs. 40.3%) (Table 9-2).

The District 9-2 sample had a smaller proportion of children whose mothers had some college education than the state sample (35.0% vs. 44.3%). The proportion of children that were enrolled in WIC in the District sample was higher than the proportion in the state sample (82.9% vs. 65.2%).

A larger proportion of children had mothers with previous children in the District 9-2 sample (68.2% vs. 58.3%). The District sample also had more children who's birth costs were covered by government assistance (71.5% vs. 50.8%).

The District sample had a smaller proportion of children who were seen by only one provider (40.7% vs. 51.0%) and a larger proportion of children had mothers <25 years of age (49.6% vs. 38.8%) than the state sample.

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 9-2 Final %	State Final Sample %
Child's Gender‡		
Male (n=51)	41.5	49.6
Female (n=72)	58.5	50.4
Number of Providers†		
1 (n=50)	40.7	51.0
2 (n=47)	38.2	25.7
3+ (n=18)	14.6	9.0
Maternal Age‡		
<25 years (n=61)	49.6	38.8
25-34 years (n=49)	39.8	47.7
35+ years (n=11)	8.9	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Table 10-0: Sample Population Demographics, District 10, 2013		
	District 10 Final %	State Final Sample %
District 10 Final Sample	n=128	*n=2,489*
Maternal Race/Ethnicity‡,†		
White, Non-Hispanic (n=78)	60.9	40.3
White, Hispanic (n=7)	5.5	3.8
Black (n=27)	21.1	38.2
Unspecified, Hispanic (n=10)	7.8	8.9
Asian (n=2)	1.6	2.8
Multiracial (n=3)	2.3	3.0
Maternal Education‡,†		
Some College+ (n=62)	48.4	44.3
HS Diploma/GED (n=31)	24.2	30.1
9th-11th grade (n=25)	19.5	16.1
<9th grade (n=6)	4.7	4.9
WIC$^{\Theta}$		
Non-WIC (n=57)	44.5	34.8
WIC (n=71)	55.5	65.2
Metro Residence$^{\Theta}$		
Metro (n=96)	75.0	78.0
Non-metro (n=32)	25.0	22.0
Maternal Marital Status‡		
Married (n=78)	60.9	48.1
Unmarried (n=50)	39.1	51.7
Repeat Birth‡		
First Child (n=49)	38.3	41.7
Repeat Birth (n=79)	61.7	58.3
Gestational Age‡		
<37 weeks (n=16)	12.5	10.9
37+ weeks (n=112)	87.5	89.1
Provider Type†		
Public Sector Only (n=0)	0.0	1.9
Private Sector Only (n=96)	75.0	80.1
Both (n=0)	0.0	0.4
Payment at Birth‡†		
Government Assist (n=61)	47.7	50.8
Private Insurance (n=47)	36.7	28.4
Other (n=2)	1.6	6.7
Self Pay (n=8)	6.3	4.6

Notable Demographic Findings: The proportion of children whose mothers were classified as white, non-Hispanic was greater for the District sample than for the overall state sample (60.9% vs. 40.3%) while the proportion of children whose mothers were classified as black was less (21.1% vs. 38.2%) (Table 10-0).

The proportion of children that were enrolled in WIC in the District sample was lower than the proportion in the total state sample (55.5% vs. 65.2%).

The District sample also had a lower proportion of children with unmarried mothers than the state sample (39.1% vs. 51.7%).

The District sample had a higher proportion of children whose birth costs were covered by private insurance than the state sample (36.7% vs. 28.4%).

Other demographic measures for this District were similar to findings for the state sample as a whole.

	District 10 Final %	State Final Sample %
Child's Gender‡		
Male (n=51)	39.8	49.6
Female (n=77)	60.2	50.4
Number of Providers†		
1 (n=68)	53.1	51.0
2 (n=36)	28.1	25.7
3+ (n=10)	7.8	9.0
Maternal Age‡		
<25 years (n=40)	31.3	38.8
25-34 years (n=72)	56.3	47.7
35+ years (n=15)	11.7	12.5

Θ Please see Appendix B for additional information regarding the methodology in obtaining this variable.
‡ Indicates that this variable corresponds to the data collected at the time of delivery.
† Indicates that the percentages for this variable may not add up to 100% because the information was missing in some cases.

Appendix E: District Immunization Measures, p1

Appendix Table E-1: District Immunization Coverage Rates, 2013

Highest Rate

A. District Response Rate
B. UTD by 24 months, based on GRITS alone, 2013
C. UTD by 24 months, 2013
D. UTD by end of data collection, 2013
E. Average Response Rate, 2008-2013*
F. Average UTD by 24 months, 2008-2013*
G. Percent change in UTD by 24 months, 2012 to 2013
H. Percent change in UTD by end of data collection, 2012 to 2013
I. Percent change in UTD from 24 months to end of data collection, 2013

*Immunization Rate not calculated for 2009

District	A (%)	B (%)	C (%)	D (%)	E (%)	F (%)	G (%)	H (%)	I (%)
1-1 Northwest (Rome)	94.7	84.4	84.4	91.1	88.7	83.4	-9.1	-6.0	7.9
1-2 North Georgia (Dalton)	98.2	85.6	88.3	92.8	97.8	81.1	1.0	-2.4	5.1
2-0 North (Gainesville)	100.0	67.1	82.1	85.0	98.0	83.5	-2.4	-10.0	3.5
3-1 Cobb-Douglas	99.4	69.9	79.0	90.9	93.2	78.8	-4.7	-4.3	15.1
3-2 Fulton	91.9	80.5	83.9	87.8	88.8	76.7	8.5	4.5	4.6
3-3 Clayton	91.9	62.8	67.9	72.3	91.4	74.8	-19.1	-24.1	6.5
3-4 East Metro (Lawrenceville)	92.4	77.6	86.3	91.3	92.6	82.9	5.9	-0.5	5.8
3-5 DeKalb	88.5	87.7	91.4	93.8	84.9	83.7	4.7	-4.3	2.6
4-0 LaGrange	96.4	80.4	84.7	89.0	93.9	79.6	-3.9	-8.0	5.1
5-1 South Central (Dublin)	87.1	82.4	86.5	95.9	94.4	79.5	11.0	2.6	10.9
5-2 North Central (Macon)	91.1	88.7	91.0	92.5	92.8	82.2	6.6	-1.3	1.6
6-0 East Central (Augusta)	100.0	80.7	86.2	96.6	99.9	83.2	-5.3	-2.1	12.1
7-0 West Central (Columbus)	95.6	83.3	89.8	93.5	93.5	80.8	1.0	-2.9	4.1
8-1 South (Valdosta)	90.4	81.7	88.5	93.3	93.5	82.3	6.2	5.3	5.4
8-2 Southwest (Albany)	97.1	86.0	87.5	94.1	96.7	81.0	5.0	6.2	7.5
9-1 Coastal (Savannah)	93.4	77.2	79.5	87.1	92.8	75.4	-1.5	-6.7	9.6
9-2 Southeast (Waycross)	97.6	86.2	86.2	93.5	97.2	79.8	2.1	-0.3	8.5
10-0 Northeast (Athens)	97.0	90.6	92.2	97.7	94.9	83.6	8.5	8.1	6.0
Georgia	**94.6**	**80.2**	**85.0**	**90.6**	**93.1**	**80.1**	**0.6**	**-3.1**	**6.6**

Appendix E: District Immunization Measures, p2

Appendix Table E-2: District Vaccine Antigen-Specific Immunization Measures, 2013

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)	85.6	97.8	93.3	94.4	80.0	96.7	94.4	87.8	91.1	32.2
1-2 North Georgia (Dalton)	87.4	94.6	94.6	97.3	79.3	96.4	95.5	90.1	88.3	76.6
2-0 North (Gainesville)	87.1	94.3	91.4	95.0	78.6	91.4	90.7	87.1	87.9	41.4
3-1 Cobb-Douglas	79.5	95.5	93.2	95.5	72.7	96.0	92.6	81.3	86.4	38.1
3-2 Fulton	83.4	92.7	92.7	93.2	78.0	95.1	95.6	81.5	81.5	30.7
3-3 Clayton	67.2	86.1	82.5	85.4	82.5	85.4	83.2	65.0	75.9	13.1
3-4 East Metro (Lawrenceville	88.0	95.1	93.4	94.0	80.9	95.6	95.1	88.0	87.4	26.8
3-5 DeKalb	88.3	98.1	94.4	96.9	79.0	98.1	94.4	88.3	85.8	29.0
4-0 LaGrange	84.7	96.9	89.0	97.5	89.0	95.7	91.4	84.0	84.7	23.9
5-1 South Central (Dublin)	79.7	98.6	95.9	98.6	89.2	97.3	95.9	81.1	70.3	18.9
5-2 North Central (Macon)	88.7	97.7	94.7	97.7	91.7	96.2	97.0	91.0	64.7	22.6
6-0 East Central (Augusta)	84.8	97.9	97.9	95.9	88.3	98.6	97.2	83.4	82.8	23.4
7-0 West Central (Columbus)	90.7	97.2	93.5	97.2	92.6	98.1	92.6	88.0	85.2	21.3
8-1 South (Valdosta)	86.5	96.2	93.3	96.2	92.3	97.1	92.3	91.3	95.2	20.2
8-2 Southwest (Albany)	86.0	97.1	91.2	97.8	89.7	99.3	93.4	86.8	91.2	32.4
9-1 Coastal (Savannah)	81.9	93.6	90.1	93.0	83.6	92.4	90.6	77.2	71.3	31.0
9-2 Southeast (Waycross)	87.0	98.4	95.1	95.9	95.1	100.0	96.7	87.0	88.6	18.7
10-0 Northeast (Athens)	88.3	100.0	94.5	100.0	75.0	99.2	95.3	87.5	86.7	25.8
Georgia	**84.6**	**95.7**	**92.7**	**96.3**	**83.6**	**95.9**	**93.5**	**84.5**	**83.5**	**29.3**

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

For questions relating specifically to this document, please email the author at
Manoj.Rema@dph.ga.gov