

GEORGIA ADOLESCENT IMMUNIZATION STUDY 2018

Immunization Program / Acute Disease Epidemiology Section



PREPARED BY:

Fabio R. Machado, MPH, *Principal Investigator, Author*

Ebony Thomas, MPH, *Primary Editor*

Cherie Drenzek, MS, DVM, *Editor*

Sheila Lovett, *Editor*

Acknowledgements

The Georgia Department of Public Health Epidemiology and Immunization Programs would like to thank the public health representatives who participated in this study for all of their hard work, support and dedication. This study could not have been completed successfully without the cooperation of the Immunization Regional Consultants and State staff throughout Georgia.

A profound thank you and sincere appreciation is also given to the public and private schools and their immunization staff and nurses that participated in this collaborative effort. Their cooperation and assistance throughout the study is greatly appreciated.

Additional gratitude goes to Karl Soetebier for the development and maintenance of our data collection system; and LaTonya Thomas and Ben Sloat for their collaborative effort in making this study possible.

This publication was supported by the Cooperative Agreement Number 5H23IP000744-05-02 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Abbreviations and Vaccine Names

Abbreviation	Definition
ACIP	Advisory Committee on Immunization Practices
CDC	Centers for Disease Control and Prevention
GAIS	Georgia Adolescent Immunization Study
IRC	Immunization Regional Consultant (data collectors)
GRITS	Georgia Registry of Immunization Transactions and Services
UTD	Up-to-date [vaccination history]
HepB	Hepatitis B [vaccine]
MMR	Measles, Mumps, Rubella [vaccine]
Varicella	Varicella (chicken pox) [vaccine]
Tdap	Tetanus, Diphtheria and acellular Pertussis [vaccine]
MCV4	Meningococcal Conjugate [vaccine]
HPV	Human Papillomavirus [vaccine]

Table of Contents

Contents	Page (s)
Acknowledgements	1
Abbreviations	2
Table of Contents	3
Section I: Project Overview	5–7
Purpose of Study	5
Methods	6-7
Section II: Statewide Results	9–10
State-Level Immunization Study Staff	9
State of Georgia Immunization Report	10
Section III: Health District Immunization Reports	11-29
District-Level Immunization Study Team	11
District 1-1 Immunization Report (Rome District)	12
District 1-2 Immunization Report (Dalton District)	13
District 2-0 Immunization Report (Gainesville District)	14
District 3-1 Immunization Report (Cobb-Douglas District)	15
District 3-2 Immunization Report (Fulton District)	16
District 3-3 Immunization Report (Clayton District)	17
District 3-4 Immunization Report (Lawrenceville District)	18
District 3-5 Immunization Report (DeKalb District)	19
District 4-0 Immunization Report (LaGrange District)	20
District 5-1 Immunization Report (Dublin District)	21
District 5-2 Immunization Report (Macon District)	22
District 6-0 Immunization Report (Augusta District)	23
District 7-0 Immunization Report (Columbus District)	24
District 8-1 Immunization Report (Valdosta District)	25
District 8-2 Immunization Report (Albany District)	26
District 9-1 Immunization Report (Savannah District)	27
District 9-2 Immunization Report (Waycross District)	28
District 10-0 Immunization Report (Athens District)	29
Appendices	i-iii
Appendix A: Immunization coverage measures	i
Appendix B: Frequency of exemptions	ii
Appendix C: Reasons for incomplete vaccination	iii
Additional Resources	iv

Purpose of Study

The Centers for Disease Control and Prevention (CDC) and the Advisory Committee on Immunization Practices (ACIP) recommend that adolescents routinely receive Tdap, MCV4, and HPV vaccinations at 11 to 12 years of age¹. Beginning in the 2014-2015 school year, Tdap and MCV4 were added to the list of required vaccines for Georgia students entering seventh grade who were born on or after January 1, 2002. This report summarizes the annual assessment of vaccination coverage for school-required vaccinations as well as one-dose and complete dose coverage of HPV among seventh grade students in Georgia's 18 Public Health Districts. HPV coverage was assessed using the 2016 ACIP recommendations of a 2 or 3-dose schedule based on the age of the recipient².

The objectives of the Georgia adolescent immunization study are:

1. To generate annual state and District-level vaccination coverage estimates for school-required and HPV vaccinations for 7th grade Georgia students.
2. Determine if coverage levels are different from the previous year, between genders or any other domain of interest (as data allows).

1. Kroger AT, Duchin J, Vázquez M. General Best Practice Guidelines for Immunization. Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP). <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>. Accessed on 12/22/2017

2. Meites E, Kempe A, Markowitz LE. Use of a 2-Dose Schedule for Human Papillomavirus Vaccination – Updated Recommendations of the Advisory Committee on Immunization Practices. MMWR Morb Mortal Wkly Rep 2016;65:1405–1408. DOI: <http://dx.doi.org/10.15585/mmwr.mm6549a5>

Methods

Study Design

The annual Georgia Adolescent Immunization Study (GAIS) employs a cross-sectional research design to ascertain the vaccine coverage rate for 7th grade adolescents in the state of Georgia. Vaccination history for 7th grade students from 18 Health Districts were analyzed to calculate rates. Identifying information and vaccination history data were obtained from school 3231 files and the Georgia Registry of Immunization Transactions and Services (GRITS). Vaccination rates for Tdap, Polio, MMR, MCV4 (meningococcal), Hepatitis B, Varicella and HPV vaccines were calculated.

Data collection for the 2018 GAIS study began January 22 and lasted for three months until April, 20, 2018. A two-stage cluster-sampling scheme was developed to randomly select the study sample. Stage one of the cluster sampling scheme involved randomly selecting up to 30 middle schools (public or private) from each of the 18 Health Districts. If a District had fewer than 30 middle schools, then all middle schools in that District were sampled.

Stage two of the sampling scheme involved randomly selecting an established number of students from each school. This number varied by District depending on the number of schools sampled, with the goal of having similar sized samples for each District.

The following formula was used to determine the sample size for each District, taking into account a finite population correction:

$$n_i \geq \frac{N_i}{\left(\frac{c.i. \text{ halfwidth}}{\text{critical value}}\right)^2 \left(\frac{N_i - 1}{p(1 - p)}\right) + 1}$$

Where:

- N_i = 7th grade population in District i
- c.i. halfwidth < 0.05 (half of the confidence interval)
- critical value = 1.96 (for a 95% confidence interval)
- $p = 0.5$ (expected proportion, 0.5 is the most conservative value)
- n_i = sample size for District i

The final sample size for the study is the addition of all the District samples.

Once we know the sample size for the District, we determine the number of students to sample from each school by dividing the sample n_i by the number of schools in the sample.

Target and Sample Populations

The target population of the 2018 GAIS included all 7th grade adolescents in the State of Georgia during the 2017-2018 school year. A sample of 7,057 seventh grade students, attending both private and public Georgia schools, were selected for the study. The sample design allowed for independent estimates to be calculated for each of the 18 Health Districts in the state.

Data Collection

An electronic web-based data collection system named "GAIS" was created to systematically collect the required information for each child. This system interfaces with GRITS to extract vaccination data for students enrolled in the study.

Data collection was carried out by the State's Immunization Regional Consultants (IRCs), who are responsible for 13 health regions, which may overlap Health District boundaries. The IRCs participated in a training at the start of the data collection period. A Training Manual was also provided and made available on the GAIS log-in screen.

Data Collection Protocol

Step #1: Obtain student sample

Before the data collection process began, IRCs were assigned a maximum of 30 middle schools in their respective Districts and assigned a required number of students per school to be sampled. Once at a school, IRCs obtained a roster of all currently enrolled 7th graders in that school and using a random-number generator, selected the required number of students.

Step #2: Collect immunization forms at public and private schools

Once the school-specific sample was selected, IRCs checked the sample's 3231 forms (the official vaccination history) on file at the school. A comparison of the GRITS record and the 3231 form was conducted for the sample to make sure all vaccines received matched between sources. If any dates were missing from either source, steps were taken to update the 3231 form and/or the GRITS record to match. If a 3231 was found to be expired, a new one was printed out from GRITS for the school's record.

Step #3: Input adolescents into the GAIS website

A record was created by the IRC for each sampled student in the GAIS website. Information collected included first and last name, date of birth, county, school, exemptions (medical or religious), waiver status and immunity history. This data was used to link the sampled student with GRITS in order to download their vaccination history. A

blank vaccination record was also available in the GAIS website as a backup incase linking failed, this way the IRC could record the vaccination history.

Step #4: Record review

As the records were completed using the web GAIS system, problematic records were reviewed by the principal investigator and resolved before data analysis began.

Data Analysis

The data cleaning and analysis for the 2018 GAIS were performed using R (ver. 3.4.2) software.

Vaccination history were used to determine what percentage of 7th graders were up-to-date (UTD), which was defined as having at least 3 doses of Hepatitis B, 2 doses of MMR, 2 doses of Varicella, 1 dose of Tdap and 1 dose of MCV4 vaccines. UTD vaccination rates as well as individual vaccine coverage rates were assessed at both the state and Health District level. A vaccination was considered valid if it met ACIP's recommendations for dosing and spacing and was given prior to January 1, 2018.

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. Vaccination rates are calculated regardless of the student's waiver, exemption or immunity status.

Margins of error are provided for all vaccination coverage estimates. The margin of error is a convenient notation of the 95% confidence interval range. For example, 94.4 ± 0.6 represents the confidence interval (93.8, 95.0) for the statewide UTD estimate of 94.4%. Vaccination rate differences between comparison groups were tested with R (ver 3.4.2, *Epi* package), utilizing a 2 sample test for equality of proportions. Significant differences ($p < 0.05$) are ***bolded and italicized*** in the appropriate tables. Comparison groups are defined as:

- 2018 State rates vs individual 2018 District rates
- Individual District rates for 2017 vs 2018
- 2018 coverage rates for male vs. female students
- 2018 coverage rates for students attending public vs. private schools

Sample Table 1 serves to illustrate these comparisons. For example, in Sample Table 1, the rates for having 1 dose of HPV are significantly different ($p < 0.05$) between :

- The state (50.1%) and District X (58.6%) in 2018
- Male (52.6%) and female students (65.5%) in District X in 2018

Similarly, the rates for completing the HPV series are significantly different ($p < 0.05$) between :

- The state (28.0%) and District X (20.2%) in 2018
- 2017 (12.4%) and 2018 (20.2%) for District X
- Public (24.9%) and private schools (14.2%)

Limitations

When interpreting the study results, the following limitations of the study should be considered:

1. Compared to other sampling methods, cluster sampling is least representative of the population. Individuals within a cluster tend to have similar characteristics and there is a chance of over- or underrepresentation of the population, leading to skewed results. The two-stage cluster sampling scheme was used because of its low-cost and efficient method of collecting a larger sample size across a wide area.
2. Some IRCs had less than 30 middle schools in their District and were therefore required to sample all middle schools. Larger Districts were restricted to a maximum sample of 30 schools, due to time and resource restraints. This may lead to underrepresentation in Districts that have more than 30 schools. We tried to overcome this limitation by randomly selecting schools with equal probability of selection.

Sample Table 1

	2018, State	Year, District X		Gender, 2018, District X		School type, 2018, District X	
	<i>n</i> = 7,057 (%)	2017 <i>n</i> = 363 (%)	2018 <i>n</i> = 370 (%)	Male <i>n</i> = 195 (%)	Female <i>n</i> = 170 (%)	Public <i>n</i> = 312 (%)	Private <i>n</i> = 58 (%)
1 HPV	<i>50.1 ± 1.2</i>	52.7 ± 5.1	58.6 ± 5.2	<i>52.6 ± 7.5</i>	65.5 ± 7.2	59.9 ± 6.3	55.8 ± 9.2
Complete HPV series	<i>28.0 ± 1.1</i>	<i>12.4 ± 3.6</i>	20.2 ± 4.3	19.4 ± 5.8	21.7 ± 6.5	<i>24.9 ± 6.1</i>	14.2 ± 5.6

Section II: Statewide Results

State-Level Immunization Study Staff, 2018 Georgia Adolescent Immunization Study

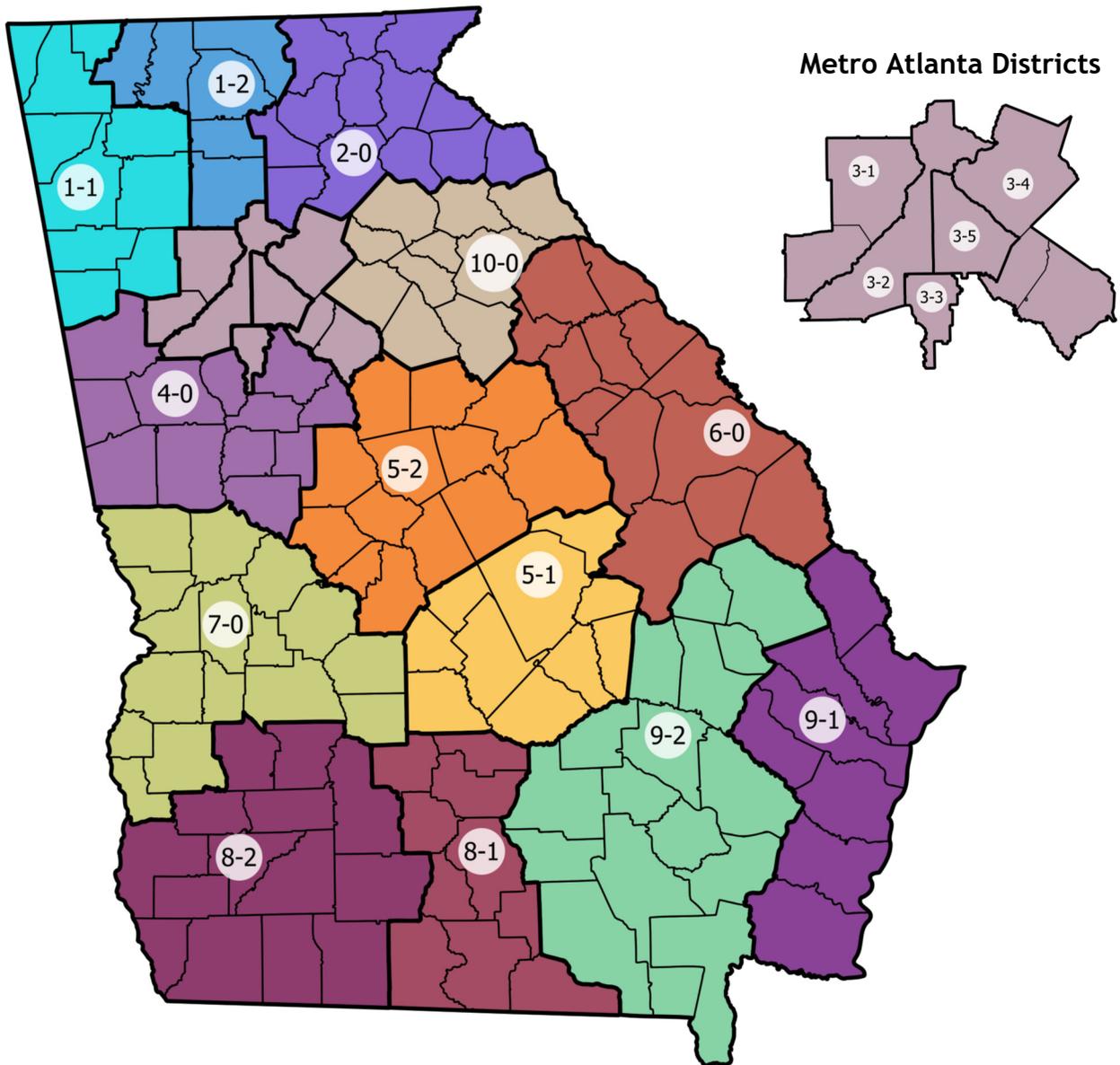
Fabio R. Machado, MPH

Immunization Study Epidemiologist
Principal Investigator, Primary Author

Ebony S. Thomas, MPH

Vaccine-Preventable Disease Epidemiologist
Primary Editor

Figure 1: Georgia Health Districts



State of Georgia



The 2018 Georgia Adolescent Immunization Study (GAIS) sampled 7,057 seventh grade adolescents from 503 middle schools (322 public, 181 private) (Table 1). Of the students sampled, 50.2% were male, 49.2% were female, and 0.6% had missing gender information.

Students enrolled in public schools accounted for 70.6% of the sample; 29.4% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. Statewide, the 2018 UTD vaccination rate for 7th graders was 93.9%, lower than the 2017 rate (94.4%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 2).

Statewide, the 2018 vaccination rate for 1 HPV was significantly higher than the 2017 rate, whereas the vaccination rates for Tdap and MCV4 were significantly lower. The statewide vaccination rates for 1 HPV was significantly higher for female students than male students. Statewide coverage rates for all vaccines were significantly higher for students enrolled in public schools than students enrolled in private schools (Table 2).

Only fifteen (0.2%) of the students in the 2018 sample were found to be in the school waiver period. Eight (0.1%) of the students in the sample had a medical exemption for one more vaccines and 191 (2.7%) had a religious exemption on file (Table 1).

Table 1: Gender, school type, waiver and exemptions among Georgia adolescents, 2018 (n = 7,057).

		# of students	Percent of sample (%)
Gender	Male	3541	50.2
	Female	3474	49.2
	Unknown	42	0.6
School type	Public (322)	4981	70.6
	Private (181)	2076	29.4
Within waiver period?	Yes	15	0.2
	No	7042	99.8
Exemptions	Religious	191	2.7
	Medical	8	0.1
	No exemption	6859	97.2

Fifteen adolescents had documentation of serologic immunity in lieu of vaccination: 11 had varicella immunity, 3 had measles, mumps, rubella (MMR) immunity, and 1 had hepatitis B immunity. Twenty-seven (27) students had either documentation of physician-diagnosed or a history of varicella (not shown). Statewide vaccination rate determinations were calculated based only on receipt of vaccine, therefore these students were not excluded from the coverage rate calculations.

Table 2: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, 2018

	Year		Gender, 2018		School type, 2018	
	2017 n = 6,191 (%)	2018 n = 7,057 (%)	Male n = 3,541 (%)	Female n = 3,474 (%)	Public n = 4,981 (%)	Private n = 2,076 (%)
UTD rate*	94.4 ± 0.6	93.9 ± 0.6	94.4 ± 0.8	94.4 ± 0.8	94.7 ± 0.6	92.1 ± 1.2
3+ Hepatitis B	98.3 ± 0.3	98.2 ± 0.3	98.6 ± 0.4	98.6 ± 0.4	98.8 ± 0.3	96.9 ± 0.7
2+ MMR	98.3 ± 0.3	97.9 ± 0.3	98.3 ± 0.4	98.4 ± 0.4	98.5 ± 0.3	96.5 ± 0.8
2+ Varicella	97.2 ± 0.4	97.0 ± 0.4	97.5 ± 0.5	97.4 ± 0.5	97.6 ± 0.4	95.7 ± 0.9
1 Tdap	96.6 ± 0.5	95.7 ± 0.5	96.1 ± 0.6	96.2 ± 0.6	96.3 ± 0.5	94.0 ± 1.0
1 MCV4	96.4 ± 0.5	95.5 ± 0.5	95.8 ± 0.7	96.0 ± 0.6	96.1 ± 0.5	93.9 ± 1.0
4+ Polio	97.6 ± 0.4	97.3 ± 0.4	97.8 ± 0.5	97.7 ± 0.5	97.9 ± 0.4	96.1 ± 0.8
1 HPV	47.9 ± 1.2	50.6 ± 1.2	48.9 ± 1.6	52.8 ± 1.7	55.0 ± 1.4	39.8 ± 2.1
Complete HPV series	23.3 ± 1.1	23.4 ± 1.0	22.8 ± 1.4	24.2 ± 1.4	25.0 ± 1.2	19.5 ± 1.7

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

Section III: Health District Immunization Reports¹¹

Immunization Study Data Collection Team by Health District, Georgia Adolescent Immunization Study, 2018

<i>District</i>	<i>Immunization Regional Consultant</i>
1-1	Jamie Henley Toni Jackson
1-2	Jamie Henley Toni Jackson
2-0	Farrah Machida
3-1	Toni Jackson
3-2	Saron Ephraim Kelly Seegmueller
3-3	Saron Ephraim Kelly Seegmueller
3-4	Dionne Hansey
3-5	Kelly Seegmueller Latonya Thomas
4-0	Tina Dempsey Kelly Seegmueller
5-1	Kelly Duke Kelly Seegmueller
5-2	Kelly Duke
6-0	Shelia Fultz
7-0	Kelly Seegmueller
8-1	Lisa Jenkins
8-2	Lisa Jenkins Kelly Seegmueller
9-1	John Sheahan Kelly Duke
9-2	Shelia Fultz Kelly Duke John Sheahan Lisa Jenkins
10-0	Angie Webster Lisa Jenkins Dionne Hansey

District 1-1 (Rome)



The 2018 GAIS sampled 393 seventh grade adolescents in District 1-1 from 29 middle schools (23 public, 6 private) (Table 1-1-A). Of the students sampled, 47.8% were male, 51.7% were female, and 0.5% were missing gender information.

Students enrolled in public schools accounted for 81.9% of the sample; 18.1% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 1-1, the 2018 UTD vaccination rate for 7th graders was 95.7%, higher than the 2017 rate (94.3%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 1-1-B).

The 2018 District 1-1 vaccination rates for MCV4 and Polio were significantly higher than the state rates, whereas the rates for HPV (1-dose and complete) were significantly lower. The 2018 vaccination estimates did not differ from 2017, between genders or school type (Table 1-1-B).

Table 1-1-A: Gender, school type, waiver and exemptions among District 1-1 adolescents, 2018 (n = 393).

		# of students	Percent of sample (%)
Gender	Male	188	47.8
	Female	203	51.7
	Unknown	2	0.5
School type	Public (23)	322	81.9
	Private (6)	71	18.1
Within waiver period?	Yes	0	0.0
	No	393	100.0
Exemptions	Religious	9	2.3
	Medical	1	0.3
	No exemption	383	97.5

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 1-1 sample were found to be in the school “waiver” period (Table 1-1-A).

One (0.3%) of the students in the District 1-1 sample had a medical exemption for one more vaccines; 9 (2.3%) students had a religious exemption on file (Table 1-1-A).

Table 1-1-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 1-1, 2018

	2018, State	Year, District 1-1		Gender, 2018, District 1-1		School type, 2018, District 1-1	
	Overall n = 7,057 (%)	2017 n = 370 (%)	2018 n = 393 (%)	Male n = 188 (%)	Female n = 203 (%)	Public n = 322 (%)	Private n = 71 (%)
UTD rate*	93.9 ± 0.6	94.3 ± 2.4	95.7 ± 2.0	97.9 ± 2.1	94.6 ± 3.1	95.0 ± 2.4	98.6 ± 2.7
3+ Hepatitis B	98.2 ± 0.3	97.3 ± 1.7	99.0 ± 1.0	99.5 ± 1.0	99.0 ± 1.4	98.8 ± 1.2	100.0 ± 0.0
2+ MMR	97.9 ± 0.3	97.6 ± 1.6	98.7 ± 1.1	99.5 ± 1.0	98.5 ± 1.7	98.4 ± 1.4	100.0 ± 0.0
2+ Varicella	97.0 ± 0.4	97.3 ± 1.7	98.0 ± 1.4	98.9 ± 1.5	97.5 ± 2.1	97.8 ± 1.6	98.6 ± 2.7
1 Tdap	95.7 ± 0.5	95.9 ± 2.0	97.2 ± 1.6	98.4 ± 1.8	97.0 ± 2.3	96.6 ± 2.0	100.0 ± 0.0
1 MCV4	95.5 ± 0.5	94.9 ± 2.3	97.2 ± 1.6	98.4 ± 1.8	97.0 ± 2.3	96.6 ± 2.0	100.0 ± 0.0
4+ Polio	97.3 ± 0.4	97.3 ± 1.7	98.7 ± 1.1	98.9 ± 1.5	99.0 ± 1.4	98.8 ± 1.2	98.6 ± 2.7
1 HPV	50.6 ± 1.2	47.6 ± 5.1	44.8 ± 4.9	48.4 ± 7.1	41.9 ± 6.8	45.7 ± 5.4	40.8 ± 11.4
Complete HPV series	23.4 ± 1.0	21.9 ± 4.2	18.3 ± 3.8	17.0 ± 5.4	19.7 ± 5.5	17.1 ± 4.1	23.9 ± 9.9

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg 7).

District 1-2 (Dalton)



The 2018 GAIS sampled 391 seventh grade adolescents in District 1-2 from 30 middle schools (19 public, 11 private) (Table 1-2-A). Of the students sampled, 50.1% were male, 48.6% were female, and 1.3% were missing gender information.

Students enrolled in public schools accounted for 73.7% of the sample; 26.3% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 1-2, the 2018 UTD vaccination rate for 7th graders was 89.5%, lower than the 2017 rate (92%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 1-2-B).

The 2018 District 1-2 vaccination rates for UTD, MMR, Tdap and MCV4 were significantly lower than the state rates, whereas the rates for HPV (1-dose and complete) were significantly higher. The 2018 District 1-2 vaccination rates for HPV (1-dose and completion) were significantly higher than the 2017 rates. The 2018 vaccination rates for UTD, Tdap, MCV4, and HPV (1-dose and complete) were significantly higher for public school students than private school students (Table 1-2-B).

Table 1-2-A: Gender, school type, waiver and exemptions among District 1-2 adolescents, 2018 (n = 391).

		# of students	Percent of sample (%)
Gender	Male	196	50.1
	Female	190	48.6
	Unknown	5	1.3
School type	Public (19)	288	73.7
	Private (11)	103	26.3
Within waiver period?	Yes	0	0.0
	No	391	100.0
Exemptions	Religious	30	7.7
	Medical	0	0.0
	No exemption	361	92.3

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements.

None of the students in the District 1-2 sample were found to be in the school “waiver” period (Table 1-2-A). None of the students in the District 1-2 sample had a medical exemption for one more vaccine; 30 (7.7%) students had a religious exemption on file (Table 1-2-A).

Table 1-2-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 1-2, 2018

	2018, State	Year, District 1-2		Gender, 2018, District 1-2		School type, 2018, District 1-2	
	Overall n = 7,057 (%)	2017 n = 314 (%)	2018 n = 391 (%)	Male n = 196 (%)	Female n = 190 (%)	Public n = 288 (%)	Private n = 103 (%)
UTD rate*	93.9 ± 0.6	92.0 ± 3.0	89.5 ± 3.0	89.8 ± 4.2	91.6 ± 4.0	92.7 ± 3.0	80.6 ± 7.6
3+ Hepatitis B	98.2 ± 0.3	97.5 ± 1.7	96.9 ± 1.7	98.5 ± 1.7	97.4 ± 2.3	98.3 ± 1.5	93.2 ± 4.9
2+ MMR	97.9 ± 0.3	95.2 ± 2.4	95.4 ± 2.1	95.4 ± 2.9	97.4 ± 2.3	96.5 ± 2.1	92.2 ± 5.2
2+ Varicella	97.0 ± 0.4	94.6 ± 2.5	95.4 ± 2.1	95.9 ± 2.8	96.8 ± 2.5	96.5 ± 2.1	92.2 ± 5.2
1 Tdap	95.7 ± 0.5	93.9 ± 2.6	91.3 ± 2.8	92.9 ± 3.6	92.1 ± 3.8	94.8 ± 2.6	81.6 ± 7.5
1 MCV4	95.5 ± 0.5	93.3 ± 2.8	91.0 ± 2.8	92.3 ± 3.7	92.1 ± 3.8	93.8 ± 2.8	83.5 ± 7.2
4+ Polio	97.3 ± 0.4	94.6 ± 2.5	95.4 ± 2.1	95.9 ± 2.8	96.8 ± 2.5	96.5 ± 2.1	92.2 ± 5.2
1 HPV	50.6 ± 1.2	40.8 ± 5.4	50.1 ± 5.0	49.5 ± 7.0	52.1 ± 7.1	56.2 ± 5.7	33.0 ± 9.1
Complete HPV series	23.4 ± 1.0	20.4 ± 4.5	28.6 ± 4.5	32.1 ± 6.5	25.8 ± 6.2	32.6 ± 5.4	17.5 ± 7.3

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 2-0 (Gainesville)



The 2018 GAIS sampled 389 seventh grade adolescents in District 2-0 from 30 middle schools (15 public, 15 private) (Table 2-0-A). Of the students sampled, 47.3% were male and 52.7% were female. Students enrolled in public schools accounted for 62.0% of the sample; 38.0% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 2-0, the 2018 UTD vaccination rate for 7th graders was 94.6%, higher than the 2017 rate (92.9%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 2-0-B).

The 2018 District 2-0 vaccination rates for HPV (1-shot and complete series) were significantly lower than the state rates. The 2018 vaccination rates did not differ from 2017 or between genders. The 2018 vaccination rates for MCV4 and HPV (1-shot and complete series) were significantly higher for public school students than private school students (Table 2-0-B).

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements (Table 2-0-A).

Table 2-0-A: Gender, school type, waiver and exemptions among District 2-0 adolescents, 2018 (n = 389).

		# of students	Percent of sample (%)
Gender	Male	184	47.3
	Female	205	52.7
	Unknown	0	0.0
School type	Public (15)	241	62.0
	Private (15)	148	38.0
Within waiver period?	Yes	1	0.3
	No	388	99.7
Exemptions	Religious	10	2.6
	Medical	0	0.0
	No exemption	379	97.4

Only one (0.3%) of the students in the District 2-0 sample was found to be in the school waiver period (Table 2-0-A). None of the students in the District 2-0 sample had a medical exemption for one more vaccine; 10 (2.6%) students had a religious exemption on file (Table 2-0-A).

Table 2-0-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 2-0, 2018

	2018, State	Year, District 2-0		Gender, 2018, District 2-0		School type, 2018, District 2-0	
	Overall n = 7,057 (%)	2017 n = 323 (%)	2018 n = 389 (%)	Male n = 184 (%)	Female n = 205 (%)	Public n = 241 (%)	Private n = 148 (%)
UTD rate*	93.9 ± 0.6	92.9 ± 2.8	94.6 ± 2.2	96.2 ± 2.8	93.2 ± 3.5	96.3 ± 2.4	91.9 ± 4.4
3+ Hepatitis B	98.2 ± 0.3	99.4 ± 0.9	98.5 ± 1.2	98.9 ± 1.5	98.0 ± 1.9	99.2 ± 1.1	97.3 ± 2.6
2+ MMR	97.9 ± 0.3	99.1 ± 1.0	98.5 ± 1.2	98.9 ± 1.5	98.0 ± 1.9	99.6 ± 0.8	96.6 ± 2.9
2+ Varicella	97.0 ± 0.4	96.9 ± 1.9	96.7 ± 1.8	97.3 ± 2.4	96.1 ± 2.7	97.5 ± 2.0	95.3 ± 3.4
1 Tdap	95.7 ± 0.5	95.4 ± 2.3	96.9 ± 1.7	97.3 ± 2.4	96.6 ± 2.5	98.3 ± 1.6	94.6 ± 3.6
1 MCV4	95.5 ± 0.5	95.7 ± 2.2	96.7 ± 1.8	97.3 ± 2.4	96.1 ± 2.7	98.3 ± 1.6	93.9 ± 3.9
4+ Polio	97.3 ± 0.4	97.8 ± 1.6	97.9 ± 1.4	98.4 ± 1.8	97.6 ± 2.1	98.8 ± 1.4	96.6 ± 2.9
1 HPV	50.6 ± 1.2	37.2 ± 5.3	38.6 ± 4.8	37.0 ± 7.0	40.0 ± 6.7	46.1 ± 6.3	26.4 ± 7.1
Complete HPV series	23.4 ± 1.0	17.3 ± 4.1	18.0 ± 3.8	15.8 ± 5.3	20.0 ± 5.5	22.8 ± 5.3	10.1 ± 4.9

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 3-1 (Cobb/Douglas)



The 2018 GAIS sampled 394 seventh grade adolescents in District 3-1 from 30 middle schools (12 public, 18 private) (Table 3-1-A). Of the students sampled, 48.0% were male, 51.8% were female, and 0.3% had missing gender information.

Students enrolled in public schools accounted for 43.4% of the sample; 56.6% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 3-1, the 2018 UTD vaccination rate for 7th graders was 93.1%, lower than the 2017 rate (93.3%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 3-1-B).

The 2018 District 3-1 vaccination rates for HPV (1-shot and complete series) were significantly lower than the state rates. The 2018 vaccination estimates did not differ from 2017, between genders or school type (Table 3-1-B).

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 3-1 sample were found to be in the school “waiver” period (Table 3-1-A).

Table 3-1-A: Gender, school type, waiver and exemptions among District 3-1 adolescents, 2018 (n = 394).

		# of students	Percent of sample (%)
Gender	Male	189	48.0
	Female	204	51.8
	Unknown	1	0.3
School type	Public (12)	171	43.4
	Private (18)	223	56.6
Within waiver period?	Yes	0	0.0
	No	394	100.0
Exemptions	Religious	15	3.8
	Medical	0	0.0
	No exemption	379	96.2

None of the students in the District 3-1 sample had a medical exemption for one more vaccine; 15 (3.8%) students had a religious exemption on file (Table 3-1-A).

Table 3-1-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 3-1, 2018

	2018, State	Year, District 3-1		Gender, 2018, District 3-1		School type, 2018, District 3-1	
	Overall n = 7,057 (%)	2017 n = 267 (%)	2018 n = 394 (%)	Male n = 189 (%)	Female n = 204 (%)	Public n = 171 (%)	Private n = 223 (%)
UTD rate*	93.9 ± 0.6	93.3 ± 3.0	93.1 ± 2.5	93.7 ± 3.5	93.1 ± 3.5	92.4 ± 4.0	93.7 ± 3.2
3+ Hepatitis B	98.2 ± 0.3	98.1 ± 1.6	97.5 ± 1.6	97.4 ± 2.3	98.0 ± 1.9	97.1 ± 2.5	97.8 ± 1.9
2+ MMR	97.9 ± 0.3	98.9 ± 1.3	98.0 ± 1.4	98.4 ± 1.8	98.0 ± 1.9	97.7 ± 2.3	98.2 ± 1.7
2+ Varicella	97.0 ± 0.4	97.4 ± 1.9	95.7 ± 2.0	96.3 ± 2.7	95.6 ± 2.8	94.7 ± 3.3	96.4 ± 2.4
1 Tdap	95.7 ± 0.5	96.6 ± 2.2	95.9 ± 2.0	96.8 ± 2.5	95.6 ± 2.8	95.9 ± 3.0	96.0 ± 2.6
1 MCV4	95.5 ± 0.5	95.9 ± 2.4	95.4 ± 2.1	95.8 ± 2.9	95.6 ± 2.8	95.3 ± 3.2	95.5 ± 2.7
4+ Polio	97.3 ± 0.4	97.0 ± 2.0	97.0 ± 1.7	97.4 ± 2.3	97.1 ± 2.3	95.3 ± 3.2	98.2 ± 1.7
1 HPV	50.6 ± 1.2	43.1 ± 5.9	41.4 ± 4.9	38.6 ± 6.9	44.1 ± 6.8	43.9 ± 7.4	39.5 ± 6.4
Complete HPV series	23.4 ± 1.0	21.0 ± 4.9	19.3 ± 3.9	17.5 ± 5.4	21.1 ± 5.6	17.0 ± 5.6	21.1 ± 5.4

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 3-2 (Fulton)



The 2018 GAIS sampled 382 seventh grade adolescents in District 3-2 from 29 middle schools (20 public, 9 private) (Table 3-2-A). Of the students sampled, 57.9% were male, 41.4% were female, and 0.8% had missing gender information.

Students enrolled in public schools accounted for 72.5% of the sample; 27.5% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 3-2, the 2018 UTD vaccination rate for 7th graders was 93.5%, lower than the 2017 rate (94.7%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 3-2-B).

The 2018 District 3-2 vaccination rates did not differ from the state, 2017, between genders or school type (Table 3-2-B).

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. Only two (0.5%) of the students in the District 3-2 sample were found to be in the school waiver period (Table 3-2-A).

Table 3-2-A: Gender, school type, waiver and exemptions among District 3-2 adolescents, 2018 (n = 382).

		# of students	Percent of sample (%)
Gender	Male	221	57.9
	Female	158	41.4
	Unknown	3	0.8
School type	Public (20)	277	72.5
	Private (9)	105	27.5
Within waiver period?	Yes	2	0.5
	No	380	99.5
Exemptions	Religious	10	2.6
	Medical	0	0.0
	No exemption	372	97.4

None of the students in the District 3-2 sample had a medical exemption for one more vaccine; 10 (2.6%) students had a religious exemption on file (Table 3-2-A).

Table 3-2-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 3-2, 2018

	2018, State	Year, District 3-2		Gender, 2018, District 3-2		School type, 2018, District 3-2	
	Overall n = 7,057 (%)	2017 n = 378 (%)	2018 n = 382 (%)	Male n = 221 (%)	Female n = 158 (%)	Public n = 277 (%)	Private n = 105 (%)
UTD rate*	93.9 ± 0.6	94.7 ± 2.3	93.5 ± 2.5	93.7 ± 3.2	93.7 ± 3.8	92.8 ± 3.1	95.2 ± 4.1
3+ Hepatitis B	98.2 ± 0.3	98.9 ± 1.0	99.0 ± 1.0	99.5 ± 0.9	98.1 ± 2.1	99.3 ± 1.0	98.1 ± 2.6
2+ MMR	97.9 ± 0.3	98.4 ± 1.3	97.9 ± 1.4	98.2 ± 1.8	97.5 ± 2.5	98.2 ± 1.6	97.1 ± 3.2
2+ Varicella	97.0 ± 0.4	97.1 ± 1.7	97.1 ± 1.7	98.2 ± 1.8	95.6 ± 3.2	97.8 ± 1.7	95.2 ± 4.1
1 Tdap	95.7 ± 0.5	97.9 ± 1.5	96.1 ± 1.9	95.9 ± 2.6	96.8 ± 2.7	95.7 ± 2.4	97.1 ± 3.2
1 MCV4	95.5 ± 0.5	97.1 ± 1.7	95.8 ± 2.0	94.6 ± 3.0	97.5 ± 2.5	95.3 ± 2.5	97.1 ± 3.2
4+ Polio	97.3 ± 0.4	98.4 ± 1.3	97.6 ± 1.5	97.7 ± 2.0	97.5 ± 2.5	97.8 ± 1.7	97.1 ± 3.2
1 HPV	50.6 ± 1.2	51.6 ± 5.0	47.6 ± 5.0	47.1 ± 6.6	49.4 ± 7.8	48.4 ± 5.9	45.7 ± 9.5
Complete HPV series	23.4 ± 1.0	25.1 ± 4.4	20.4 ± 4.0	22.6 ± 5.5	17.7 ± 6.0	19.5 ± 4.7	22.9 ± 8.0

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 3-3 (Clayton)



The 2018 GAIS sampled 390 seventh grade adolescents in District 3-3 from 19 middle schools (18 public, 1 private) (Table 3-3-A). Of the students sampled, 49.5% were male, 50.0% were female, and 0.5% had missing gender information. Students enrolled in public schools

accounted for 99.5% of the sample; only 0.5% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 3-3, the 2018 UTD vaccination rate for 7th graders was 96.2%, higher than the 2017 rate (95.9%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 3-3-B).

The 2018 District 3-3 vaccination rates for UTD, HepB, MMR, Varicella, Tdap, MCV4 and 1 HPV were significantly higher than the state rates. The 2018 District 3-3 vaccination rates for 1 HPV was significantly higher than the 2017 rates. The 2018 District 3-3 vaccination rates for Tdap and MCV4 were significantly higher for female students than male students (Table 3-3-B).

Table 3-3-A: Gender, school type, waiver and exemptions among District 3-3 adolescents, 2018 (n = 390).

		# of students	Percent of sample (%)
Gender	Male	193	49.5
	Female	195	50.0
	Unknown	2	0.5
School type	Public (18)	388	99.5
	Private (1)	2	0.5
Within waiver period?	Yes	0	0.0
	No	390	100.0
Exemptions	Religious	5	1.3
	Medical	0	0.0
	No exemption	385	98.7

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 3-3 sample were found to be in the school “waiver” period (Table 3-3-A).

None of the students in the District 3-3 sample had a medical exemption for one more vaccines; 5 (1.3%) students had a religious exemption on file (Table 3-3-A).

Table 3-3-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 3-3, 2018

	2018, State	Year, District 3-3		Gender, 2018, District 3-3		School type, 2018, District 3-3		
	Overall n = 7,057 (%)	2017 n = 294 (%)	2018 n = 390 (%)	Male n = 193 (%)	Female n = 195 (%)	Public n = 388 (%)	Private n = 2 (%)	
UTD rate*	93.9 ± 0.6	95.9 ± 2.3	96.2 ± 1.9	95.3 ± 3.0	97.4 ± 2.2	96.1 ± 1.9		
3+ Hepatitis B	98.2 ± 0.3	98.3 ± 1.5	99.5 ± 0.7	100.0 ± 0.0	99.5 ± 1.0	99.5 ± 0.7		
2+ MMR	97.9 ± 0.3	99.7 ± 0.7	99.7 ± 0.5	100.0 ± 0.0	100.0 ± 0.0	99.7 ± 0.5		Sample size
2+ Varicella	97.0 ± 0.4	98.3 ± 1.5	98.5 ± 1.2	99.5 ± 1.0	97.9 ± 2.0	98.5 ± 1.2		is too small
1 Tdap	95.7 ± 0.5	98.0 ± 1.6	97.4 ± 1.6	95.9 ± 2.8	99.5 ± 1.0	97.4 ± 1.6		to generate
1 MCV4	95.5 ± 0.5	97.6 ± 1.7	97.7 ± 1.5	96.4 ± 2.6	99.5 ± 1.0	97.7 ± 1.5		meaningful
4+ Polio	97.3 ± 0.4	98.6 ± 1.3	97.9 ± 1.4	98.4 ± 1.7	97.9 ± 2.0	97.9 ± 1.4		estimates or
1 HPV	50.6 ± 1.2	58.5 ± 5.6	65.9 ± 4.7	62.7 ± 6.8	69.2 ± 6.5	65.7 ± 4.7		comparisons
Complete HPV series	23.4 ± 1.0	23.1 ± 4.8	26.9 ± 4.4	22.8 ± 5.9	30.8 ± 6.5	26.8 ± 4.4		

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 3-4 (Gwinnett/ Newton/ Rockdale)



The 2018 GAIS sampled 398 seventh grade adolescents in District 3-4 from 30 middle schools (17 public, 13 private) (Table 3-4-A). Of the students sampled, 51.3% were male, 48.0% were female, and 0.8% had missing gender information.

Students enrolled in public schools accounted for 59.8% of the sample; 40.2% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by 1/1/18. In District 3-4, the 2018 UTD vaccination rate for 7th graders was 93.2%, higher than the 2017 rate (91.4%) and lower than the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 3-4-B).

The 2018 District 3-4 vaccination rates were similar to the state averages and 2017 rates. The 2018 District 3-4 vaccination rate for 1 HPV was significantly higher for female students than male students. The vaccination rates for HPV (1-shot and complete series) were significantly higher for public school students than private school students (Table 3-4-B).

Table 3-4-A: Gender, school type, waiver and exemptions among District 3-4 adolescents, 2018 (n = 398).

		# of students	Percent of sample (%)
Gender	Male	204	51.3
	Female	191	48.0
	Unknown	3	0.8
School type	Public (17)	238	59.8
	Private (13)	160	40.2
Within waiver period?	Yes	0	0.0
	No	398	100.0
Exemptions	Religious	14	3.5
	Medical	0	0.0
	No exemption	384	96.5

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 3-4 sample were found to be in the school “waiver” period (Table 3-4-A).

None of the students in the District 3-4 sample had a medical exemption for one more vaccines; 14 (3.5%) students had a religious exemption on file (Table 3-4-A).

Table 3-4-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 3-4, 2018

	2018, State	Year, District 3-4		Gender, 2018, District 3-4		School type, 2018, District 3-4	
	Overall n = 7,057 (%)	2017 n = 362 (%)	2018 n = 398 (%)	Male n = 204 (%)	Female n = 191 (%)	Public n = 238 (%)	Private n = 160 (%)
UTD rate*	93.9 ± 0.6	91.4 ± 2.9	93.2 ± 2.5	93.1 ± 3.5	94.8 ± 3.2	92.9 ± 3.3	93.8 ± 3.8
3+ Hepatitis B	98.2 ± 0.3	97.0 ± 1.8	98.2 ± 1.3	98.5 ± 1.7	99.5 ± 1.0	98.7 ± 1.4	97.5 ± 2.4
2+ MMR	97.9 ± 0.3	97.8 ± 1.5	98.2 ± 1.3	98.5 ± 1.7	99.5 ± 1.0	98.7 ± 1.4	97.5 ± 2.4
2+ Varicella	97.0 ± 0.4	95.0 ± 2.2	97.0 ± 1.7	97.5 ± 2.1	97.9 ± 2.0	97.1 ± 2.1	96.9 ± 2.7
1 Tdap	95.7 ± 0.5	96.4 ± 1.9	95.2 ± 2.1	95.6 ± 2.8	96.3 ± 2.7	95.8 ± 2.6	94.4 ± 3.6
1 MCV4	95.5 ± 0.5	97.0 ± 1.8	94.7 ± 2.2	95.1 ± 3.0	95.8 ± 2.8	95.0 ± 2.8	94.4 ± 3.6
4+ Polio	97.3 ± 0.4	97.0 ± 1.8	97.5 ± 1.5	98.5 ± 1.7	97.9 ± 2.0	97.9 ± 1.8	96.9 ± 2.7
1 HPV	50.6 ± 1.2	45.9 ± 5.1	49.7 ± 4.9	45.1 ± 6.8	55.5 ± 7.1	58.0 ± 6.3	37.5 ± 7.5
Complete HPV series	23.4 ± 1.0	24.3 ± 4.4	19.6 ± 3.9	18.6 ± 5.3	20.9 ± 5.8	23.9 ± 5.4	13.1 ± 5.2

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.
 Red font indicates a rate decrease since 2017.
 Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 3-5 (DeKalb)



The 2018 GAIS sampled 402 seventh grade adolescents in District 3-5 from 30 middle schools (17 public, 13 private) (Table 3-5-A). Of the students sampled, 50.2% were male, 47.8% were female, and 2.0% had missing gender information. Students enrolled in public schools

accounted for 57.0% of the sample; 43.0% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by 1/1/2018. In District 3-5, the 2018 UTD vaccination rate for 7th graders was 91.5%, higher than the 2017 rate (87.2%) and lower than the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 3-5-B).

The 2018 District 3-5 vaccination rates for HPV (1-shot and complete series) were significantly higher than the state rates, whereas the vaccination rate for HepB, MMR, Varicella and Polio were significantly lower. The 2018 District 3-5 vaccination rates did not differ significantly from 2017 rates or between genders. The vaccination rates for UTD, HepB, MMR and Varicella were significantly higher for public school students than private school students, whereas the vaccination rates for completing the HPV series was significantly lower (Table 3-5-B).

Table 3-5-A: Gender, school type, waiver and exemptions among District 3-5 adolescents, 2018 (n = 402).

		# of students	Percent of sample (%)
Gender	Male	202	50.2
	Female	192	47.8
	Unknown	8	2.0
School type	Public (17)	229	57.0
	Private (13)	173	43.0
Within waiver period?	Yes	2	0.5
	No	400	99.5
Exemptions	Religious	15	3.7
	Medical	1	0.2
	No exemption	386	96.0

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. Only two (0.5%) of the students in the District 3-5 sample were found to be in the school waiver period (Table 3-5-A).

One (0.2%) of the students in the District 3-5 sample had a medical exemption for one more vaccine; 15 (3.7%) students had a religious exemption on file (Table 3-5-A).

Table 3-5-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 3-5, 2018

	2018, State	Year, District 3-5		Gender, 2018, District 3-5		School type, 2018, District 3-5	
	Overall n = 7,057 (%)	2017 n = 345 (%)	2018 n = 402 (%)	Male n = 202 (%)	Female n = 192 (%)	Public n = 229 (%)	Private n = 173 (%)
UTD rate*	93.9 ± 0.6	87.2 ± 3.5	91.5 ± 2.7	92.6 ± 3.6	93.8 ± 3.4	94.8 ± 2.9	87.3 ± 5.0
3+ Hepatitis B	98.2 ± 0.3	93.6 ± 2.6	94.8 ± 2.2	96.5 ± 2.5	96.4 ± 2.7	97.8 ± 1.9	90.8 ± 4.3
2+ MMR	97.9 ± 0.3	96.2 ± 2.0	95.3 ± 2.1	96.5 ± 2.5	97.4 ± 2.3	97.4 ± 2.1	92.5 ± 3.9
2+ Varicella	97.0 ± 0.4	93.3 ± 2.6	94.5 ± 2.2	95.5 ± 2.8	96.9 ± 2.5	96.9 ± 2.2	91.3 ± 4.2
1 Tdap	95.7 ± 0.5	93.9 ± 2.5	93.8 ± 2.4	95.0 ± 3.0	95.8 ± 2.8	95.6 ± 2.6	91.3 ± 4.2
1 MCV4	95.5 ± 0.5	93.6 ± 2.6	93.3 ± 2.4	95.0 ± 3.0	94.8 ± 3.1	95.2 ± 2.8	90.8 ± 4.3
4+ Polio	97.3 ± 0.4	94.2 ± 2.5	94.0 ± 2.3	96.0 ± 2.7	95.3 ± 3.0	96.1 ± 2.5	91.3 ± 4.2
1 HPV	50.6 ± 1.2	54.2 ± 5.3	60.0 ± 4.8	59.4 ± 6.8	63.0 ± 6.8	60.7 ± 6.3	59.0 ± 7.3
Complete HPV series	23.4 ± 1.0	25.8 ± 4.6	31.6 ± 4.5	34.2 ± 6.5	30.2 ± 6.5	26.6 ± 5.7	38.2 ± 7.2

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 4-0 (LaGrange)



The 2018 GAIS sampled 386 seventh grade adolescents in District 4-0 from 30 middle schools (21 public, 9 private) (Table 4-0-A). Of the students sampled, 54.1% were male, 45.6% were female, and 0.3% had missing gender information.

Students enrolled in public schools accounted for 76.4% of the sample; 23.6% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 4-0, the 2018 UTD vaccination rate for 7th graders was 88.3%, lower than the 2017 rate (90.3%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 4-0-B).

The 2018 District 4-0 vaccination rates for UTD, MMR, Varicella, Tdap, MCV4 and HPV (1-shot and complete series) were significantly lower than the state rates. The 2018 District 4-0 vaccination rates did not differ significantly from 2017 rates or between genders. The vaccination rates for Tdap and HPV (1-shot and complete series) were significantly higher for public school students than private school students (Table 4-0-B).

Table 4-0-A: Gender, school type, waiver and exemptions among District 4-0 adolescents, 2018 (n = 386).

		# of students	Percent of sample (%)
Gender	Male	209	54.1
	Female	176	45.6
	Unknown	1	0.3
School type	Public (21)	295	76.4
	Private (9)	91	23.6
Within waiver period?	Yes	0	0.0
	No	386	100.0
Exemptions	Religious	26	6.7
	Medical	1	0.3
	No exemption	359	93.0

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 4-0 sample were found to be in the school “waiver” period (Table 4-0-A).

One (0.3%) of the students in the District 4-0 sample had a medical exemption for one more vaccine; 26 (6.7%) students had a religious exemption on file (Table 4-0-A).

Table 4-0-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 4-0, 2018

	2018, State	Year, District 4-0		Gender, 2018, District 4-0		School type, 2018, District 4-0	
	Overall n = 7,057 (%)	2017 n = 341 (%)	2018 n = 386 (%)	Male n = 209 (%)	Female n = 176 (%)	Public n = 295 (%)	Private n = 91 (%)
UTD rate*	93.9 ± 0.6	90.3 ± 3.1	88.3 ± 3.2	89.5 ± 4.2	87.5 ± 4.9	90.2 ± 3.4	82.4 ± 7.8
3+ Hepatitis B	98.2 ± 0.3	96.8 ± 1.9	96.9 ± 1.7	97.1 ± 2.3	97.2 ± 2.5	96.9 ± 2.0	96.7 ± 3.7
2+ MMR	97.9 ± 0.3	95.6 ± 2.2	95.3 ± 2.1	96.7 ± 2.4	94.3 ± 3.4	96.3 ± 2.2	92.3 ± 5.5
2+ Varicella	97.0 ± 0.4	94.1 ± 2.5	94.8 ± 2.2	96.7 ± 2.4	93.2 ± 3.7	95.9 ± 2.3	91.2 ± 5.8
1 Tdap	95.7 ± 0.5	93.3 ± 2.7	90.4 ± 2.9	90.0 ± 4.1	91.5 ± 4.1	92.5 ± 3.0	83.5 ± 7.6
1 MCV4	95.5 ± 0.5	93.5 ± 2.6	90.2 ± 3.0	90.0 ± 4.1	90.9 ± 4.3	91.9 ± 3.1	84.6 ± 7.4
4+ Polio	97.3 ± 0.4	94.4 ± 2.4	95.9 ± 2.0	96.7 ± 2.4	95.5 ± 3.1	96.9 ± 2.0	92.3 ± 5.5
1 HPV	50.6 ± 1.2	37.8 ± 5.2	44.6 ± 5.0	46.9 ± 6.8	42.0 ± 7.3	48.8 ± 5.7	30.8 ± 9.5
Complete HPV series	23.4 ± 1.0	17.3 ± 4.0	18.4 ± 3.9	20.1 ± 5.4	16.5 ± 5.5	20.3 ± 4.6	12.1 ± 6.7

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 5-1 (Dublin)



The 2018 GAIS sampled 391 seventh grade adolescents in District 5-1 from 14 middle schools (12 public, 2 private) (Table 5-1-A). Of the students sampled, 52.2% were male, 47.6% were female, and 0.3% had missing gender information.

Students enrolled in public schools accounted for 91.3% of the sample; 8.7% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 5-1, the 2018 UTD vaccination rate for 7th graders was 91.8%, lower than the 2017 rate (97.3%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 5-1-B).

The 2018 District 5-1 vaccination rates for HepB, MMR and Polio were significantly higher than the state rates, whereas the rates for MCV4 and 1 HPV were significantly lower. The 2018 District 5-1 vaccination rates for UTD, Tdap and MCV4 were significantly lower than the 2017 rates. The 2018 vaccination estimates for male and female students did not differ significantly. The vaccination rates for HPV (1-shot and complete series) were significantly higher for public school students than private school students (Table 5-1-B).

Table 5-1-A: Gender, school type, waiver and exemptions among District 5-1 adolescents, 2018 (n = 391).

		# of students	Percent of sample (%)
Gender	Male	204	52.2
	Female	186	47.6
	Unknown	1	0.3
School type	Public (12)	357	91.3
	Private (2)	34	8.7
Within waiver period?	Yes	0	0.0
	No	391	100.0
Exemptions	Religious	5	1.3
	Medical	1	0.3
	No exemption	385	98.5

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 5-1 sample were found to be in the school “waiver” period (Table 5-1-A).

One (0.3%) of the students in the District 5-1 sample had a medical exemption for one more vaccines; 5 (1.3%) students had a religious exemption on file (Table 5-1-A).

Table 5-1-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 5-1, 2018

	2018, State	Year, District 5-1		Gender, 2018, District 5-1		School type, 2018, District 5-1	
	Overall n = 7,057 (%)	2017 n = 367 (%)	2018 n = 391 (%)	Male n = 204 (%)	Female n = 186 (%)	Public n = 357 (%)	Private n = 34 (%)
UTD rate*	93.9 ± 0.6	97.3 ± 1.7	91.8 ± 2.7	91.7 ± 3.8	92.5 ± 3.8	91.3 ± 2.9	97.1 ± 5.7
3+ Hepatitis B	98.2 ± 0.3	99.7 ± 0.5	99.2 ± 0.9	99.0 ± 1.4	100.0 ± 0.0	99.4 ± 0.8	97.1 ± 5.7
2+ MMR	97.9 ± 0.3	99.7 ± 0.5	99.0 ± 1.0	99.0 ± 1.4	99.5 ± 1.1	98.9 ± 1.1	100.0 ± 0.0
2+ Varicella	97.0 ± 0.4	99.2 ± 0.9	98.0 ± 1.4	97.5 ± 2.1	98.9 ± 1.5	97.8 ± 1.5	100.0 ± 0.0
1 Tdap	95.7 ± 0.5	98.1 ± 1.4	93.4 ± 2.5	94.1 ± 3.2	93.0 ± 3.7	92.7 ± 2.7	100.0 ± 0.0
1 MCV4	95.5 ± 0.5	97.8 ± 1.5	92.8 ± 2.6	93.6 ± 3.4	92.5 ± 3.8	92.2 ± 2.8	100.0 ± 0.0
4+ Polio	97.3 ± 0.4	99.2 ± 0.9	98.7 ± 1.1	98.5 ± 1.7	99.5 ± 1.1	98.9 ± 1.1	97.1 ± 5.7
1 HPV	50.6 ± 1.2	40.3 ± 5.0	43.0 ± 4.9	41.7 ± 6.8	44.6 ± 7.1	45.1 ± 5.2	20.6 ± 13.6
Complete HPV series	23.4 ± 1.0	16.6 ± 3.8	19.9 ± 4.0	19.1 ± 5.4	21.0 ± 5.9	21.6 ± 4.3	2.9 ± 5.7

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 5-2 (Macon)



The 2018 GAIS sampled 412 seventh grade adolescents in District 5-2 from 30 middle schools (17 public, 13 private) (Table 5-2-A). Of the students sampled, 47.8% were male, 51.9% were female, and 0.2% had missing gender information.

Students enrolled in public schools accounted for 58.7% of the sample; 41.3% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 5-2, the 2018 UTD vaccination rate for 7th graders was 93%, lower than the 2017 rate (94.8%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 5-2-B).

The 2018 District 5-2 vaccination rates for HepB, MMR, Varicella and Polio were significantly lower than the state rates. The 2018 District 5-2 vaccination rates for HepB, MMR, Varicella and Polio were significantly lower than the 2017 rates. The 2018 District 5-2 vaccination rate for completing the HPV series was significantly higher for female students than male students. The vaccination rates for HPV (1-shot and complete series) were significantly higher for public school students than private school students (Table 5-2-B).

Table 5-2-A: Gender, school type, waiver and exemptions among District 5-2 adolescents, 2018 (n = 412).

		# of students	Percent of sample (%)
Gender	Male	197	47.8
	Female	214	51.9
	Unknown	1	0.2
School type	Public (17)	242	58.7
	Private (13)	170	41.3
Within waiver period?	Yes	0	0.0
	No	412	100.0
Exemptions	Religious	20	4.9
	Medical	0	0.0
	No exemption	392	95.1

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 5-2 sample were found to be in the school “waiver” period (Table 5-2-A).

None of the students in the District 5-2 sample had a medical exemption for one more vaccine; 20 (4.9%) students had a religious exemption on file (Table 5-2-A).

Table 5-2-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 5-2, 2018

	2018, State	Year, District 5-2		Gender, 2018, District 5-2		School type, 2018, District 5-2	
	Overall n = 7,057 (%)	2017 n = 381 (%)	2018 n = 412 (%)	Male n = 197 (%)	Female n = 214 (%)	Public n = 242 (%)	Private n = 170 (%)
UTD rate*	93.9 ± 0.6	94.8 ± 2.2	93.0 ± 2.5	90.9 ± 4.0	95.3 ± 2.8	93.0 ± 3.2	92.9 ± 3.9
3+ Hepatitis B	98.2 ± 0.3	99.2 ± 0.9	96.1 ± 1.9	95.4 ± 2.9	97.2 ± 2.2	96.7 ± 2.3	95.3 ± 3.2
2+ MMR	97.9 ± 0.3	99.0 ± 1.0	95.9 ± 1.9	94.9 ± 3.1	97.2 ± 2.2	96.7 ± 2.3	94.7 ± 3.4
2+ Varicella	97.0 ± 0.4	98.4 ± 1.3	94.7 ± 2.2	92.9 ± 3.6	96.7 ± 2.4	95.0 ± 2.7	94.1 ± 3.5
1 Tdap	95.7 ± 0.5	95.5 ± 2.1	94.7 ± 2.2	93.9 ± 3.3	95.8 ± 2.7	94.6 ± 2.8	94.7 ± 3.4
1 MCV4	95.5 ± 0.5	95.5 ± 2.1	94.4 ± 2.2	93.4 ± 3.5	95.8 ± 2.7	94.6 ± 2.8	94.1 ± 3.5
4+ Polio	97.3 ± 0.4	98.7 ± 1.1	95.4 ± 2.0	94.4 ± 3.2	96.7 ± 2.4	96.3 ± 2.4	94.1 ± 3.5
1 HPV	50.6 ± 1.2	46.7 ± 5.0	47.1 ± 4.8	44.2 ± 6.9	50.0 ± 6.7	53.7 ± 6.3	37.6 ± 7.3
Complete HPV series	23.4 ± 1.0	23.9 ± 4.3	21.4 ± 4.0	16.8 ± 5.2	25.7 ± 5.9	27.3 ± 5.6	12.9 ± 5.0

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 6-0 (Augusta)



The 2018 GAIS sampled 404 seventh grade adolescents in District 6-0 from 30 middle schools (20 public, 10 private) (Table 6-0-A). Of the students sampled, 54.7% were male, 45.3% were female. Students enrolled in public schools accounted for 70.0% of the sample; 30.0% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 6-0, the 2018 UTD vaccination rate for 7th graders was 94.6%, lower than the 2017 rate (95.8%) and higher than the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 6-0-B).

The 2018 District 6-0 vaccination rates for HepB, MMR and Polio were significantly higher than the state rates. The 2018 District 6-0 vaccination rate for MMR was significantly lower than the 2017 rate. The 2018 District 6-0 vaccination rate for 1 HPV was significantly higher for female students than male students. The vaccination rate for 1 HPV was significantly higher for public school students than private school students, whereas the vaccination rates for UTD were significantly lower (Table 6-0-B).

Table 6-0-A: Gender, school type, waiver and exemptions among District 6-0 adolescents, 2018 (n = 404).

		# of students	Percent of sample (%)
Gender	Male	221	54.7
	Female	183	45.3
	Unknown	0	0.0
School type	Public (20)	283	70.0
	Private (10)	121	30.0
Within waiver period?	Yes	0	0.0
	No	404	100.0
Exemptions	Religious	3	0.7
	Medical	0	0.0
	No exemption	401	99.3

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 6-0 sample were found to be in the school “waiver” period (Table 6-0-A).

None of the students in the District 6-0 sample had a medical exemption for one more vaccines; 3 (0.7%) students had a religious exemption on file (Table 6-0-A).

Table 6-0-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 6-0, 2018

	2018, State	Year, District 6-0		Gender, 2018, District 6-0		School type, 2018, District 6-0	
	Overall n = 7,057 (%)	2017 n = 356 (%)	2018 n = 404 (%)	Male n = 221 (%)	Female n = 183 (%)	Public n = 283 (%)	Private n = 121 (%)
UTD rate*	93.9 ± 0.6	95.8 ± 2.1	94.6 ± 2.2	95.0 ± 2.9	94.0 ± 3.4	93.3 ± 2.9	97.5 ± 2.8
3+ Hepatitis B	98.2 ± 0.3	100.0 ± 0.0	99.3 ± 0.8	99.1 ± 1.2	99.5 ± 1.1	99.3 ± 1.0	99.2 ± 1.6
2+ MMR	97.9 ± 0.3	100.0 ± 0.0	99.0 ± 1.0	98.6 ± 1.5	99.5 ± 1.1	98.9 ± 1.2	99.2 ± 1.6
2+ Varicella	97.0 ± 0.4	98.0 ± 1.4	97.5 ± 1.5	97.3 ± 2.1	97.8 ± 2.1	96.8 ± 2.0	99.2 ± 1.6
1 Tdap	95.7 ± 0.5	97.8 ± 1.5	96.3 ± 1.8	96.8 ± 2.3	95.6 ± 3.0	95.8 ± 2.3	97.5 ± 2.8
1 MCV4	95.5 ± 0.5	97.2 ± 1.7	96.5 ± 1.8	96.8 ± 2.3	96.2 ± 2.8	96.1 ± 2.3	97.5 ± 2.8
4+ Polio	97.3 ± 0.4	99.2 ± 1.0	98.5 ± 1.2	98.2 ± 1.8	98.9 ± 1.5	98.2 ± 1.5	99.2 ± 1.6
1 HPV	50.6 ± 1.2	50.8 ± 5.2	48.3 ± 4.9	43.0 ± 6.5	54.6 ± 7.2	51.6 ± 5.8	40.5 ± 8.8
Complete HPV series	23.4 ± 1.0	25.8 ± 4.6	23.3 ± 4.1	22.2 ± 5.5	24.6 ± 6.2	25.4 ± 5.1	18.2 ± 6.9

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 7-0 (Columbus)



The 2018 GAIS sampled 377 seventh grade adolescents in District 7-0 from 30 middle schools (18 public, 12 private) (Table 7-0-A). Of the students sampled, 45.6% were male, 54.1% were female, and 0.3% had missing gender information. Students enrolled in public schools

accounted for 71.4% of the sample; 28.6% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 7-0, the 2018 UTD vaccination rate for 7th graders was 93.6%, lower than the 2017 rate (94.5%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 7-0-B).

The 2018 District 7-0 vaccination rates for HPV (1-shot and complete series) were significantly higher than the state rates. The 2018 District 7-0 vaccination rates did not differ significantly from 2017 rates or between genders. The vaccination rates for UTD and HPV (1-shot and complete series) were significantly higher for public school students than private school students (Table 7-0-B).

Table 7-0-A: Gender, school type, waiver and exemptions among District 7-0 adolescents, 2018 (n = 377).

		# of students	Percent of sample (%)
Gender	Male	172	45.6
	Female	204	54.1
	Unknown	1	0.3
School type	Public (18)	269	71.4
	Private (12)	108	28.6
Within waiver period?	Yes	2	0.5
	No	375	99.5
Exemptions	Religious	6	1.6
	Medical	1	0.3
	No exemption	371	98.4

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. Only two (0.5%) of the students in the District 7-0 sample were found to be in the school waiver period (Table 7-0-A).

One (0.3%) of the students in the District 7-0 sample had a medical exemption for one more vaccines; 6 (1.6%) students had a religious exemption on file (Table 7-0-A).

Table 7-0-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 7-0, 2018

	2018, State	Year, District 7-0		Gender, 2018, District 7-0		School type, 2018, District 7-0	
	Overall n = 7,057 (%)	2017 n = 329 (%)	2018 n = 377 (%)	Male n = 172 (%)	Female n = 204 (%)	Public n = 269 (%)	Private n = 108 (%)
UTD rate*	93.9 ± 0.6	94.5 ± 2.5	93.6 ± 2.5	95.3 ± 3.1	92.2 ± 3.7	95.5 ± 2.5	88.9 ± 5.9
3+ Hepatitis B	98.2 ± 0.3	97.3 ± 1.8	98.1 ± 1.4	98.3 ± 2.0	98.0 ± 1.9	98.9 ± 1.3	96.3 ± 3.6
2+ MMR	97.9 ± 0.3	97.3 ± 1.8	97.9 ± 1.5	98.8 ± 1.6	97.1 ± 2.3	98.9 ± 1.3	95.4 ± 4.0
2+ Varicella	97.0 ± 0.4	97.0 ± 1.9	97.6 ± 1.5	98.3 ± 2.0	97.1 ± 2.3	98.5 ± 1.4	95.4 ± 4.0
1 Tdap	95.7 ± 0.5	95.7 ± 2.2	95.0 ± 2.2	97.1 ± 2.5	93.1 ± 3.5	96.3 ± 2.3	91.7 ± 5.2
1 MCV4	95.5 ± 0.5	95.1 ± 2.3	95.2 ± 2.2	97.1 ± 2.5	93.6 ± 3.4	96.7 ± 2.2	91.7 ± 5.2
4+ Polio	97.3 ± 0.4	97.0 ± 1.9	96.3 ± 1.9	97.1 ± 2.5	95.6 ± 2.8	97.4 ± 1.9	93.5 ± 4.6
1 HPV	50.6 ± 1.2	64.7 ± 5.2	61.3 ± 4.9	60.5 ± 7.3	61.8 ± 6.7	69.5 ± 5.5	40.7 ± 9.3
Complete HPV series	23.4 ± 1.0	34.3 ± 5.1	31.6 ± 4.7	32.0 ± 7.0	30.9 ± 6.3	36.1 ± 5.7	20.4 ± 7.6

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 8-1 (Valdosta)



The 2018 GAIS sampled 394 seventh grade adolescents in District 8-1 from 25 middle schools (16 public, 9 private) (Table 8-1-A). Of the students sampled, 45.2% were male, 54.6% were female, and 0.3% had missing gender information.

Students enrolled in public schools accounted for 74.4% of the sample; 25.6% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 8-1, the 2018 UTD vaccination rate for 7th graders was 97.5%, lower than the 2017 rate (98.8%) and higher than the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 8-1-B).

The 2018 District 8-1 vaccination rates for every vaccination was significantly higher than the state rates. The 2018 District 8-1 vaccination rate for 1 HPV was significantly higher than the 2017 rates. The 2018 vaccination estimates for male and female students did not differ significantly. The vaccination rates for 1 HPV were significantly higher for public school students than private school students (Table 8-1-B).

Table 8-1-A: Gender, school type, waiver and exemptions among District 8-1 adolescents, 2018 (n = 394).

		# of students	Percent of sample (%)
Gender	Male	178	45.2
	Female	215	54.6
	Unknown	1	0.3
School type	Public (16)	293	74.4
	Private (9)	101	25.6
Within waiver period?	Yes	0	0.0
	No	394	100.0
Exemptions	Religious	3	0.8
	Medical	1	0.3
	No exemption	390	99.0

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 8-1 sample were found to be in the school “waiver” period (Table 8-1-A).

One (0.3%) of the students in the District 8-1 sample had a medical exemption for one more vaccines; 3 (0.8%) students had a religious exemption on file (Table 8-1-A).

Table 8-1-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 8-1, 2018

	2018, State	Year, District 8-1		Gender, 2018, District 8-1		School type, 2018, District 8-1	
	Overall n = 7,057 (%)	2017 n = 343 (%)	2018 n = 394 (%)	Male n = 178 (%)	Female n = 215 (%)	Public n = 293 (%)	Private n = 101 (%)
UTD rate*	93.9 ± 0.6	98.8 ± 1.1	97.5 ± 1.6	97.8 ± 2.2	97.7 ± 2.0	98.6 ± 1.3	94.1 ± 4.6
3+ Hepatitis B	98.2 ± 0.3	100.0 ± 0.0	99.5 ± 0.7	99.4 ± 1.1	99.5 ± 0.9	99.3 ± 0.9	100.0 ± 0.0
2+ MMR	97.9 ± 0.3	100.0 ± 0.0	99.2 ± 0.9	99.4 ± 1.1	99.1 ± 1.3	99.3 ± 0.9	99.0 ± 1.9
2+ Varicella	97.0 ± 0.4	99.1 ± 1.0	98.5 ± 1.2	98.3 ± 1.9	98.6 ± 1.6	99.0 ± 1.2	97.0 ± 3.3
1 Tdap	95.7 ± 0.5	99.7 ± 0.6	98.7 ± 1.1	98.9 ± 1.5	99.1 ± 1.3	99.0 ± 1.2	98.0 ± 2.7
1 MCV4	95.5 ± 0.5	99.7 ± 0.6	98.5 ± 1.2	98.3 ± 1.9	99.1 ± 1.3	99.0 ± 1.2	97.0 ± 3.3
4+ Polio	97.3 ± 0.4	100.0 ± 0.0	99.0 ± 1.0	99.4 ± 1.1	98.6 ± 1.6	99.0 ± 1.2	99.0 ± 1.9
1 HPV	50.6 ± 1.2	46.6 ± 5.3	56.1 ± 4.9	51.7 ± 7.3	60.0 ± 6.6	63.5 ± 5.5	34.7 ± 9.3
Complete HPV series	23.4 ± 1.0	23.3 ± 4.5	27.9 ± 4.4	25.3 ± 6.4	30.2 ± 6.1	30.0 ± 5.3	21.8 ± 8.1

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 8-2 (Albany)



The 2018 GAIS sampled 387 seventh grade adolescents in District 8-2 from 30 middle schools (21 public, 9 private) (Table 8-2-A). Of the students sampled, 49.9% were male, 49.9% were female, and 0.3% had missing gender information.

Students enrolled in public schools accounted for 73.1% of the sample; 26.9% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 8-2, the 2018 UTD vaccination rate for 7th graders was 99%, higher than the 2017 rate (97.8%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 8-2-B).

The 2018 District 8-2 vaccination rates for UTD, HepB, MMR, Varicella, Tdap, MCV4 and HPV (1-shot and complete series) were significantly higher than the state rates. The 2018 District 8-2 vaccination rates did not differ significantly from 2017 rates or between genders. The vaccination rates for Polio and HPV (1-shot and complete series) were significantly higher for public school students than private school students (Table 8-2-B).

Table 8-2-A: Gender, school type, waiver and exemptions among District 8-2 adolescents, 2018 (n = 387).

		# of students	Percent of sample (%)
Gender	Male	193	49.9
	Female	193	49.9
	Unknown	1	0.3
School type	Public (21)	283	73.1
	Private (9)	104	26.9
Within waiver period?	Yes	0	0.0
	No	387	100.0
Exemptions	Religious	1	0.3
	Medical	0	0.0
	No exemption	386	99.7

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 8-2 sample were found to be in the school “waiver” period (Table 8-2-A).

None of the students in the District 8-2 sample had a medical exemption for one more vaccines; 1 (0.3%) students had a religious exemption on file (Table 8-2-A).

Table 8-2-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 8-2, 2018

	2018, State	Year, District 8-2		Gender, 2018, District 8-2		School type, 2018, District 8-2	
	Overall n = 7,057 (%)	2017 n = 361 (%)	2018 n = 387 (%)	Male n = 193 (%)	Female n = 193 (%)	Public n = 283 (%)	Private n = 104 (%)
UTD rate*	93.9 ± 0.6	97.8 ± 1.5	99.0 ± 1.0	99.5 ± 1.0	99.0 ± 1.4	98.9 ± 1.2	99.0 ± 1.9
3+ Hepatitis B	98.2 ± 0.3	99.4 ± 0.8	99.2 ± 0.9	100.0 ± 0.0	99.0 ± 1.4	99.3 ± 1.0	99.0 ± 1.9
2+ MMR	97.9 ± 0.3	99.4 ± 0.8	99.5 ± 0.7	100.0 ± 0.0	99.5 ± 1.0	99.6 ± 0.7	99.0 ± 1.9
2+ Varicella	97.0 ± 0.4	99.2 ± 0.9	99.5 ± 0.7	100.0 ± 0.0	99.5 ± 1.0	99.6 ± 0.7	99.0 ± 1.9
1 Tdap	95.7 ± 0.5	98.1 ± 1.4	99.5 ± 0.7	99.5 ± 1.0	100.0 ± 0.0	99.6 ± 0.7	99.0 ± 1.9
1 MCV4	95.5 ± 0.5	98.1 ± 1.4	99.5 ± 0.7	99.5 ± 1.0	100.0 ± 0.0	99.6 ± 0.7	99.0 ± 1.9
4+ Polio	97.3 ± 0.4	99.2 ± 0.9	98.4 ± 1.2	99.5 ± 1.0	97.9 ± 2.0	99.6 ± 0.7	95.2 ± 4.1
1 HPV	50.6 ± 1.2	53.5 ± 5.1	58.1 ± 4.9	57.0 ± 7.0	59.6 ± 6.9	62.5 ± 5.6	46.2 ± 9.6
Complete HPV series	23.4 ± 1.0	30.7 ± 4.8	29.7 ± 4.6	33.2 ± 6.6	26.4 ± 6.2	33.2 ± 5.5	20.2 ± 7.7

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 9-1 (Coastal)



The 2018 GAIS sampled 360 seventh grade adolescents in District 9-1 from 28 middle schools (17 public, 11 private) (Table 9-1-A). Of the students sampled, 51.9% were male, 46.7% were female, and 1.4% had missing gender information.

Students enrolled in public schools accounted for 66.1% of the sample; 33.9% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 9-1, the 2018 UTD vaccination rate for 7th graders was 95.3%, lower than the 2017 rate (97.8%) and higher than the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 9-1-B).

The 2018 District 9-1 vaccination rate for 1 HPV was significantly higher than the state rate. The 2018 District 9-1 vaccination rate for 1 HPV was significantly higher than the 2017 rate, whereas the vaccination rate for Varicella was significantly lower. The 2018 vaccination estimates for male and female students did not differ significantly. The vaccination rates for completing the HPV series was significantly lower for public school students than private school students (Table 9-1-B).

Table 9-1-A: Gender, school type, waiver and exemptions among District 9-1 adolescents, 2018 (n = 360).

		# of students	Percent of sample (%)
Gender	Male	187	51.9
	Female	168	46.7
	Unknown	5	1.4
School type	Public (17)	238	66.1
	Private (11)	122	33.9
Within waiver period?	Yes	5	1.4
	No	355	98.6
Exemptions	Religious	7	1.9
	Medical	0	0.0
	No exemption	353	98.1

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. Only five (1.4%) of the students in the District 9-1 sample were found to be in the school waiver period (Table 9-1-A).

None of the students in the District 9-1 sample had a medical exemption for one more vaccines; 7 (1.9%) students had a religious exemption on file (Table 9-1-A).

Table 9-1-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 9-1, 2018

	2018, State	Year, District 9-1		Gender, 2018, District 9-1		School type, 2018, District 9-1	
	Overall n = 7,057 (%)	2017 n = 489 (%)	2018 n = 360 (%)	Male n = 187 (%)	Female n = 168 (%)	Public n = 238 (%)	Private n = 122 (%)
UTD rate*	93.9 ± 0.6	97.8 ± 1.3	95.3 ± 2.2	95.7 ± 2.9	97.6 ± 2.3	95.0 ± 2.8	95.9 ± 3.5
3+ Hepatitis B	98.2 ± 0.3	99.6 ± 0.6	98.6 ± 1.2	98.9 ± 1.5	99.4 ± 1.2	99.2 ± 1.2	97.5 ± 2.7
2+ MMR	97.9 ± 0.3	99.2 ± 0.8	98.3 ± 1.3	98.4 ± 1.8	99.4 ± 1.2	98.7 ± 1.4	97.5 ± 2.7
2+ Varicella	97.0 ± 0.4	99.4 ± 0.7	97.5 ± 1.6	97.9 ± 2.1	98.2 ± 2.0	97.5 ± 2.0	97.5 ± 2.7
1 Tdap	95.7 ± 0.5	98.2 ± 1.2	97.2 ± 1.7	97.3 ± 2.3	99.4 ± 1.2	97.9 ± 1.8	95.9 ± 3.5
1 MCV4	95.5 ± 0.5	98.2 ± 1.2	96.9 ± 1.8	97.3 ± 2.3	98.8 ± 1.6	97.5 ± 2.0	95.9 ± 3.5
4+ Polio	97.3 ± 0.4	98.6 ± 1.1	97.8 ± 1.5	98.4 ± 1.8	98.2 ± 2.0	97.9 ± 1.8	97.5 ± 2.7
1 HPV	50.6 ± 1.2	52.6 ± 4.4	61.4 ± 5.0	58.8 ± 7.1	66.1 ± 7.2	62.6 ± 6.2	59.0 ± 8.7
Complete HPV series	23.4 ± 1.0	27.8 ± 4.0	26.9 ± 4.6	26.2 ± 6.3	28.6 ± 6.8	23.5 ± 5.4	33.6 ± 8.4

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 9-2 (Waycross)



The 2018 GAIS sampled 405 seventh grade adolescents in District 9-2 from 30 middle schools (21 public, 9 private) (Table 9-2-A). Of the students sampled, 50.1% were male, 48.4% were female, and 1.5% had missing gender information.

Students enrolled in public schools accounted for 73.6% of the sample; 26.4% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 9-2, the 2018 UTD vaccination rate for 7th graders was 93.3%, lower than the 2017 rate (95.5%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 9-2-B).

The 2018 District 9-2 vaccination rate for completing the HPV series was significantly lower than the state rate. The 2018 District 9-2 vaccination rates did not differ significantly from 2017 rates or between genders. The vaccination rates for UTD, Tdap, MCV4 and HPV (1-shot and complete series) were significantly higher for public school students than private school students (Table 9-2-B).

Table 9-2-A: Gender, school type, waiver and exemptions among District 9-2 adolescents, 2018 (n = 405).

		# of students	Percent of sample (%)
Gender	Male	203	50.1
	Female	196	48.4
	Unknown	6	1.5
School type	Public (21)	298	73.6
	Private (9)	107	26.4
Within waiver period?	Yes	3	0.7
	No	402	99.3
Exemptions	Religious	6	1.5
	Medical	1	0.2
	No exemption	398	98.3

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. Only three (0.7%) of the students in the District 9-2 sample were found to be in the school waiver period (Table 9-2-A).

One (0.2%) of the students in the District 9-2 sample had a medical exemption for one more vaccines; 6 (1.5%) students had a religious exemption on file (Table 9-2-A).

Table 9-2-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 9-2, 2018

	2018, State	Year, District 9-2		Gender, 2018, District 9-2		School type, 2018, District 9-2	
	Overall n = 7,057 (%)	2017 n = 224 (%)	2018 n = 405 (%)	Male n = 203 (%)	Female n = 196 (%)	Public n = 298 (%)	Private n = 107 (%)
UTD rate*	93.9 ± 0.6	95.5 ± 2.7	93.3 ± 2.4	94.6 ± 3.1	94.9 ± 3.1	96.3 ± 2.1	85.0 ± 6.8
3+ Hepatitis B	98.2 ± 0.3	99.1 ± 1.2	98.3 ± 1.3	99.5 ± 1.0	99.0 ± 1.4	99.0 ± 1.1	96.3 ± 3.6
2+ MMR	97.9 ± 0.3	99.1 ± 1.2	97.5 ± 1.5	98.5 ± 1.7	99.5 ± 1.0	98.7 ± 1.3	94.4 ± 4.4
2+ Varicella	97.0 ± 0.4	98.2 ± 1.7	97.3 ± 1.6	97.5 ± 2.1	99.5 ± 1.0	98.3 ± 1.5	94.4 ± 4.4
1 Tdap	95.7 ± 0.5	96.4 ± 2.4	95.1 ± 2.1	96.6 ± 2.5	95.9 ± 2.8	97.3 ± 1.8	88.8 ± 6.0
1 MCV4	95.5 ± 0.5	96.9 ± 2.3	94.8 ± 2.2	96.6 ± 2.5	95.4 ± 2.9	97.0 ± 1.9	88.8 ± 6.0
4+ Polio	97.3 ± 0.4	97.8 ± 1.9	97.3 ± 1.6	98.0 ± 1.9	99.0 ± 1.4	97.7 ± 1.7	96.3 ± 3.6
1 HPV	50.6 ± 1.2	48.7 ± 6.6	46.2 ± 4.9	44.8 ± 6.8	49.0 ± 7.0	52.7 ± 5.7	28.0 ± 8.5
Complete HPV series	23.4 ± 1.0	18.3 ± 5.1	18.3 ± 3.8	15.3 ± 5.0	21.9 ± 5.8	21.1 ± 4.6	10.3 ± 5.8

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

District 10-0 (Athens)



The 2018 GAIS sampled 402 seventh grade adolescents in District 10-0 from 29 middle schools (18 public, 11 private) (Table 10-0-A). Of the students sampled, 49.8% were male, 50.0% were female, and 0.2% had missing gender information. Students enrolled in public schools

accounted for 66.9% of the sample; 33.1% were enrolled in private schools.

Adolescents were considered up-to-date (UTD) if they received 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4 vaccines by January 1, 2018. In District 10-0, the 2018 UTD vaccination rate for 7th graders was 97.3%, higher than the 2017 rate (93.9%) and the state average for 2018 (93.9%). Vaccination rates that decreased from the previous year are shown in **red**; rates that were significantly different ($p < 0.05$) between comparison categories are **bolded and italicized** (Table 10-0-B).

The 2018 District 10-0 vaccination rates for UTD, HepB, MMR, Varicella, Tdap, MCV4 and Polio were significantly higher than the state rates. The 2018 District 10-0 vaccination rates for UTD, HepB, Varicella and Polio were significantly higher than the 2017 rates. The 2018 vaccination estimates for male and female students did not differ significantly. The vaccination rate for 1 HPV was significantly higher for public school students than private school students (Table 10-0-B).

Table 10-0-A: Gender, school type, waiver and exemptions among District 10-0 adolescents, 2018 (n = 402).

		# of students	Percent of sample (%)
Gender	Male	200	49.8
	Female	201	50.0
	Unknown	1	0.2
School type	Public (18)	269	66.9
	Private (11)	133	33.1
Within waiver period?	Yes	0	0.0
	No	402	100.0
Exemptions	Religious	6	1.5
	Medical	1	0.2
	No exemption	395	98.3

Transfer students with incomplete vaccination records have a 30-day waiver period to meet vaccination requirements. None of the students in the District 10-0 sample were found to be in the school “waiver” period (Table 10-0-A).

One (0.2%) of the students in the District 10-0 sample had a medical exemption for one more vaccines; 6 (1.5%) students had a religious exemption on file (Table 10-0-A).

Table 10-0-B: Georgia adolescent vaccination coverage rates by vaccine antigen, gender and school type, District 10-0, 2018

	2018, State	Year, District 10-0		Gender, 2018, District 10-0		School type, 2018, District 10-0	
	Overall n = 7,057 (%)	2017 n = 347 (%)	2018 n = 402 (%)	Male n = 200 (%)	Female n = 201 (%)	Public n = 269 (%)	Private n = 133 (%)
UTD rate*	93.9 ± 0.6	93.9 ± 2.5	97.3 ± 1.6	98.5 ± 1.7	96.5 ± 2.5	98.5 ± 1.4	94.7 ± 3.8
3+ Hepatitis B	98.2 ± 0.3	97.4 ± 1.7	99.5 ± 0.7	99.5 ± 1.0	99.5 ± 1.0	100.0 ± 0.0	98.5 ± 2.1
2+ MMR	97.9 ± 0.3	97.7 ± 1.6	99.3 ± 0.8	99.5 ± 1.0	99.0 ± 1.4	99.6 ± 0.7	98.5 ± 2.1
2+ Varicella	97.0 ± 0.4	96.0 ± 2.1	98.5 ± 1.2	99.0 ± 1.4	98.0 ± 1.9	99.3 ± 1.0	97.0 ± 2.9
1 Tdap	95.7 ± 0.5	96.8 ± 1.8	98.0 ± 1.4	99.0 ± 1.4	97.5 ± 2.2	98.9 ± 1.3	96.2 ± 3.2
1 MCV4	95.5 ± 0.5	96.5 ± 1.9	98.0 ± 1.4	99.0 ± 1.4	97.5 ± 2.2	98.9 ± 1.3	96.2 ± 3.2
4+ Polio	97.3 ± 0.4	96.5 ± 1.9	98.8 ± 1.1	98.5 ± 1.7	99.0 ± 1.4	98.9 ± 1.3	98.5 ± 2.1
1 HPV	50.6 ± 1.2	40.6 ± 5.2	47.5 ± 4.9	46.0 ± 6.9	49.3 ± 6.9	53.2 ± 6.0	36.1 ± 8.2
Complete HPV series	23.4 ± 1.0	17.9 ± 4.0	21.1 ± 4.0	20.5 ± 5.6	21.9 ± 5.7	23.0 ± 5.0	17.3 ± 6.4

* UTD if adolescent has 3 Hepatitis B, 2 MMR, 2 Varicella, 1 Tdap and 1 MCV4.

Red font indicates a rate decrease since 2017

Bolded and italicized font indicates a significant difference ($p < 0.05$) from the comparison group (see methods, pg. 7).

Appendices

Appendix A: Vaccination Coverage Measures

Appendix Table A: Vaccine antigen-specific vaccination coverage by District, GAIS, 2018

District	UTD (%)	Highest rate							
		3+ Hepatitis B (%)	2+ MMR (%)	2+ Varicella (%)	1 Tdap (%)	1 MCV4 (%)	4+ Polio (%)	1 dose HPV (%)	Complete HPV series (%)
1-1 Northwest (Rome)	95.7	99.0	98.7	98.0	97.2	97.2	98.7	44.8	18.3
1-2 North Georgia (Dalton)	89.5	96.9	95.4	95.4	91.3	91.0	95.4	50.1	28.6
2-0 North (Gainesville)	94.6	98.5	98.5	96.7	96.9	96.7	97.9	38.6	18.0
3-1 Cobb-Douglas	93.1	97.5	98.0	95.7	95.9	95.4	97.0	41.4	19.3
3-2 Fulton	93.5	99.0	97.9	97.1	96.1	95.8	97.6	47.6	20.4
3-3 Clayton	96.2	99.5	99.7	98.5	97.4	97.7	97.9	65.9	26.9
3-4 East Metro (Lawrenceville)	93.2	98.2	98.2	97.0	95.2	94.7	97.5	49.7	19.6
3-5 DeKalb	91.5	94.8	95.3	94.5	93.8	93.3	94.0	60.0	31.6
4-0 LaGrange	88.3	96.9	95.3	94.8	90.4	90.2	95.9	44.6	18.4
5-1 South Central (Dublin)	91.8	99.2	99.0	98.0	93.4	92.8	98.7	43.0	19.9
5-2 North Central (Macon)	93.0	96.1	95.9	94.7	94.7	94.4	95.4	47.1	21.4
6-0 East Central (Augusta)	94.6	99.3	99.0	97.5	96.3	96.5	98.5	48.3	23.3
7-0 West Central (Columbus)	93.6	98.1	97.9	97.6	95.0	95.2	96.3	61.3	31.6
8-1 South (Valdosta)	97.5	99.5	99.2	98.5	98.7	98.5	99.0	56.1	27.9
8-2 Southwest (Albany)	99.0	99.2	99.5	99.5	99.5	99.5	98.4	58.1	29.7
9-1 Coastal (Savannah)	95.3	98.6	98.3	97.5	97.2	96.9	97.8	61.4	26.9
9-2 Southeast (Waycross)	93.3	98.3	97.5	97.3	95.1	94.8	97.3	46.2	18.3
10 Northeast (Athens)	97.3	99.5	99.3	98.5	98.0	98.0	98.8	47.5	21.1
Georgia	93.9	98.2	97.9	97.0	95.7	95.5	97.3	50.6	23.4

Appendix B: Frequency of exemptions

Appendix Table B: Frequency of exemptions and school waiver status by Health District, GAIS, 2018

<i>District</i>	<i>Sample size</i>	<i>Within school waiver period</i>	<i>Religious exemption</i>	<i>Medical exemption</i>	<i>Total</i>
1-1 Northwest (Rome)	393	0	9	1	10
1-2 North Georgia (Dalton)	391	0	30	0	30
2-0 North (Gainesville)	389	1	10	0	11
3-1 Cobb-Douglas	394	0	15	0	15
3-2 Fulton	382	2	10	0	12
3-3 Clayton	390	0	5	0	5
3-4 East Metro (Lawrenceville)	398	0	14	0	14
3-5 DeKalb	402	2	15	1	18
4-0 LaGrange	386	0	26	1	27
5-1 South Central (Dublin)	391	0	5	1	6
5-2 North Central (Macon)	412	0	20	0	20
6-0 East Central (Augusta)	404	0	3	0	3
7-0 West Central (Columbus)	377	2	6	1	9
8-1 South (Valdosta)	394	0	3	1	4
8-2 Southwest (Albany)	387	0	1	0	1
9-1 Coastal (Savannah)	360	5	7	0	12
9-2 Southeast (Waycross)	405	3	6	1	10
10 Northeast (Athens)	402	0	6	1	7
Georgia	7,057	15	191	8	214

Appendix C: Reasons for incomplete vaccination

Appendix Table C: Reasons for incomplete vaccination by antigen, Georgia Adolescent Immunization Study, 2018

<i>Reason</i>	<i>3+ Hepatitis B</i>	<i>2+ MMR</i>	<i>2+ Varicella</i>	<i>1 Tdap</i>	<i>1 MCV4</i>	<i>4+ Polio</i>	<i>1 dose HPV</i>	<i>Complete HPV series</i>
Exempt certificate on file	83	105	109	171	174	105	191	195
Serology+ or history of disease	1	3	38	0	0	0	0	0
School waiver on file	2	2	2	4	5	2	5	6
Late (given after 1/1/2018)	7	2	9	55	64	9	137	357
Incomplete series (as of 5/30/18)	19	18	24	0	0	58	0	114
Never initiated series (as of 5/30/18)	14	17	28	76	76	14	3156	4736
<i>UTD</i>	<i>6,931</i>	<i>6,910</i>	<i>6,847</i>	<i>6,751</i>	<i>6,738</i>	<i>6,869</i>	<i>3,568</i>	<i>1,649</i>
Total (sample size)	7,057	7,057	7,057	7,057	7,057	7,057	7,057	7,057
Vaccine gap (admitted to school without completing series or having an exemption, as of 1/1/18)	40	37	61	131	140	81	3,293	5,207

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>

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 to this document, please email the author at Fabio.Machado@dph.ga.gov



Immunization Program
Acute Disease Epidemiology Section
dph.georgia.gov/immunization-section