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ABSTRACT

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Human Papillomavirus (HPV) vaccine coverage rates struggled to meet the Healthy People 2020 Goals of 80% of adolescents in the United States up to date for the 2-3 dose vaccine series. While HPV vaccination is cited as the most important prevention measure against HPV-related cancers, parents are often hesitant to vaccinate their children. National level statistics in the United States show, in 2020, 75.1% of adolescents had $\geq$ 1 dose of the HPV vaccine series and 58.6% of adolescents were up to date. Georgia has consistently fallen short of the national average estimates, and in 2020 was estimated to have 54.9% of adolescents considered up to date on the HPV vaccine series. When assessing the vaccine uptake over the period 2006-2017 for Georgia birth cohorts of 1995-2006, we found an overall increase in HPV vaccine coverage across all birth cohorts with up to 82.25% of the birth cohort of 2003 initiating the vaccine series compared to 32.22% of the birth cohort of 1995. However, there remains a lower proportion of adolescents up to date on the HPV vaccine series compared to those initiating, indicating dropouts before series completion (i.e. 18.80% of the birth cohort of 1995 considered up to date). Additionally, there was heterogeneity observed across the state, with certain health districts having higher proportions of initiation and completion than state and national averages, while other health districts fell far below the averages. Health Districts 3-2 Fulton, 3-5 DeKalb, and 3-4 GNR had the highest proportions of initiation and completion per birth cohort, while Health Districts 9-2 Southeast, 5-1 South Central, and 10 Northeast had the lowest proportions. Further, males had lower proportions of initiation and completion compared to females. This study echoes national level trends of Hispanic/Latino persons having the highest proportions of initiation and completion, with up to 78.41% of Hispanic/Latino persons in one birth cohort initiating the vaccine series by 2017. These descriptive statistics are important for understanding vaccine coverage for HPV vaccines and provide a framework on how to evaluate vaccine coverage within health districts, to support future HPV vaccine outreach efforts.

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CHAPTER 1: INTRODUCTION

A. Introduction and Rationale

Human papillomavirus (HPV) infections are responsible for 4.5% of all new cancer cases globally and are associated with about 70% of cervical cancer cases in women [1, 2]. Further, cervical cancer is the fourth most common cancer leading to death in women aged 15-44 years old [1]. Annually, about 570,000 cancer cases in women and 60,000 in men are related to HPV infection globally with about 36,500 of these cases residing in the United States [3, 4]. While HPV infection remains prevalent in high proportions in the global population, the vast number of these cases can be prevented by HPV vaccination.

While vaccination is a key strategy for preventing infectious disease transmission, HPV vaccination rates are low in the United States. In 2006, the Advisory Committee on Immunization Practices (ACIP) recommended a three-dose HPV vaccine series for prevention of HPV infections, cervical cancer and precancers, vaginal and vulvar precancers, and genital warts, for females at age 11-12 years, though the vaccine series can be started as young as 9 years through a two-dose series [5]. Over time, these recommendations have been updated to include prevention of additional cancers, in both males and females, and to reduce the vaccination series for younger adolescents [6]. If an adolescent receives their first dose of the HPV vaccine on or after their 15th birthday, they are recommended to complete a three-dose catch up series; if the first dose is received prior to the 15th birthday, only two doses are required. The American Cancer Society (ACS) updated their guidelines concerning HPV vaccination based on these recommendations and suggested beginning the vaccine series at age 9 to better prevent HPV associated cancers [7].

The Healthy People 2020 Goals aimed to have 80% of adolescents fully vaccinated against HPV in the United States but fell short with no states surpassing the 80% threshold. According to the National Immunization Survey -Teen (NIS-Teen) data on adolescents from 2020, 75.1% of adolescents ages 13-17 had initiated the HPV vaccine series in the United States, while only 58.6% of these adolescents were considered up to date on vaccination [8]. The state of Georgia, specifically, falls behind the national average consistently with 54.9% of adolescents considered up to date on the vaccine series by 2020 [8]. As a result, the goal of obtaining 80% of adolescents up to date on their HPV vaccine was incorporated into the Healthy People 2030 Goals and highlights the need for HPV vaccine implementation programs nationally and locally [9].

B. Problem Statement

While assessing vaccine coverage can often be difficult, a valuable survey resource, NIS-Teen, conducts random telephone interviews with adolescents' parents/guardians to understand vaccine coverage in the United States. However, NIS-Teen data are mostly comprised of national-level estimates, with state-level data often having large confidence intervals [8]. Due to large confidence intervals, potentially leading to less accurate estimates, it is vital to better understand local-level data, such as health district or county level data, within states. According to NIS-Teen data, in Georgia as of 2020, 54.9% of adolescents aged 13-17 years had completed the HPV vaccine series. For reference, the national average for completion in 2020 was 58.6%. These values indicate that there is a need to increase vaccine coverage in Georgia, as coverage is low compared to the rest of the United States, and a first step is understanding vaccine coverage at a more granular level within the state.

Rationale

Using state-level Immunization Information System (IIS) data, such as the Georgia Registry of Immunizations and Transaction Services (GRITS), can help identify gaps in vaccination coverage at sub-state levels, including within health districts and counties, to better understand HPV coverage and further allowing evidence-based decision making for HPV vaccination programs and initiatives. Furthermore, the understanding of local-level data may increase state-level vaccine coverage in Georgia to resemble national averages more closely for HPV vaccine coverage. Understanding cultural and geographic barriers and knowledge pertaining to uptake of HPV vaccination is essential and requires further research in Georgia to increase coverage, as this has not been a primary focus to date [2]. Few studies have attempted to understand coverage rates among adolescents in Georgia, especially for HPV [10]. Studies that have been done are small scale, such as a studies done by the Georgia Department of Public Health to assess vaccine coverage among 7th graders in Georgia health districts, showing that there is a need for increased surveillance related to health district level data on vaccine coverage [11].

C. Purpose Statement

The purpose of this project is to utilize data from GRITS to identify geographic differences, at the health district level, in HPV vaccine initiation and completion, across both temporal years (2006-2017) and birth cohorts (1995-2006).

D. Research Question

The overarching research question that will be addressed through this analysis is as follows: Using GRITS data on HPV vaccinations from the years 2006 to 2017, by geography,

race, ethnicity, and sex, what are the trends for vaccines administered between 2006 and 2017 for the birth cohorts between 1995-2006 in Georgia?

The research question will be addressed through the following subsections:

a. Are there geographic differences in Georgia when assessing HPV vaccine uptake?
b. Does vaccine uptake increase from the years of 2006-2017?
c. Does vaccine uptake vary between birth cohorts at ages 11-12?
d. Do local level trends in HPV vaccination follow state and national level data on sex, race, and ethnicity?

E. Significance Statement

This study will provide important context for future research pertaining to county-level and health district-level data for HPV vaccine coverage and other essential vaccines in the state of Georgia. Understanding the distribution of childhood immunizations will give insight to potential barriers that must be overcome to increase vaccine coverage, such as access to care or access to accurate information. The state of Georgia has lower HPV vaccine coverage than the national average, and this information will be used to identify which health-districts and counties require an increase in coverage to reflect the higher HPV vaccination national average [8].

Definition of terms

Human Papillomavirus (HPV): HPV is a sexually transmitted infection (STI) that is spread through having vaginal, anal, or oral sex with someone who has the virus. It can also be spread through close skin-to-skin contact during sex. The virus can cause six cancers -- cervical, vaginal, vulvar, anal, penile, and oropharyngeal. The Centers for Disease Control and Prevention recommends all preteens (boys and girls) be vaccinated against HPV between the ages of 11 and 12 [12].

Georgia Registry of Immunization Transactions and Services (GRITS): GRITS is an immunization information system that confidentially reports information regarding immunizations of all persons in the state of Georgia. People are often entered into the registry at birth through electronic birth records, or during their first interaction with a health-care system, which is how computerized immunization data becomes linked to a person [13].

IIS (Immunization Information System): Immunization Information Systems are digital databases that record all immunization doses that are administered in a geopolitical area (ex: GRITS). These databases are confidential and protect the privacy of all patients [14].

Public health-district: The Department of Public Health in Georgia identifies 18 geographically separate public health districts throughout the state. Each district comprises one or more counties and with their health departments. Each health district has a district health director that oversees the district [15].

National Immunization Survey - Teen (NIS-Teen): NIS-Teen is a sample survey of phone interviews for parents/guardians of adolescents aged 13-17 to assess vaccination coverage among children and teens. The phone call is followed with a mailed questionnaire for participants to complete. The survey uses a random-digit-dialing method to survey parents or guardians [16].

CHAPTER 2: Literature Review

Introduction

At the forefront of risk mitigation measures for infectious disease prevention lies immunizations for diseases that are vaccine preventable. Vaccination, a cost-effective method of prevention, relies heavily on coverage and adherence to recommendations to be effective in populations [17]. These recommendations exist to provide the most protection to as many people as possible. Introduced in 2006 by the Advisory Committee on Immunization Practices (ACIP) in the United States, a vaccine for Human Papillomavirus (HPV) is now recommended to prevent transmission of a virus associated with a range of cancers [18]. HPV is the most common sexually transmitted infection (STI) among men and women in the United States, accounting for an estimated 14 million new infections each year [19]. It affects both men and women and is often a controversial disease among caregivers of children, as stigmas about vaccination and HPV infection exist, such as promiscuity. Breaking down such barriers along with understanding geographic and demographic differences associated with vaccine coverage are essential to increase the proportion of people immunized for HPV.

Transmission and related disease

Spread primarily through a range of close epithelial contact, HPV infects mucosal areas in men and women such as the cervix, vagina, vulva, penis, oropharynx, and anus [20]. While transmission can occur through oral-genital and digital-genital contact, data supports the main route of infection being sexual intercourse with contact of mucosal cells between sexual partners. Close contact to an HPV infected person can lead to transmission of the virus, resulting in

asymptomatic infection or symptomatic where genital warts are a common presentation of the virus [19]. Asymptomatic infection is dangerous, as it does not present itself but can lead to further disease, such as cervical cancer in women. Approximately 80% of women have experienced an HPV infection by the age of 50 [21]. With over 100 types of the virus identified, there have been 40 types of HPV identified that can infect the genital tract, potentially leading to associated cancers. While almost all cases of cervical cancer in women are linked to HPV, about 70% of these cases are associated with HPV types 16 and 28 [2]. However, if caught early through screening to identify pre-cancerous changes to the human cells, the cancer can be controlled, but if a person is unaware of the infection, they can miss identifying the cancer early on, potentially leading to death. HPV types 6 and 11 are responsible for 90% of genital warts cases, which present following close epithelial contact. Further, HPV infections are a leading cause of anal and oropharyngeal cancers in both men and women.

Vaccine recommendation

The Centers for Disease Control and Prevention (CDC) currently recommends a two-dose vaccine series for all preteens beginning at age 11 or 12 with the second dose administered 6-12 months following the initial dose. The two-dose series is recommended for persons who initiate the vaccine series from ages 9-14. If a teen is age 15 and has not initiated the vaccine series, a three-dose series is recommended where the second dose is given 1-2 months following the initial dose and the final dose being administered 6 months following the initial dose [22]. This is referred to as a "catch-up" vaccination for HPV and is carried through to age 26. Following age 26, there is not a routine recommendation for HPV vaccination, but vaccine may

be given following shared clinical decision making between the patient and their doctor to determine if they are eligible for the HPV vaccine [22].

Vaccine history

The initial vaccine recommended for HPV prevention was a quadrivalent vaccine developed by Merck and licensed by the FDA in 2006 for females. The current vaccine recommendation in the United States is for a 9-valent HPV vaccine, Gardasil 9, produced by Merck, which added protection against 5 types of HPV to the vaccine series. It was licensed in 2014 for males and females, compared to Gardasil 4, that was licensed for only females in 2006. Following approval and recommendation of the HPV vaccination series in 2006 through 2014, 68 countries have adopted the recommendation. However, the WHO did not recommend the two-dose schedule until 2014 [23].

Differences between the vaccines

The first HPV vaccine, quadrivalent Gardasil, covered HPV types 6, 11, 16, and 18 [5]. HPV 6 and 11 are responsible for 90% of genital warts cases, while HPV 16 and 18 account for 70% of cervical cancers [21]. Gardasil 9, currently recommended, covers HPV types 6, 11, 16, 18, 31, 33, 45, 52, and 58, increasing protection against HPV types responsible for up to 90% of cervical cancers. While Gardasil 4 was an effective HPV vaccine, Gardasil 9 provides greater protection against cervical cancer by including increased protection against HPV 16/18 and other high-risk strains [23]. Less common, there is also a vaccine called Cervarix that can be used to prevent cancer in the cervix. Cervarix is used primarily to prevent infection from HPV types 16 and 18 [23].

Evolution of the vaccine recommendation

As do many vaccines, the recommendation for HPV vaccination in adolescents has evolved over time. As stated, in 2006 the quadrivalent vaccine was licensed by the Food and Drug Administration (FDA) and recommended by ACIP. Currently used, the nine-valent vaccine was approved in 2014. The recommendation initially suggested use only for females aged 11-12 years, but the series may begin at age 9 for higher protection against HPV infection. Catch up vaccination is recommended for ages 15-26 if not previously vaccinated, while vaccination starting after age 26 is not routinely recommended but may be provided following a shared clinical decision making framework between patients and providers [22]. Data supports that initiating vaccination at a young age, prior to close epithelial contact, provides greater protection against HPV. The addition of males to the recommendation in 2014 has helped decrease HPV transmission, therefore helping to reduce the rates of HPV-related diseases [24].

According to a study published prior to implementation of a HPV vaccine, use of a vaccine was noted to be the most important intervention to control HPV related cancers [25]. Prior to vaccination, regular cervical smears, called Pap smears, were an important method of prevention, as well as surveillance for cervical lesions that could lead to cancer in women. Catching cervical cancer early in women is vital to reduce risk of death and harmful outcomes. However, in areas where there is less access to healthcare, it is difficult to stress the importance of screening, which led to women not being screened for cervical cancer as frequently as they should prior to vaccine implementation. The development of a vaccine against HPV provides another preventative measure against HPV infection and related cancers.

NIS-Teen

Since 2006, HPV vaccination rates have increased, but remain low. The National Immunization Survey – Teen (NIS-Teen), first conducted in 2006, collects vaccine information to assess coverage following implementation of three routine adolescent vaccine recommendations made in 2005-2006. NIS-Teen conducts phone surveys to assess Tetanus, Diphtheria, Acellular Pertussis (Tdap), Quadrivalent Meningococcal Conjugate (MenACWY), HPV, and Influenza (flu) vaccine coverage across the United States for adolescents aged 13-17 [26]. Following phone call survey with parent/guardians, and having guardian consent, a mail survey is sent to the vaccination provider of the adolescents to obtain accurate data on number of doses, dates of administration, and more specific data that may be unknown by parent/guardians and is important for surveillance measures. These data also inform studies, such as this, that are interested in conducting analyses on vaccine trends in the United States.

Georgia Immunization Registries

Georgia-specific data have also been analyzed, using records from the Georgia Registry of Immunization and Transaction Services (GRITS) to better understand trends in adolescent vaccine uptake in Georgia. The mission of GRITS by the Department of Public Health in Georgia is to maintain accurate and complete vaccination information for disease prevention and control. GRITS was established in 1996 and records all vaccinations administered in the state of Georgia. The recording system also allows providers to easily look up patients vaccination statuses between healthcare providers and generate reports on their immunization statuses [13]. GRITS is a useful source of information where data may be collected to conduct analyses on immunization information in the state of Georgia. A limitation of using GRITS data for analysis

is the lack of denominator data – that is, only vaccines administered are recorded in GRITS, but there is no comparable record for individuals in Georgia who have not received any vaccines.

National HPV vaccine trends

With the vaccine recommendation in place and data from NIS-Teen, there have been important trends identified in the United States in relation to who is getting vaccinated and at what age. According to the Health People 2020 goals, the United States fell behind on its goal to vaccinate 80% of the adolescent population against HPV [27]. Not only did they fail to meet this goal, but HPV vaccination rates also remain among the lowest of adolescent vaccine coverage rates in the country.

The Healthy People 2030 goals carried over the goal to vaccinate 80% of adolescents following only 48% of the adolescents being vaccinated in 2018 [9]. According to the reported data from the 2020 NIS-Teen survey, HPV vaccination uptake continued to increase through years in adolescents [8]. The data also show an increase in receipt of at least one dose of HPV vaccine from 71.5% in 2019 to 75.1% in 2020. The completion of the series also increased from 54.2% in 2019 to 58.6% in 2020 among adolescents aged 13-17 years.

Other important trends to note are those adolescents living below the poverty line tend to have higher vaccination rates than those living at or above the poverty line. Furthermore, females generally had higher vaccine initiation and completion rates for HPV vaccinations than males in 2020 [8], largely owing to the later recommendation for vaccination of males. According to NIS-Teen data, Hispanic adolescents were more likely to initiate and complete HPV vaccination series in the United States compared to other race/ethnicities. Not only does NIS-Teen report data in tabular format, but they also report data in an interactive way that allows you to view

vaccination trends across years in different categories. From 2016-2020, adolescents aged 13-17 show an increase in ≥1 dose of HPV vaccine from 60.4% to 75.1%. For completion of the HPV vaccine series, there was an increase in coverage from 43.4% in 2016 to 58.6 in 2020 [8].

Georgia-level HPV vaccine trends

Continuing from national level data, it is important to understand state-level data as it relates to the national average. The 2020 NIS-Teen report showed state-level coverage of the HPV vaccine, highlighting the proportion of each state receiving at least one dose of the vaccine and the proportion considered up to date on the vaccine series. As of 2020, 73.1% of Georgia adolescents aged 13-17 had received at least one dose of the HPV vaccine with only 54.9% of these adolescents considered up to date on the vaccine series [28]. Nationally in 2020, 75.1% of adolescents had received at least one dose and 58.6% of these adolescents were considered up to date on the vaccine series, highlighting Georgia fell short of the national averages. Both Georgia and the national-level data did not meet the Healthy People 2020 Goal of fully vaccinating at least 80% of the population for HPV.

Barriers to HPV vaccination

To better understand why Georgia has consistently fallen behind the national average for HPV vaccinations, one study developed a spatial model to identify barriers related to access for HPV vaccination [10]. The study found that areas with both public and private clinics tend to have increased counts of administered vaccine doses. Moreover, areas with greater access to public transit were also associated with a higher percent of doses of HPV vaccine administered. Healthcare provider knowledge and practicing clinics that administer HPV vaccinations were also important factors to consider when understanding why Georgia falls behind the national

average. Outside of access and healthcare provider factors, cultural barriers also prevented uptake in adolescents in Georgia [2]. These cultural barriers may be related to race, ethnicity, and personal beliefs of caretakers.

Other studies further suggest barriers to increasing HPV vaccine coverage include parental attitudes and concerns about the HPV vaccine leads to lower coverage compared to other vaccinations [2]. Parents are often concerned that vaccinating their children beginning at age 11 for preventing spread of HPV and prevention of cervical cancer promotes unwanted sexual behavior in their children [29]. Often, responses to healthcare providers include complaining of children being too young to receive such a vaccine that is for sexual health. Parents also regularly require additional information about the vaccine prior to allowing their children to receive the first dose. Furthermore, there is often a low perceived benefit of vaccinating males for HPV among parents, while studies have shown that the expansion of the HPV vaccine being administered to males led to a reduction in HPV cases in women [29]. Financial concerns are also a barrier related to low vaccine coverage, even when healthcare providers can council on the importance of the vaccine series [30].

Outside of parental concerns, healthcare provider input is often cited as the most frequent source of immunization information from parents [17]. Because of this, if healthcare providers are not informed of the importance of vaccinating against HPV, this will not be translated to parents for their children. Provider knowledge on HPV is generally low in some areas, resulting in a low coverage rate for vaccination against HPV. This lack of knowledge is also associated with low confidence in their ability to counsel parents on the vaccine and discomfort related to discussing the sexual issues related to HPV transmission [31]. The culmination of these barriers

leads to the low vaccine coverage rates for HPV we see in the United States following the recommendation in 2006.

In the state of Georgia, a study found that there were other barriers associated with lower vaccine coverage [30]. Among barriers previously mentioned, organizational priorities associated with vaccinations such as appointment scheduling, vaccine availability, and coordination with community resources were highlighted. Furthermore, barriers such as perceived high cost of vaccination, vaccine confidence and trust, and concerns with sexual activity were found to be associated with low levels of vaccine confidence.

Current efforts

While there are many barriers to overcome in the state of Georgia, there are existing plans in place to better implement vaccination programs, including HPV. For example, The Georgia Department of Public health and the Georgia Cancer Control Consortium developed a 2014-2019 Georgia Comprehensive Cancer Control Plan [32]. This comprehensive plan encompasses goals to increase awareness of screening for cancers, increase quality of care, and improve patient case management and care coordination. Among these goals, increasing HPV vaccination to prevent associated cancers remains a top priority. The Plan aims to engage the community in raising awareness of the risks associated with cervical cancer and how it can be prevented. The Plan also aims to educate healthcare providers to promote HPV vaccination among adolescents in compliance with ACIP standards. Improving screening for cancers such as cervical, anal, or oropharyngeal cancers are among the goals of The Plan as well as risk reduction strategies.

Georgia Watch, a program that reviews nonprofit hospital's Community Needs Assessments (CHNAs), found that local data sources are not commonly used to assess local needs and social determinants of health are not commonly collected in Georgia. This raises an issue as it is important to assess what health programs are needed to be implemented in a geographic location [2]. Another study suggests that cervical cancer and HPV are not a top priority recognized among community needs in Georgia based on these reports, which differs from national priorities [2].

The United Health Foundation has also reported on state findings in Georgia in relation to vaccine uptake and disparities in vaccination status [33]. Among these trends, it was noted that from 2017 to 2019 Hispanic adolescents had a higher vaccination rate compared to White and Black adolescents in Georgia. However, Hispanic, White, and Black adolescents all saw an increase in uptake rates from 2017 to 2019. Females were also seen to have a higher vaccination rate from 2016 to 2020 compared to males. Adolescents below the poverty line had a higher vaccination rate from 2016 to 2019 compared to those adolescents at or above the poverty line, which follows national level trends. Interestingly, these trends differ from trends we see with other vaccinations.

Local-level studies

While it is understood that there are many barriers to proper implementation of HPV vaccinations in local communities, few studies have attempted to understand local-level HPV vaccine uptake in terms of within counties or health districts. While Georgia has seen an increase in uptake rates, little is known about the local-level data (i.e. health- district and zip code). Georgia studies investigating the disparities among vaccinations in Georgia often suggest that

future work with small area studies analyzing disparities by ZIP code may be essential to better understand how to increase HPV vaccinations in Georgia [10]. While analysis by ZIP code is suggested, health-district data may also show to be useful.

One study from Augusta University assessed the socioeconomic factors related to HPV vaccination coverage in the South-Central Health District in Georgia and found similar trends related to sex and vaccination status as found in state-wide studies. However, unlike the Georgia-state level data and national level data, White persons were more likely to complete vaccination series [34]. This highlights how essential it is to assess local needs and not base interventions off state or national level vaccine coverage data as this health district does not follow the typical trend of White persons having the lowest level of vaccine coverage among races. It is important to understand these differences and analyze why they are happening as this may be due to primarily White persons residing in this health district.

Understanding this gap in knowledge and utilizing GRITS data, this study attempts to provide descriptive statistics on HPV vaccinations by health district. It is also important to account for racial/ethnic differences amongst populations of people receiving HPV vaccines. As seen in data, HPV vaccination trends within ZIP codes or health districts do not always follow state or national level data. Understanding these differences will provide a framework for future implementation of vaccination programs and enlighten public health officials in Georgia of how to increase HPV coverage. Such analyses may also provide insight for where to target vaccine interventions and programs. Furthermore, while studies have focused in on barriers to HPV vaccinations, such as perception of the vaccine, it is important to assess geographic barriers and demographic differences on a deeper level within health districts and ZIP codes. Geographic and demographic differences such as sex, race, and ethnicity can provide important information

regarding who is getting vaccinated within health districts and how to work towards reaching the Health People 2030 goal of 80% coverage within the state.

It is also important to educate and train healthcare providers of the importance of the vaccine. Additionally, it is essential to train them on how to have difficult conversations regarding HPV vaccination with parents or guardians, as studies have shown that, culturally, it is difficult to talk about prevention of HPV prior to sexual behavior with adolescent guardians – specifically in the southern United States [8].

Understanding the demographic and geographic differences in who is getting vaccinated and where within health districts can better inform healthcare providers how to tailor their counsel to such guardians. It is also important to understand how access to healthcare providers affects HPV vaccine uptake. As seen in prior studies, ZIP codes with higher percentage of public and private healthcare providers had a higher rate of HPV vaccine uptake within these communities. Areas that were more populous in Georgia, such as the metro-Atlanta area, also have a higher rate of vaccinations according to prior research. Therefore, assessing rural Georgia trends is important to understand how to better increase coverage in these areas.

CHAPTER 3: MANUSCRIPT

Assessing HPV Vaccination Trends in the State of Georgia Utilizing the Georgia Registry of Immunization Transactions and Services (GRITS) Data

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Abstract

Human Papillomavirus (HPV) vaccine coverage rates struggled to meet the Healthy People 2020 Goals of 80% of adolescents in the United States up to date for the 2-3 dose vaccine series. While HPV vaccination is cited as the most important prevention measure against HPV-related cancers, parents are often hesitant to vaccinate their children. National level statistics in the United States show, in 2020, 75.1% of adolescents had $\geq$ 1 dose of the HPV vaccine series and 58.6% of adolescents were up to date. Georgia has consistently fallen short of the national average estimates, and in 2020 was estimated to have 54.9% of adolescents considered up to date on the HPV vaccine series. When assessing the vaccine uptake over the period 2006-2017 for Georgia birth cohorts of 1995-2006, we found an overall increase in HPV vaccine coverage across all birth cohorts with up to 82.25% of the birth cohort of 2003 initiating the vaccine series compared to 32.22% of the birth cohort of 1995. However, there remains a lower proportion of adolescents up to date on the HPV vaccine series compared to those initiating, indicating dropouts before series completion (i.e. 18.80% of the birth cohort of 1995 considered up to date). Additionally, there was heterogeneity observed across the state, with certain health districts having higher proportions of initiation and completion than state and national averages, while other health districts fell far below the averages. Health Districts 3-2 Fulton, 3-5 DeKalb, and 3-4 GNR had the highest proportions of initiation and completion per birth cohort, while Health Districts 9-2 Southeast, 5-1 South Central, and 10 Northeast had the lowest proportions. Further, males had lower proportions of initiation and completion compared to females. This study echoes national level trends of Hispanic/Latino persons having the highest proportions of initiation and completion, with up to 78.41% of Hispanic/Latino persons in one birth cohort initiating the vaccine series by 2017. These descriptive statistics are important for understanding vaccine coverage for HPV vaccines and provide a framework on how to evaluate vaccine coverage within health districts, to support future HPV vaccine outreach efforts.

Introduction

Human Papillomavirus (HPV) vaccination rates are low in the United States, despite annual increases in uptake since the initial recommendation in 2006. The Healthy People 2020 Goals aimed to have 80% of adolescents fully vaccinated against HPV in the United States by 2020 but fell short with no states surpassing the 80% threshold. The state of Georgia, specifically, falls behind the national averages consistently for HPV vaccinations. In 2020, the US reached 58.6% of adolescents aged 13-17 fully vaccinated against HPV, while Georgia only reached 54.9% [8]. Understanding cultural and geographic barriers pertaining to uptake of HPV vaccination is essential and requires further research in Georgia to increase coverage, as this has not been a primary focus to date [2]. Few studies have attempted to understand coverage rates among adolescents on a local level such as by county or health district, especially for HPV [10].

National Immunization Survey – Teen (NIS-Teen) conducts random telephone interviews with adolescents' parents/guardians to assess vaccine coverage in the United States. While useful, NIS-Teen data are mostly comprised of national-level estimates, with state-level data often having large confidence intervals and lacking local-level data within states [8]. Due to large confidence intervals, potentially leading to less accurate estimates, it is vital to better understand local-level data, such as health district or county level data, within states.

To better understand HPV vaccine uptake in Georgia, we analyzed a data extract from the Georgia Registry of Immunization Transactions and Services (GRITS), containing all adolescent vaccines administered between July 2006 and December 2017 to anyone aged 9-17 years during that period, with consideration of sub-state geographic differences, as well as sex, race, and ethnicity of adolescents.

Methods

We analyzed county- and health district-level patterns in HPV vaccination coverage in the state of Georgia through analysis of Georgia Registry of Immunization Transactions and Services (GRITS) data, using *SAS (v9.4, The SAS Institute, Cary NC)*. Vaccination records, for all doses of HPV, Tdap, and MCV4 administered in Georgia to all persons aged 9-17 years during the period July 1, 2006, through December 31, 2017, were obtained from Georgia Department of Public Health. This corresponds to adolescents in the birth cohorts of 1995-2006. Records were de-identified by assigning a unique client ID to each person included in the study. Birth cohorts were analyzed for HPV vaccine doses administered over this time period, with analysis conducted at the county and health district levels, accounting for race, ethnicity, and sex. Sex-stratified county level census data from 2017 were collected to provide population estimates for each birth cohort, as GRITS only reports those children in a birth cohort receiving any vaccination in the state of Georgia [35]. Census data accounts for those not reported to GRITS.

Data cleaning and formatting

Data extracts were provided through secure file transfer from the Georgia Department of Public Health to the Emory University research team and imported for analysis into SAS (v9.4, The SAS Institute, Cary NC). Many demographic and geographic variables were created to describe each participant, but this study selected for specific variables to analyze, specified in Appendix **Table A1**. A birth cohort was defined as including all individuals whose birth date lied within the particular year of the cohort (i.e. Birth Cohort 1995 = all participants with birthdates within 1995).

For each vaccine, the age at vaccine receipt was calculated based on birth date and vaccination date data. For HPV vaccine status, differences in time between doses to account for

valid doses and series completion/up-to-date status were assessed. We assessed vaccine series initiation and completion within a specific year, and by a given year. Individuals were considered to have initiated or completed the series in a given year if they received their first dose in that year, or if they received the valid dose that would make them up to date, per recommendations in effect at the time, in that year, respectively. Individuals were considered to have initiated or completed the series by a given year if they either received their first or final series dose in that year or any subsequent year. For example, an adolescent who received their first HPV vaccine dose in 2011 would be considered to have initiated in 2011, and would have been considered to have initiated by 2011, as well as by 2012, 2013, etc. This allowed us to assess vaccination incidence as well as annual prevalence. However, we do not have data on each birth cohort through the age of 18, only through ages reached in each cohort as of 2017. To better visualize trends and avoid drop offs in the data towards 2017, initiation and completion data for each cohort through age 11 (i.e. prior to the 12th birthday) was compared, allowing for consistent comparisons for all available data for all birth cohorts.

For this study, participants with unknown sex and ZIP codes were excluded from analysis. Furthermore, ZIP codes that were outside of Georgia were also dropped [36]. Numeric ZIP codes were linked to county, and counties were linked to Georgia Public Health Districts [36, 37].

Data analysis

Descriptive analyses were conducted by splitting each GRITS birth cohort data from 1995- 2006 (n=12) into its own dataset. HPV vaccine uptake comparisons between sex, race, ethnicity, and health districts were completed for vaccines reported to GRITS between 2006-2017 using PROC MEANS to county doses stratified by county, age, sex, race, and ethnicity,

with summary counts output to a new dataset. Ethnicities and races used in this analysis are listed in Appendix **Table A2**. Census data were merged to the vaccination datasets by selecting for the population of interest in each birth cohort (e.g. stratified by health district, sex, race, ethnicity) and merging the population dataset with the birth cohort dataset, and calculating vaccine coverage by dividing the appropriately stratified vaccine dose totals by the appropriate population count.

Health district data

ZIP codes were associated with a dose number corresponding to which dose of the HPV vaccine the adolescent was receiving. At most, each client ID had 3 ZIP codes (1 ZIP code per dose of HPV vaccine). A unique character variable, CountyName, was created for those observations who had a ZIP code for the first dose. This enabled the data to be grouped into counties and health districts for analyses. Counties in each Health District are described in Appendix **Table A3** [15]. To account for health district level differences, census data were used to assess the total number of births in each cohort. After GRITS data were separated into birth cohorts, the population census data were sorted according to births per cohort and county. This was done by choosing the age that each birth cohort would be in 2017, then putting those observations into their own dataset (i.e. the birth cohort of 1995 would be 22 in 2017). Georgia counties were grouped by health district in this dataset to allow population data to be merged with the vaccine data. The data were then combined and the percent of each birth cohort initiating vaccination by each year in each health district in Georgia were assessed by creating a variable, pct_i[YEAR], that used population census data as the population of a birth cohort and the number of persons initiating the vaccine by a certain year as the numerator data. The same was done for the percent of those considered up to date in each birth cohort.

RESULTS

Male and female cumulative data:

Figure 1 indicates the number of persons in each birth cohort with at least one adolescent vaccine dose received between 1995 and 2006, as reported to GRITS compared to census-derived estimates for each birth cohort in Georgia. The figure highlights that census-derived estimates are higher than the number of adolescents with vaccines reported to GRITS within each birth cohort. Similarly, the number of census-derived male and female births in each birth cohort were almost equivalent, with a slight male preponderance (**Figure 2**); the excess number of males was smaller when evaluating GRITS-reported data (**Figure 3)**.

Females reported to GRITS had higher proportions of initiation and completion across all birth cohorts compared to males reported to GRITS (**Figure 4, 5, 6, 7**). Across birth cohorts, males and females were less likely to be considered up to date on the vaccine series compared to the proportion initiating the series. For example, in the birth cohort of 2000, 67.1% of females and 58.9% of males in the cohort initiated the vaccine series by 2017, but only 50.1% of these females and 41.7% of males were considered up to date on the vaccine series by 2017.

Ethnic Distribution of GRITS reported data:

Across all birth cohorts and year of analysis, the proportion of Hispanic/Latino persons initiating HPV vaccination was higher compared to Non-Hispanic/Latino persons based on GRITS reported data. For the birth cohort of 1995, Hispanic/Latino persons reached 49.34% initiation and Non-Hispanic/Latino persons reached 44.31% initiation by 2017 from GRITS reported data. Furthermore, by 2017, for the birth cohort of 2000, 73.71% of Hispanic/Latino

persons had initiated the vaccine series and 65.20% of Non-Hispanic/Latino persons had initiated the vaccine series based on GRITS reported data.

Consistent with results by sex, the proportion of both Hispanic/Latino persons and Non-Hispanic/Latino persons considered up to date on the vaccination series was lower than the proportion that had initiated the vaccine series. Based on GRITS data, Hispanic/Latino persons in the birth cohort of 1995 reached 27.59% completion by 2017, while Non-Hispanic/Latino persons reached 25.06% completion by 2017. Hispanic/Latino persons had greater proportions of those considered up to date on the vaccine series compared to Non-Hispanic/Latino persons according to GRITS reported data. Graphs and data tables for the two ethnicities can be identified in Appendix **Tables A4-A7,** and Appendix **Figures A1- A4**.

Racial Distribution of GRITS reported data:

Assessing GRITS data, as shown in **Figure 8**, the racial distribution within each birth cohort was consistent, with White and Black identifying persons being the largest racial groups in each birth cohort.

Overall, Hispanic/Latino persons had the highest proportion of initiation across years and between each birth cohort based on GRITS reported data. White adolescents had the lowest proportions of initiations across birth cohorts when assessing GRITS reported data. Based on GRITS data, for the birth cohort of 1995, Hispanic/Latino persons reached 54.22% initiation by 2017 and 32.60% completion, while White persons in the birth cohort of 1995 reached 41.91% initiation and 25.06% completion by 2017. Specific graphs for the GRITS- initiation and completion data can be found in Appendix **Tables A8- A23** and Appendix **Figures A5- A20**.

Using GRITS data, and the limited denominator data associated with this, we assessed HPV vaccine uptake counts within health district by race/ethnicity (Appendix **Figures A21-23**). For all doses, when stratified upon race and health district, people identifying as White had a greater numeric count of people receiving the vaccine series compared to other races. It is important to distinguish that of those receiving the HPV vaccine, a greater count of persons identified as White than compared to other races, but Hispanic/Latino persons had greater proportions, measured in percent, of their population receiving the HPV vaccine.

Overall trends of each birth cohort according to combined data (census and GRITS):

The proportion of each birth cohort initiating and completing the vaccine series by 2017 increased between each birth cohort (**Figure 9**). The drop in vaccine uptake in more recent birth cohorts (2004-2006) corresponds to younger individuals; with vaccine data available through 2017, there is less time for members of these birth cohorts to be vaccinated compared to earlier birth cohorts. The proportion of adolescents initiating through 11 years of age increased from 0.5% of the 1995 birth cohort of 1995 to 23.6% of the 2006 birth cohort (Figure 10). The proportion of each birth cohort completing the series by age 11 is much lower compared to the proportion of each birth cohort initiating the vaccine series by age 11.

Health district specific data:

Specific birth cohort data tables are available in Appendix **Table A24a-A35b** that highlight the highest and lowest performing health districts in each birth cohort when assessing the combined dataset of GRITS and census data. Overall, Health Districts 3-4 GNR, 3-5 DeKalb, and 3-2 Fulton consistently had the highest proportions of initiation and completion across each

birth cohort. Districts 10 Northeast, 9-2 Southeast, 1-1 Northeast, 5-1 South Central, and 2 North had the lowest proportions of initiation and completion across birth cohorts. For example, for the year 2000 birth cohort, Health District 3-2 Fulton reached 80.0% initiation and 59.6% completion, while district 9-2 Southeast reached 39.5% initiation and 27.9% completion. Trends in lower proportions of completion versus initiation are further highlighted in the combined census and GRITS data.

Figures and Data Tables:

Figure 1. Comparing the birth cohort estimates from GRITS to census-derived estimates for the birth cohorts of 1995-2006 showing underestimations of GRITS population data.

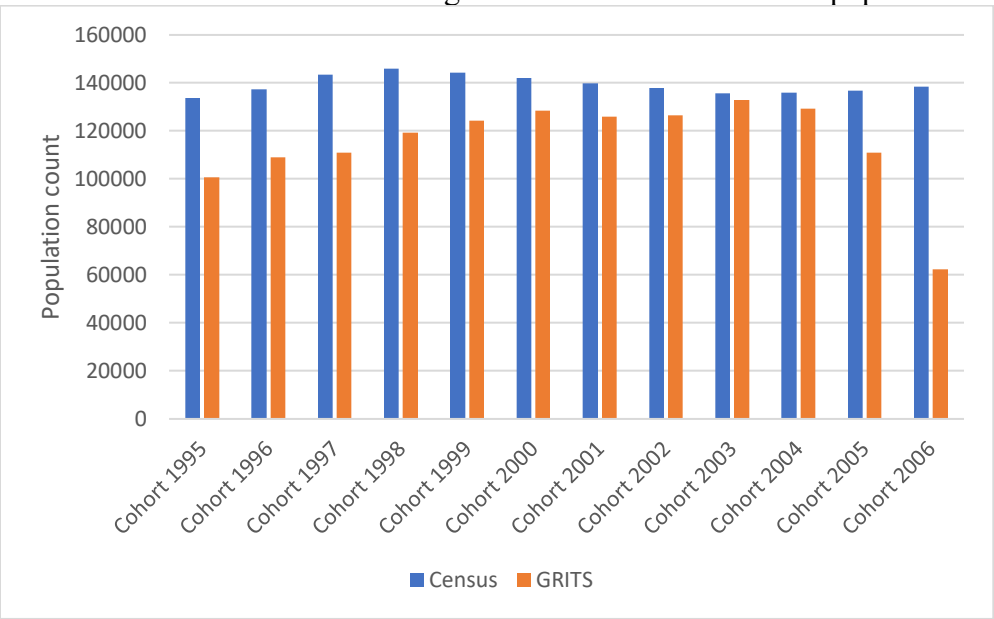


Figure 2. Number of census-derived male and female births per birth cohort.

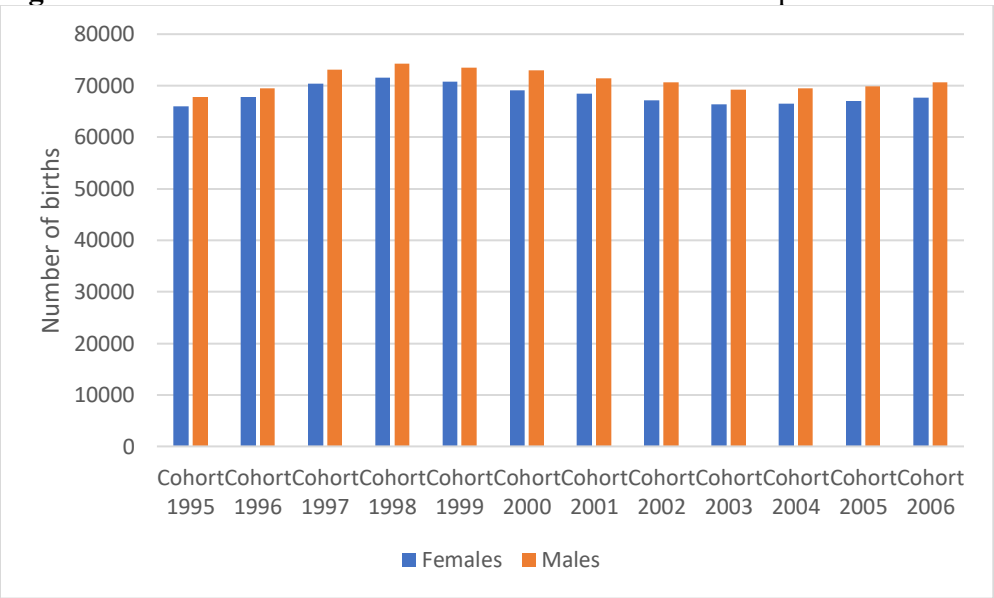


Figure 3. Number of GRITS-derived male and female births per cohort.

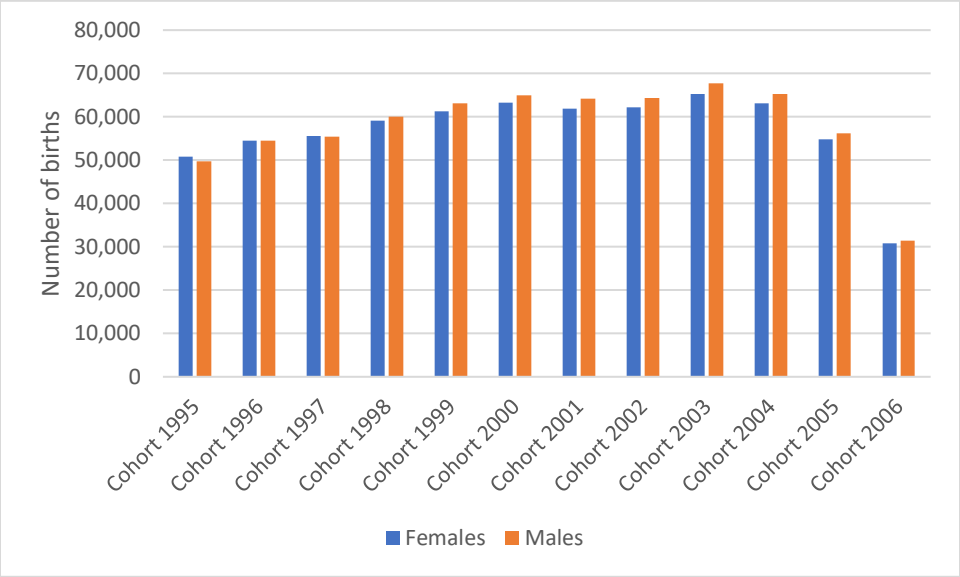


Figure 4. Proportion of Females initiating the vaccine series by year according to GRITS reported data.

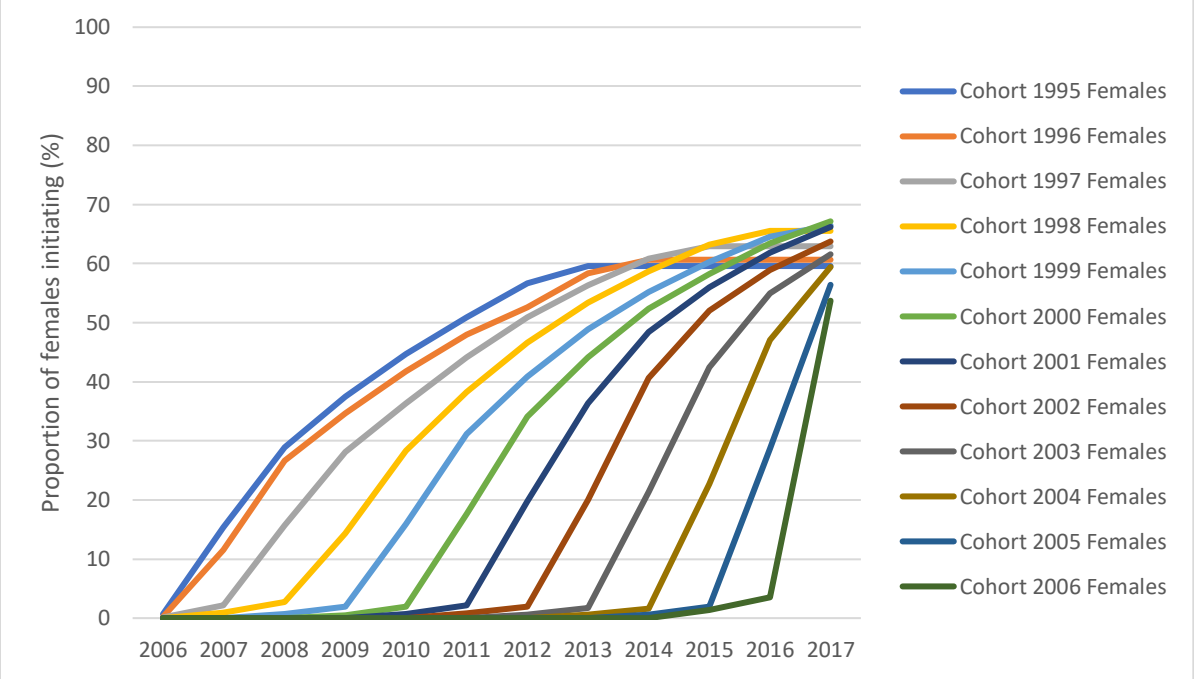


Figure 5. The proportion of males initiating the vaccine series by year from GRITS reported data.

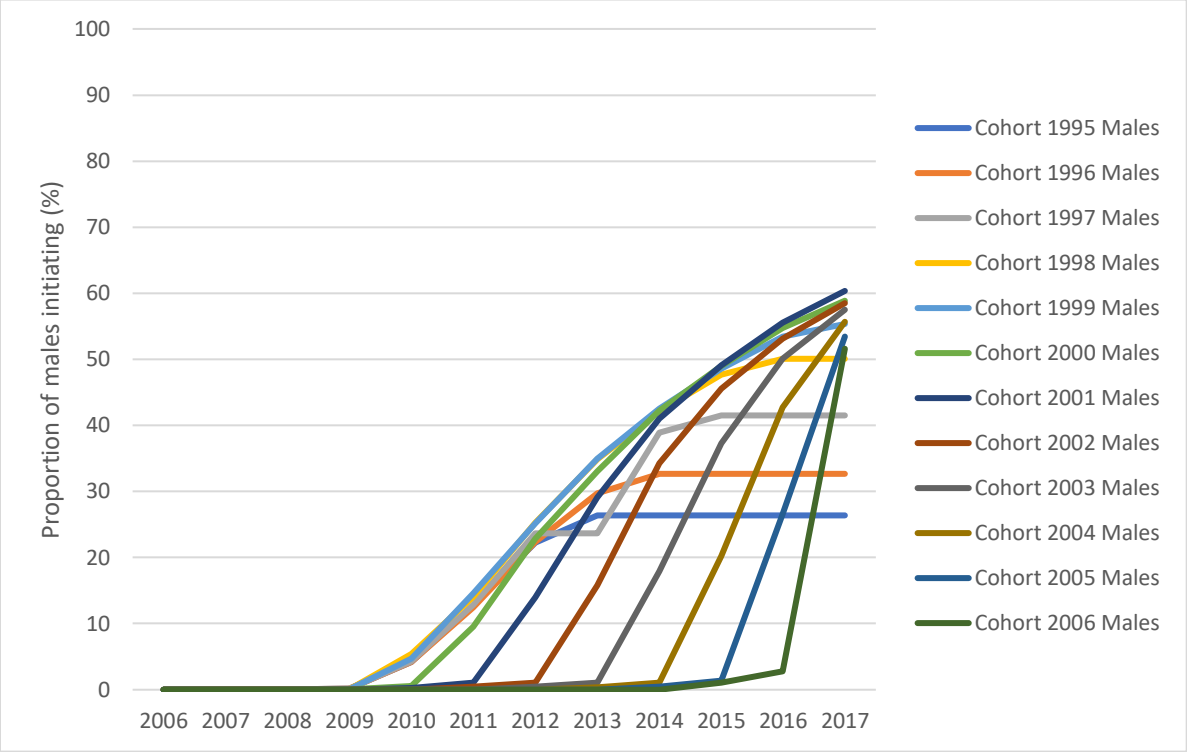


Figure 6. The proportion of females considered up to date on the vaccine series by year from GRITS reported data.

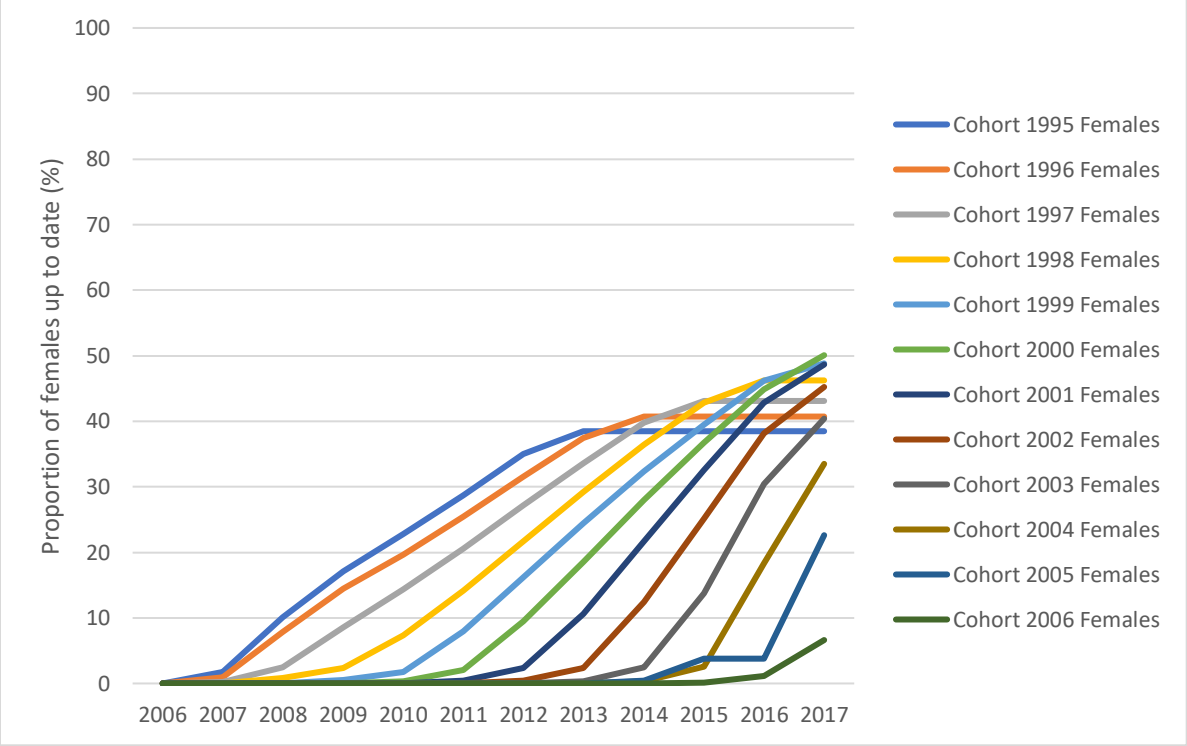


Figure 7. The proportion of males considered up to date on the vaccine series by year from GRITS reported data.

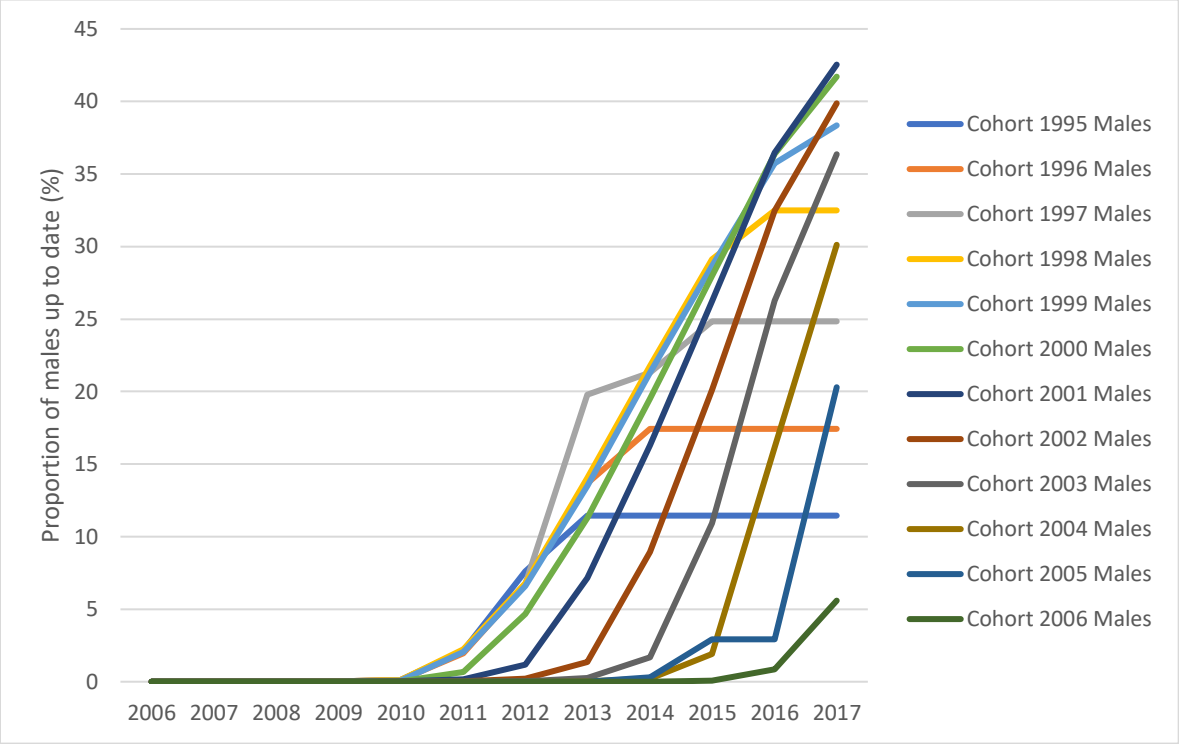


Figure 8. Racial distribution of each birth cohort according to GRITS data**.**

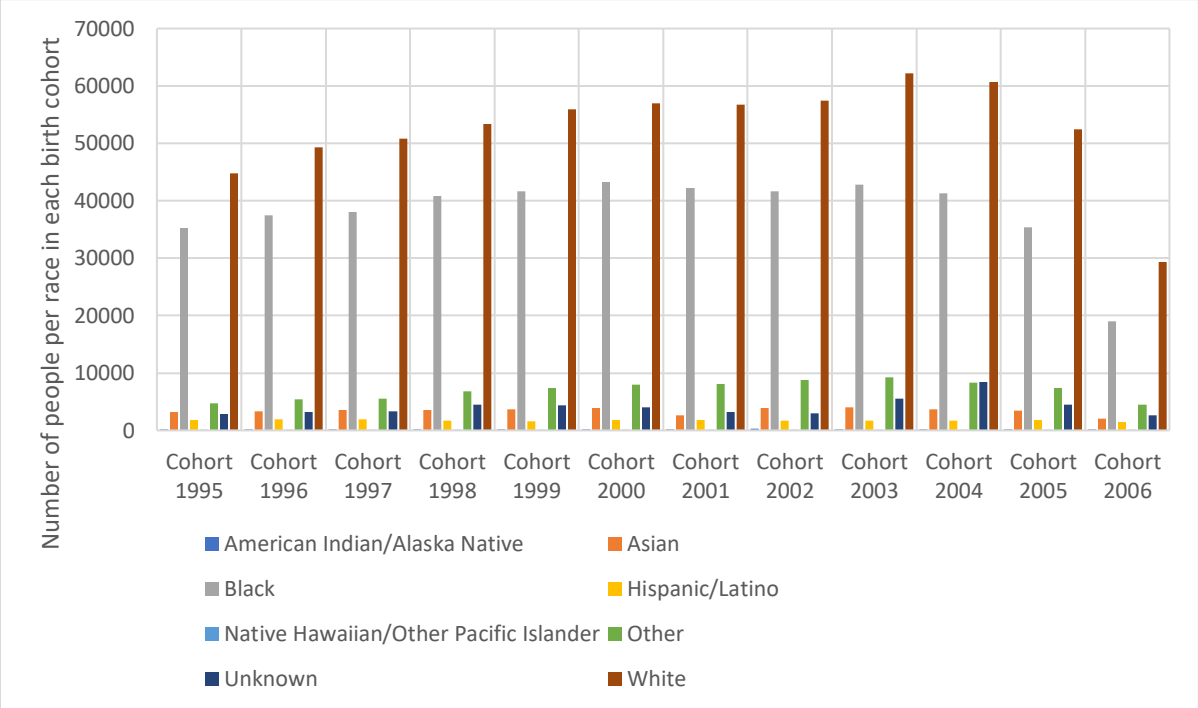


Figure 9. Proportion of each birth cohort initiating and completing the vaccine series by 2017.

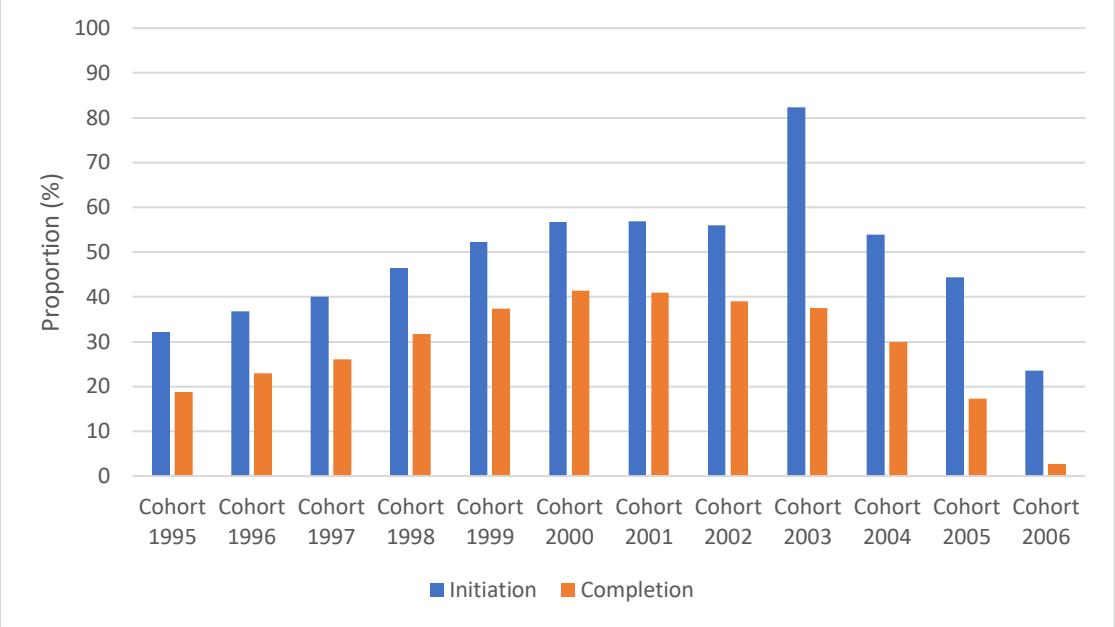
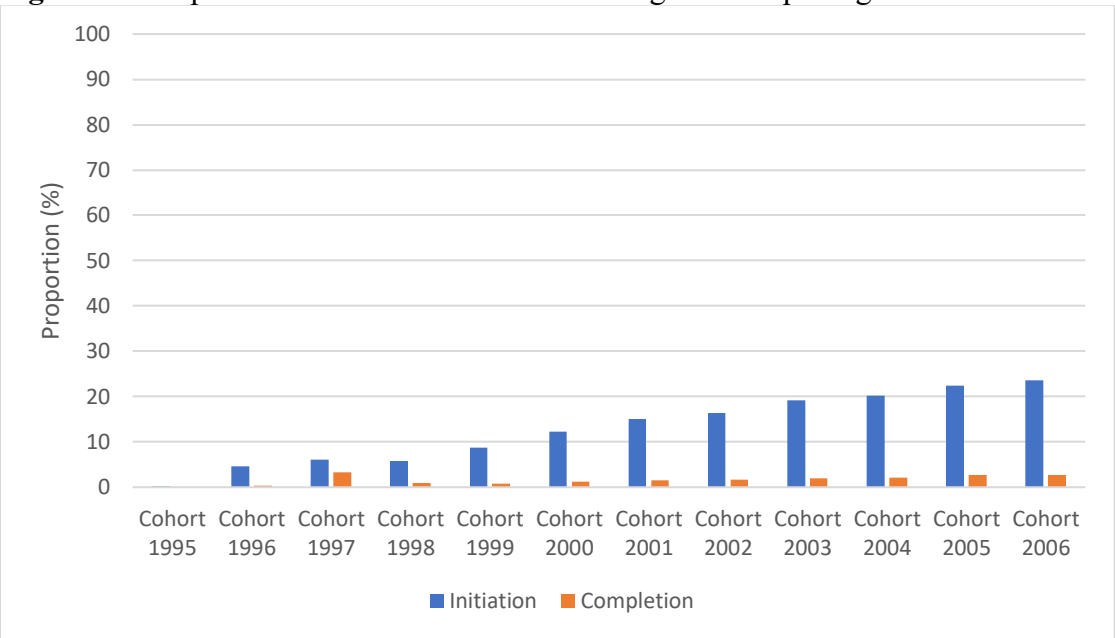


Figure 10. Proportion of each birth cohort initiating and completing the vaccine series by age 11.



DISCUSSION

Vaccine coverage

These findings suggest that while there has been an increase in HPV vaccine coverage in the state of Georgia over time, there are important demographic and geographic differences that may be associated with suboptimal vaccine coverage. Overall, each birth cohort from the cohort of 1995 to 2006 saw increased proportions of vaccine initiation and completion between the years of 2006 and 2017, but the proportion of the cohorts completing the vaccine series are much lower than the proportion of each cohort initiating vaccination. These trends reflect the national-level trend of the percent of persons considered up to date on HPV vaccination is lower than the percent of adolescents initiating the series [28]. Bridging the gap between initiation and completion rates is essential, as adolescents are more protected against infection by HPV when completing the recommended vaccine series. However, one study suggests that, in women, the results of receiving one dose of the quadrivalent HPV vaccine are comparable to receiving three doses of the vaccine in terms of preventing high-grade cervical lesions [38]. Further, regardless of number of doses received, HPV 16/18 infection is rare following vaccination of one dose [39]. While infection is rare, those receiving a second or third dose have higher titres of HPV antibodies; therefore, providing greater protection and further highlighting the importance of completing the vaccine series.

Sex differences

While there were slightly greater numbers of male births in each birth cohort, males had lower proportions of initiation and completion of the vaccine series when compared to females from GRITS reported data in this study. Initially, only females were recommended to receive the

HPV vaccine series, until 2009 when the series became suggested for males, and further routinely recommended for males in 2011 [6]. This may be a driving factor behind lower proportions of male initiation and completion across all birth cohorts. Further reasons for lower male coverage are related to healthcare provider recommendation and parental understanding of the importance of males being vaccinated against HPV [40]. HPV infection in males may lead to cause penile, anal, and oropharyngeal cancers. These are not often highlighted in conversations between healthcare providers and parents, potentially relating to the lower levels of initiation and completion in males suggested in this study [29].

Racial differences

In this study, we identified differences in HPV vaccine uptake between racial groups based on data reported to GRITS, which reflect national data from NIS-Teen where Hispanic/Latino persons are more likely to initiate and complete the series compared to other racial groups [8], with White persons the least likely to initiate and complete the HPV vaccine series across birth cohorts. Racial disparities are seen at the national and state level when assessing HPV vaccine coverage. For instance, minorities typically have higher HPV vaccine initiation rates compared to White persons, but vaccine completion rates are higher in White persons compared to racial minorities [41]. This may be related to disparities in cervical cancer incidence and mortality, which is higher for Black and Hispanic women compared to White women [1].

When analyzing GRITS reported data, adolescents that do not have a reported race or ethnicity were not included in the analysis for race and ethnicity. This may lead to inaccurate estimates for the proportion of each ethnicity and race initiating and completing the vaccine

series. Underreporting leads to bias in estimates, and further, may lead to long term negative impacts for surveillance measures. Understanding racial and ethnic differences in HPV vaccine trends are important in order to address suboptimal coverage levels as vaccination is the primary way to prevent HPV-related cancers, of which affect racial groups disproportionally [18] [41]. The racial and ethnic differences in HPV-related cancer highlight the importance of obtaining consistent, complete race and ethnicity data. Further, drivers behind differences in vaccine uptake are highlighted but remain unclear as to why these differences exist. Obtaining complete race and ethnicity data allows for a more robust dataset. In combination with health district level data, race and ethnicity data may be used to assess if there are linkages between health systems in each health district and race or ethnicity [41].

Health district data

According to NIS-Teen data, HPV vaccination coverage levels are lower in rural areas compared to urban areas [42]. Despite increases seen in the proportion of each birth cohort initiating and completing the vaccine series, some health districts did not see such increases. The low performing Health Districts in this study (Districts 10 Northeast, 9-2 Southeast, 1-1 Northeast, 5-1 South Central, and 2 North) are more rural areas, further from an urban center. The higher performing health districts in this study (3-4 GNR, 3-5 DeKalb, and 3-2 Fulton) are urban areas, close to Atlanta (the state capitol). Understanding these differences within the state are important to address the overall suboptimal state vaccine coverage. In the health districts that had higher proportions of vaccine coverage and completion, they often had higher proportions of initiation and completion compared to the overall state average for a particular birth cohort. Further, in the health districts that performed sub optimally, they often had lower proportions of

initiation and completion than those of the state for each birth cohort. This is highlighted in the health district tables in Appendix **Table A24a-A35b**. Furthermore, adolescents at or above the poverty line typically have lower proportions of HPV vaccine initiation and completion compared to those that are below the poverty line regardless of living in a rural or urban area [8]. These differences between rural and urban areas accentuate the need for understanding and addressing the disparities between areas in order to increase state-level coverage for HPV vaccination.

This study provides an important framework for future research pertaining to health district-level data for HPV vaccine coverage, and potentially for other essential vaccines in the state of Georgia. Understanding trends among HPV vaccinations within health districts in Georgia will give insight to barriers that must be overcome to increase vaccine coverage, such as access to care [2]. Increasing local-level coverage will overall increase the percent of persons vaccinated against HPV in the state of Georgia, potentially leading to accomplishing the Healthy People Goal of 2030 to reach 80% of adolescents vaccinated. Further, household response rate from NIS-Teen, the main method for assessing adolescent vaccine coverage, may not accurately reflect vaccine coverage. Studies have suggested that NIS-Teen data may not provide true estimates for vaccine coverage [43]. Telephone-based calling methods may not provide the most accurate estimates for true coverage, but NIS-Teen data and GRITS data both suggest suboptimal coverage levels. Studies like this one may provide novel methods for assessing vaccine coverage at the state level, as NIS-Teen only selects for certain local areas to report on. Further, there are more observations reported to the GRITS data system compared to NIS-Teen. For example, in 2020, NIS-Teen reported on 20,163 adolescents aged 13-17 on a national level. The birth cohort of 2000 used in this study contains 128, 311 observations in Georgia alone [8]. Studies focusing

on census level population data and utilization of state-level vaccine records may provide more accurate estimates for vaccine coverage.

Limitations

While this study aims to understand HPV vaccine rates among all adolescents in Georgia, there are a few limitations to consider when interpreting the results

I. GRITS data does not have an appropriate denominator value for considering the entire population of a birth cohort. GRITS only reports children that have received a vaccine in Georgia and does not report those children that are born but have not yet received a vaccine. This may lead to overestimation of vaccine coverage percentages, specifically for the race and ethnicity percentages, as each birth cohort in this study is only including children reported to GRITS. Census data were used to obtain the estimations of the birth cohorts of 1995-2006 along with the number of males and females within each cohort. However, the census data were not pulled for ethnic and racial identification for this study. Further studies should extrapolate on race and ethnicity census data to provide more accurate estimates.

II. This study assumes a constant population for each birth cohort. It does not take into account factors that may reduce or increase the population size of a birth cohort over time such as death or late reporting.

III. Not every client ID has an associated race code/ethnicity code/ZIP code. When conducting the analysis for this study, not every observation (client ID) had an associated race or ethnicity code. This may lead to overestimations in the race and ethnicity coverage percentages. Persons with out-of-state ZIP codes were also dropped from this

study to ensure only Georgia residents were being assessed. This may lead to less accurate percentages if children received their first or final dose outside of the state of Georgia.

CHAPTER IV: CONCLUSIONS AND RECOMMENDATIONS

HPV vaccine coverage levels remain suboptimal regardless of implementing goals to increase coverage across the United States [9]. While data exist on national and state-level coverage on initiation and completion, few studies highlight the variation within states such as between health districts. This study highlights the importance of understanding the geographic and racial distribution of people within a state to better understand how to implement HPV vaccination programs to meet the Healthy People 2030 goal of 80% of adolescents considered up to date. Grasping a better understanding of the population can give insight to specific barriers in lower-coverage areas that can be addressed through targeted interventions – therefore increasing the coverage in areas.

These descriptive analyses are essential to gain a understanding of vaccine coverage and distribution, which can often be missed in complex analyses [44]. Stratification on variables at a descriptive level are useful for understanding trends in data without being subject to as much bias as compared to complex analyses and modeling. This study further supports the significance of such studies, as they are not common, but they provide useful information for health interventions.

While these analyses are important, it is also essential to recognize the limitations of using data such as an immunization registry. While GRITS contains reports of all immunizations

in the state of Georgia, it does not provide the complete number of births into each birth cohort. GRITS only contains data on those individuals receiving vaccines, therefore potentially underestimating the number of people in each birth cohort in this study. Future studies should incorporate census data on population counts for more accurate estimates. Because of this, the percentages may be overestimated. With immunization reporting error from nonreporting, loss to follow up, and incorrect reporting of variables such as ZIP code, race code, or ethnicity code are potentially issues. These errors or nonreporting may also lead to incomplete estimates that do not fully reflect vaccine coverage. Regardless, immunization registries and survey methods, such as GRITS and NIS-Teen, are valuable resources for assessing vaccine coverage. Methods such as those used in this study may be used to evaluate the racial and geographic distribution of persons within a state to identify where vaccine programs should be implemented to reduce the risk of vaccine preventable diseases.

REFERENCES

1. Serrano, B., et al., *Epidemiology and burden of HPV-related disease.* Best Pract Res Clin Obstet Gynaecol, 2018. **47**: p. 14-26.
2. Dennison, C., et al., *HPV Vaccine-Related Research, Promotion and Coordination in the State of Georgia: A Systematic Review.* J Community Health, 2019. **44**(2): p. 313-321.
3. de Martel, C., et al., *Worldwide burden of cancer attributable to HPV by site, country and HPV type.* Int J Cancer, 2017. **141**(4): p. 664-670.
4. Watson, M., et al., *Using population-based cancer registry data to assess the burden of human papillomavirus-associated cancers in the United States: Overview of methods.* Cancer, 2008. **113**(S10): p. 2841-2854.
5. Cutts, F.T., et al., *Human papillomavirus and HPV vaccines: a review.* Bull World Health Organ, 2007. **85**(9): p. 719-26.
6. Meites, E., A. Kempe, and L.E. Markowitz, *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**(49): p. 1405-1408.
7. Saslow, D., et al., *Human papillomavirus vaccination guideline update: American Cancer Society guideline endorsement.* CA Cancer J Clin, 2016. **66**(5): p. 375-85.
8. Pingali, C., et al., *National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13-17 Years - United States, 2020.* MMWR Morb Mortal Wkly Rep, 2021. **70**(35): p. 1183-1190.
9. Healthy People 2030. *Goal: increased vaccination rates*. 2018; Available from: https://health.gov/healthypeople/objectives-and-data/browse-objectives/vaccination.
10. White, A.A., et al., *Spatial patterns of HPV and Tdap vaccine dose administration and the association of health department clinic access in Georgia counties.* Vaccine, 2022. **40**(9): p. 1352-1360.
11. Machado, F.R., Thomas, E., Drenzek, C., Lovett, S., *Georgia Adolescent Immunization Study 2018.* Immunization Program / Acute Disease Epidemiology Section, 2018.
12. Center for Disease Control. *Genital HPV Infection — Fact Sheet*. 2022 [cited 2022 February]; Available from: https://www.cdc.gov/std/hpv/stdfact-hpv.htm.
13. Georgia Department of Public Health. *Georgia Immunization Registry (GRITS)*. 1996 25 January 2022 [cited 2022 January]; Available from: https://dph.georgia.gov/immunization-section/georgia-immunization-registry-grits.
14. Center for Disease Control. *About Immunization Information Systems*. 2019 [cited 2022 February]; Available from: https://www.cdc.gov/vaccines/programs/iis/about.html.
15. Georgia Department of Public Health. *Public Health Districts*. 2021 [cited 2022 February]; Available from: https://dph.georgia.gov/about-dph/contact-dph/public-health-districts.
16. Office of Disease Prevention and Health Promotion, U.D.o.H.a.H.S. *National Immunization Survey - Teen (NIS-Teen)*. 2006 [cited 2022 February]; Available from: https://health.gov/healthypeople/objectives-and-data/data-sources-and-methods/data-sources/national-immunization-survey-teen-nis-teen.
17. Omer, S.B., et al., *Vaccine refusal, mandatory immunization, and the risks of vaccine-preventable diseases.* N Engl J Med, 2009. **360**(19): p. 1981-8.
18. Hirth, J., *Disparities in HPV vaccination rates and HPV prevalence in the United States: a review of the literature.* Hum Vaccin Immunother, 2019. **15**(1): p. 146-155.

19. Smulian, E.A., K.R. Mitchell, and S. Stokley, *Interventions to increase HPV vaccination coverage: A systematic review.* Hum Vaccin Immunother, 2016. **12**(6): p. 1566-88.
20. Burchell, A.N., et al., *Chapter 6: Epidemiology and transmission dynamics of genital HPV infection.* Vaccine, 2006. **24 Suppl 3**: p. S3/52-61.
21. Braaten, K.P. and M.R. Laufer, *Human Papillomavirus (HPV), HPV-Related Disease, and the HPV Vaccine.* Rev Obstet Gynecol, 2008. **1**(1): p. 2-10.
22. Centers for Disease Control and Prevention. *Administering HPV vaccine*. 2016 16 November 2021 [cited 2022 10 February]; Available from: https://www.cdc.gov/vaccines/vpd/hpv/hcp/administration.html.
23. Harper, D.M. and L.R. DeMars, *HPV vaccines - A review of the first decade.* Gynecol Oncol, 2017. **146**(1): p. 196-204.
24. Landis, K., R.A. Bednarczyk, and L.M. Gaydos, *Correlates of HPV vaccine initiation and provider recommendation among male adolescents, 2014 NIS-Teen.* Vaccine, 2018. **36**(24): p. 3498-3504.
25. Garnett, G.P. and H.C. Waddell, *Public health paradoxes and the epidemiological impact of an HPV vaccine.* J Clin Virol, 2000. **19**(1-2): p. 101-11.
26. Centers for Disease Control and Prevention. *National Immunization Surveys (NIS)*. 2018 [cited 2022; Available from: https://www.cdc.gov/vaccines/imz-managers/nis/about.html.
27. Healthy People 2020. *Immunization and Infectious Disease: National Snapshots*. 2014 February 6, 2022; Available from: https://www.healthypeople.gov/2020/topics-objectives/topic/immunization-and-infectious-diseases/objectives.
28. Center for Disease Control, *Estimated Vaccination Uptake* with ≥1 HPV Vaccine Dose Among Adolescents Aged 13–17† years Who Had Not Received a Dose of HPV Vaccine as of March 1st — National Immunization Survey–Teen (NIS-Teen), United States, 2019 and 2020.* MMWR. Morbidity and mortality weekly report, 2020. **70**(35).
29. Holman, D.M., et al., *Barriers to human papillomavirus vaccination among US adolescents: a systematic review of the literature.* JAMA Pediatr, 2014. **168**(1): p. 76-82.
30. Vu, M., et al., *Practice-, provider- and patient-level facilitators of and barriers to HPV vaccine promotion and uptake in Georgia: a qualitative study of healthcare providers' perspectives.* Health Educ Res, 2020. **35**(6): p. 512-523.
31. Leung, S.O.A., et al., *Educating healthcare providers to increase Human Papillomavirus (HPV) vaccination rates: A Qualitative Systematic Review.* Vaccine X, 2019. **3**: p. 100037.
32. Georgia Center for Oncology Research and Education Inc. *Georgia's Comprehensive Cancer Control Plan*. 2014 6/23/2019; Available from: https://www.georgiacancerinfo.org/statewide-initiatives/cancer-control-plan.aspx.
33. United Health Foundation. *America's Health Rankings analysis of CDC, National Immunization Survey-Teen*. 2020 [cited 2022 March]; Available from: https://www.americashealthrankings.org/explore/annual/measure/Immunize_HPV/state/GA.
34. Sydney Ekeledo, C.B., Stephanie Norman, Jodi Bazemore, Jessica Smith Schwind, *Demographic and socioeconomic factors associated with HPV vaccination in Georgia's South Central Health District.* J Ga Public Health Association, 2016. **5**(4): p. 324-331.
35. Census.gov. *County Population by Characteristics: 2010-2019*. 2020 August 2021 [cited 2022 4/16]; Available from: https://www.census.gov/data/tables/time-series/demo/popest/2010s-counties-detail.html.

36. Georgiahealthdata.info. *Georgia ZIP Codes with County*. Available from: http://georgiahealthdata.info/Georgia_Zip_Code_County_Lookup.PDF.
37. Georgia Department of Public Health. *Public Health Districts*. 2021 10/6/2021 [cited 2022 April 1]; Available from: https://dph.georgia.gov/about-dph/contact-dph/public-health-districts.
38. Brotherton, J.M.L., et al., *Is one dose of human papillomavirus vaccine as effective as three?: A national cohort analysis.* Papillomavirus Research, 2019. **8**: p. 100177.
39. Whitworth, H.S., et al., *Efficacy and immunogenicity of a single dose of human papillomavirus vaccine compared to no vaccination or standard three and two-dose vaccination regimens: A systematic review of evidence from clinical trials.* Vaccine, 2020. **38**(6): p. 1302-1314.
40. Attia, A.C., J. Wolf, and A.E. Nunez, *On surmounting the barriers to HPV vaccination: we can do better.* Ann Med, 2018. **50**(3): p. 209-225.
41. Spencer, J.C., W.A. Calo, and N.T. Brewer, *Disparities and reverse disparities in HPV vaccination: A systematic review and meta-analysis.* Prev Med, 2019. **123**: p. 197-203.
42. Walker, T.Y., et al., *National, Regional, State, and Selected Local Area Vaccination Coverage Among Adolescents Aged 13-17 Years - United States, 2016.* MMWR Morb Mortal Wkly Rep, 2017. **66**(33): p. 874-882.
43. Chen, S.T., et al., *Trends in Human Papillomavirus Vaccination in Commercially Insured Children in the United States.* Pediatrics, 2020. **146**(4).
44. Fox, M.P., et al., *On the Need to Revitalize Descriptive Epidemiology.* Am J Epidemiol, 2022.

APPENNDIX I: DATA TABLES AND GRAPHS

Table A1. Variables used during study assessing trends in birth cohorts from 2006-2017

Variable	**Definition**
CLIENT_ID	Unique client ID associated with each person included in the study
SEX_CODE	Sex of participant: Male or Female (n=2)
RACE_CODE	Numeric code associated with race of a participant that had a format to identify corresponding race: American Indian/Alaska Native, Asian, Black/African American, Hispanic/Latino, Native Hawaiian/Other Pacific Islander, Other, White, Unknown (n=8)
ETHNICITY_CODE	Numeric code associated with ethnicity of a participant that was formatted with corresponding ethnicity: Hispanic/Latino, Non-Hispanic/Latino (n=2)
H_init_by_[YEAR]	Proportion of persons in a birth cohort initiating vaccination by a particular [YEAR] where [YEAR] was between 2006-2017
H_utd_by_[YEAR]	Proportion of persons in a birth cohort considered up-to-date by a particular [YEAR] where [YEAR] was between 2006-2017
H_zip_[1,2,3]_a	ZIP code where participant received dose 1, 2, or 3 of HPV vaccine series. The numeric ZIP code was then formatted to be grouped by health district in Georgia (n=18)
CountyName	This variable was the character variable created from the numeric variable of H_zip_1_a that allowed the dataset to be broken up into Georgia counties and health districts
Pct_i[YEAR]	This created variable refers to the percent of the birth cohort initiating the vaccine series by the YEAR indicated in the variable. This was created by dividing the number of those reported to GRITS within a health district by the census level population data for the respective birth cohort.
Pct_c[YEAR]	This variable was created to indicate the proportion of the birth cohort by health district or county completing the vaccine series by the indicated year. This was created by dividing those considered up to date on the vaccine series by the total population from census data.

Table A2. Reported ethnicities and races to GRITS utilized in analysis

Ethnicities	Hispanic/Latino, Non-Hispanic/Latino
Races	American Indian/Alaska Native, Asian, Black, Hispanic/Latino, Native Hawaiian/Other Pacific Islander, Other, Unknown, White

Table A3. Georgia counties in each Georgia Public Health District

Health District	**Counties associated with the district**
1-1 Northwest (Rome)	Dade, Walker, Catoosa, Chattooga, Gordon, Floyd, Bartow, Polk, Paulding, Haralson
1-2 North Georgia (Dalton)	Whitfield, Murray, Fannin, Gilmer, Pickens, Cherokee
2 North (Gainesville)	Forsyth, Dawson, Lumpkin, White, Union, Hall, Towns, Rabun, Habersham, Banks, Stephens, Franklin, Hart
3-1 Cobb-Douglas	Cobb, Douglas
3-2 Fulton	Fulton
3-3 Clayton (Jonesboro)	Clayton
3-4 GNR (Lawrenceville)	Gwinnett, Rockdale, Newton
3-5 DeKalb	DeKalb
4 District 4	Carroll, Heard, Troup, Coweta, Fayette, Meriwether, Pike, Spaulding, Henry, Butts, Lamar, Upson
5-1 South Central (Dublin)	Johnson, Treutlen, Montgomery, Wheeler, Laurens, Dodge, Telfair, Wilcox, Pulaski, Bleckley
5-2 North Central (Macon)	Crawford, Peach, Houston, Twiggs, Bibb, Monroe, Jasper, Jones, Wilkinson, Baldwin, Putnam, Hancock, Washington
6 East Central (Augusta)	Taliaferro, Wilkes, Lincoln, Warren, McDuffie, Columbia, Glascock, Jefferson, Richmond, Burke, Emanuel, Jenkins, Screven
7 West Central (Columbus)	Harris, Muscogee, Talbot, Taylor, Marion, Chattahoochee, Stewart, Quitman, Clay, Randolph, Webster, Schley, Macon, Sumter, Dooly, Crisp
8-1 South (Valdosta)	Turner, Ben Hill, Irwin, Tift, Berrien, Cook, Lanier, Brooks, Lowndes, Echols
8-2 Southwest (Albany)	Terrell, Lee, Calhoun, Dougherty, Worth, Early, Baker, Mitchell, Colquitt, Thomas, Grady, Decatur, Seminole, Miller
9-1 Coastal (Savannah)	Effingham, Chatham, Bryan, Liberty, Long, McIntosh, Glynn, Camden
9-2 Southeast (Waycross)	Bulloch, Candler, Evans, Toombs, Tattnall, Jeff Davis, Appling, Wayne, Coffee, Bacon, Piece, Brantley, Ware, Atkinson, Clinch, Charlton
10 Northeast (Athens)	Elbert, Madison, Oglethorpe, Clarke, Jackson, Barrow, Oconee, Walton, Morgan, Greene

Ethnicity Tables and Graphs

Table A4. Percent of Hispanic/Latino persons in each birth cohort initiating HPV vaccination by year between 2006-2017 from GRITS reported data. Highlighted in yellow is when each birth cohort is age 11.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0.03	6.49	13.46	18.63	26.06	35.11	44.73	49.34	49.34	49.34	49.34	49.34
Cohort 1996	0	4.34	13.39	17.82	24.68	33.1	42.37	50.36	53.98	53.98	53.98	53.98
Cohort 1997	0.06	1.03	7.89	15.06	21.84	30.34	39.37	47.76	56.68	59.6	59.6	59.6
Cohort 1998	0	0.34	1.32	7.7	19.9	28.53	36.39	44.92	52.54	59.93	63.79	63.79
Cohort 1999	0	0	0.25	0.99	12.05	26.18	35.6	43.02	51.11	57.79	66.18	69.3
Cohort 2000	0	0	0	0.35	2.86	17.57	34.94	43.82	53.34	60.18	67.49	73.71
Cohort 2001	0	0	0	0	1.47	3.74	22.66	39.93	52.04	59.71	66.96	73.78
Cohort 2002	0	0	0	0	0	1.71	3.95	23.63	44.14	55.4	64.35	71.48
Cohort 2003	0	0	0	0	0	0	1.9	4.12	25.34	45.96	59.67	69.2
Cohort 2004	0	0	0	0	0	0	0	1.41	3.68	24.99	49.46	66.59
Cohort 2005	0	0	0	0	0	0	0	0	1.31	3.88	35.12	67.22
Cohort 2006	0	0	0	0	0	0	0	0	0	2.2	3.88	65.86

Figure A1. Proportion of GRITS reported Hispanic/Latino persons in each birth cohort initiating the HPV vaccine series across the entire state of Georgia between the years of 2006-2017.

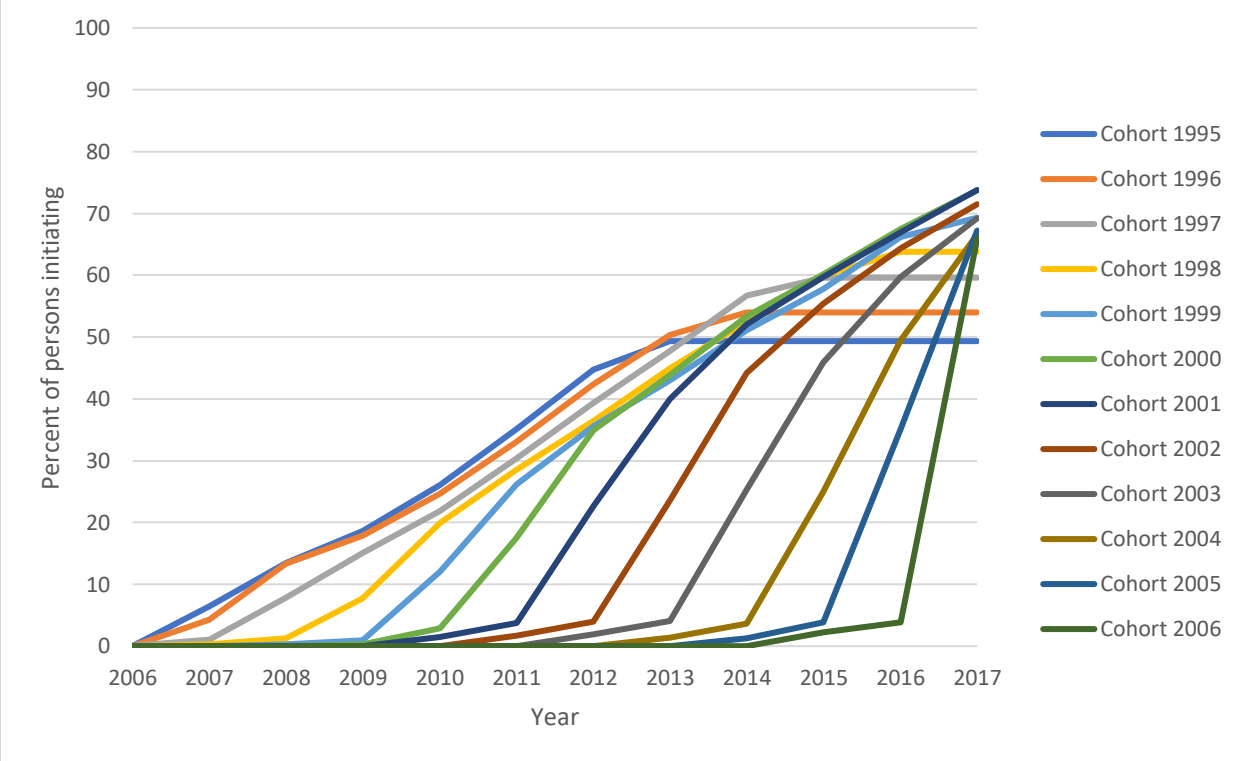


Table A5. Proportion of non-Hispanic/Latino persons in each birth cohort initiating HPV vaccination by year between 2006-2017 for GRITS reported data. Age when each birth cohort turns age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0.21	7.45	14.78	19.54	25.99	33.74	41.05	44.31	44.31	44.31	44.31	44.31
Cohort 1996	0.06	5.71	13.96	18.33	24.41	31.89	39.48	45.29	47.89	47.89	47.89	47.89
Cohort 1997	0.03	1.02	8	14.83	21.64	30.07	38.7	45.71	51.28	53.63	53.63	53.63
Cohort 1998	0	0.47	1.38	7.66	18.37	28.02	37.7	45.64	52.08	57.14	59.36	59.36
Cohort 1999	0	0	0.39	1.13	11.5	25.09	35.33	44.24	51.22	56.93	61.42	63.13
Cohort 2000	0	0	0	0.29	1.36	14.56	30.31	40.66	49.41	55.95	61.39	65.2
Cohort 2001	0	0	0	0	0.5	1.77	17.82	34.46	46.94	55.01	61.05	65.5
Cohort 2002	0	0	0	0	0	0.71	1.69	18.91	39.62	51.49	58.67	63.41
Cohort 2003	0	0	0	0	0	0	0.57	1.52	20.96	42.35	55.34	62.07
Cohort 2004	0	0	0	0	0	0	0	0.64	1.58	24.27	49.25	61.69
Cohort 2005	0	0	0	0	0	0	0	0	0.57	1.65	29.94	57.19
Cohort 2006	0	0	0	0	0	0	0	0	0	1.3	3.14	55.08

Figure A2. The proportion of Non-Hispanic/Latino persons in each birth cohort initiating the HPV vaccine series between 2006-2017 in Georgia as a whole from GRITS reported data.

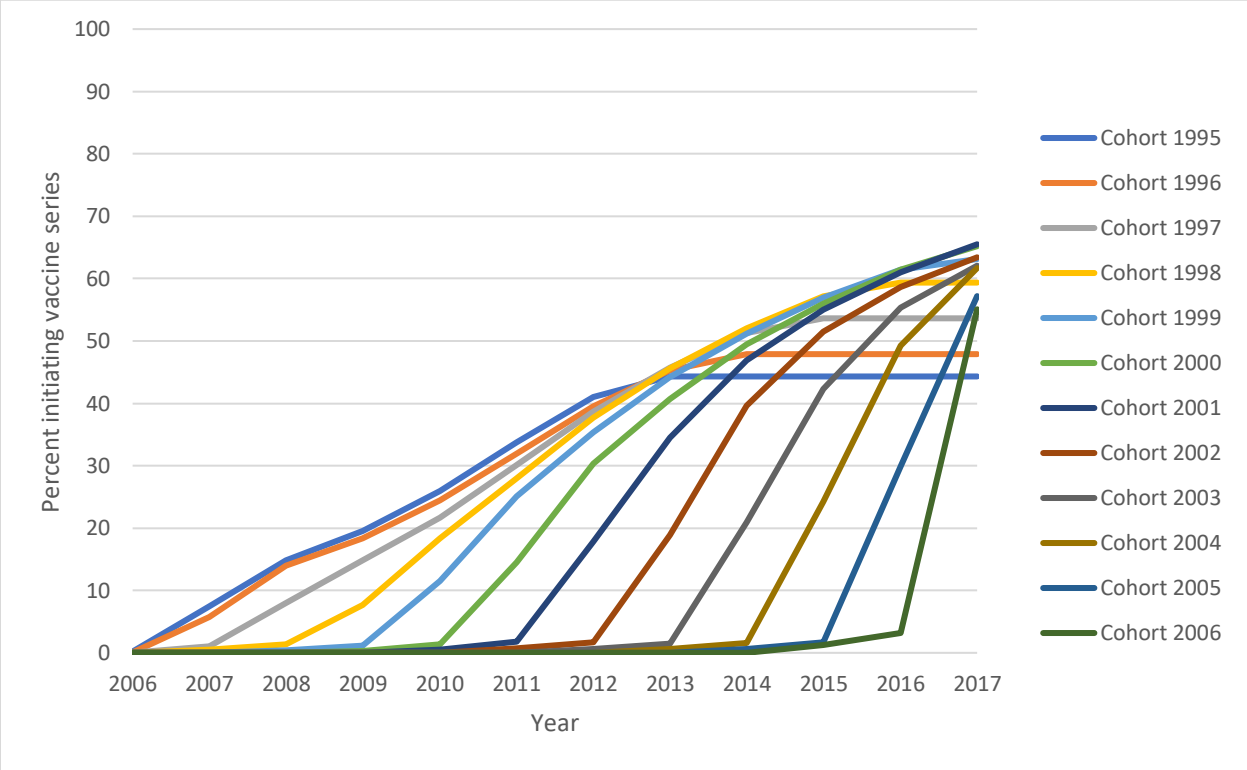


Table A6. Percent of Hispanic/Latino persons in each birth cohort up to date on HPV vaccinations by year between 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow for each birth cohort.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	0.38	4.48	8.08	11.24	15.65	22.59	27.59	27.59	27.59	27.59	27.59
Cohort 1996	0	0.09	2.93	6.68	9.39	13.95	20.31	27.24	30.86	30.86	30.86	30.86
Cohort 1997	0	0.06	1.06	4.56	7.75	12.31	17.98	25.06	32.73	36.43	36.43	36.43
Cohort 1998	0	0	0.29	1.24	4.42	9.69	15.17	21.86	29.33	35.18	38.43	38.43
Cohort 1999	0	0	0.02	0.15	1.01	6.06	12.59	20.24	27.78	35.16	41.91	45.18
Cohort 2000	0	0	0	0.02	0.43	2.49	9.85	18.85	28.2	37.29	46.7	53.01
Cohort 2001	0	0	0	0	0.12	1.25	3.42	13.24	25.64	36.41	47.03	54.24
Cohort 2002	0	0	0	0	0	0.15	0.94	3.55	15.49	29.33	42.13	50.95
Cohort 2003	0	0	0	0	0	0	0.26	1.45	4.31	16.68	33.16	45.7
Cohort 2004	0	0	0	0	0	0	0	0.2	1.11	4.12	20.1	35.38
Cohort 2005	0	0	0	0	0	0	0	0	0.16	1.27	5.63	31.44
Cohort 2006	0	0	0	0	0	0	0	0	0	0.32	1.96	9.52

Figure A3. The proportion of Hispanic/Latino persons by birth cohort completing the vaccine series between the years of 2006-2017 in Georgia as a whole from GRITS reported data.

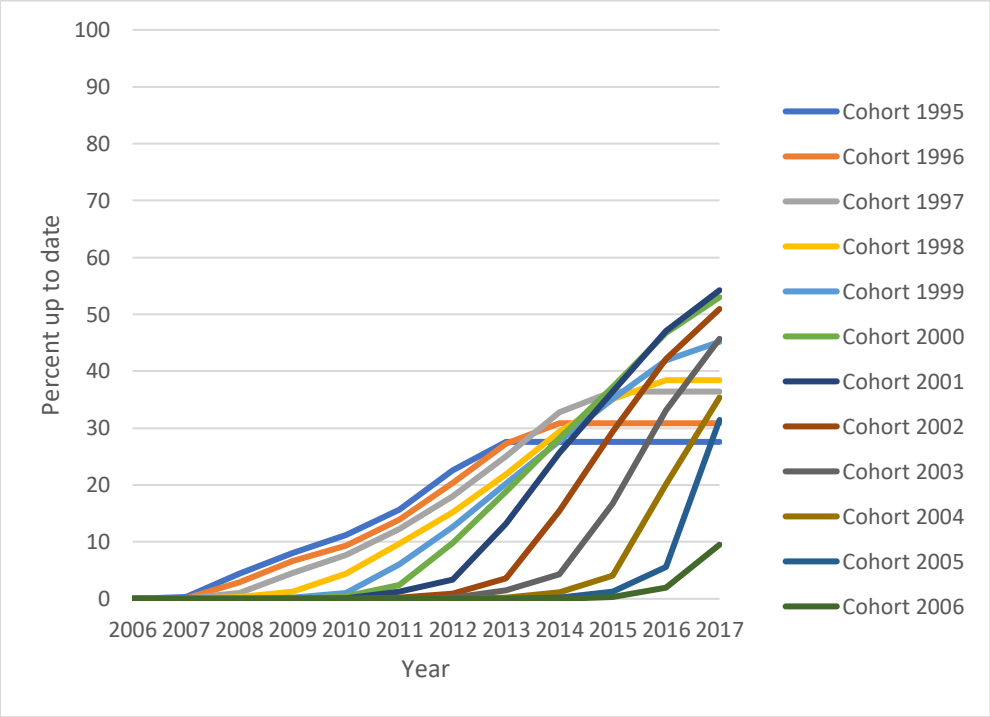
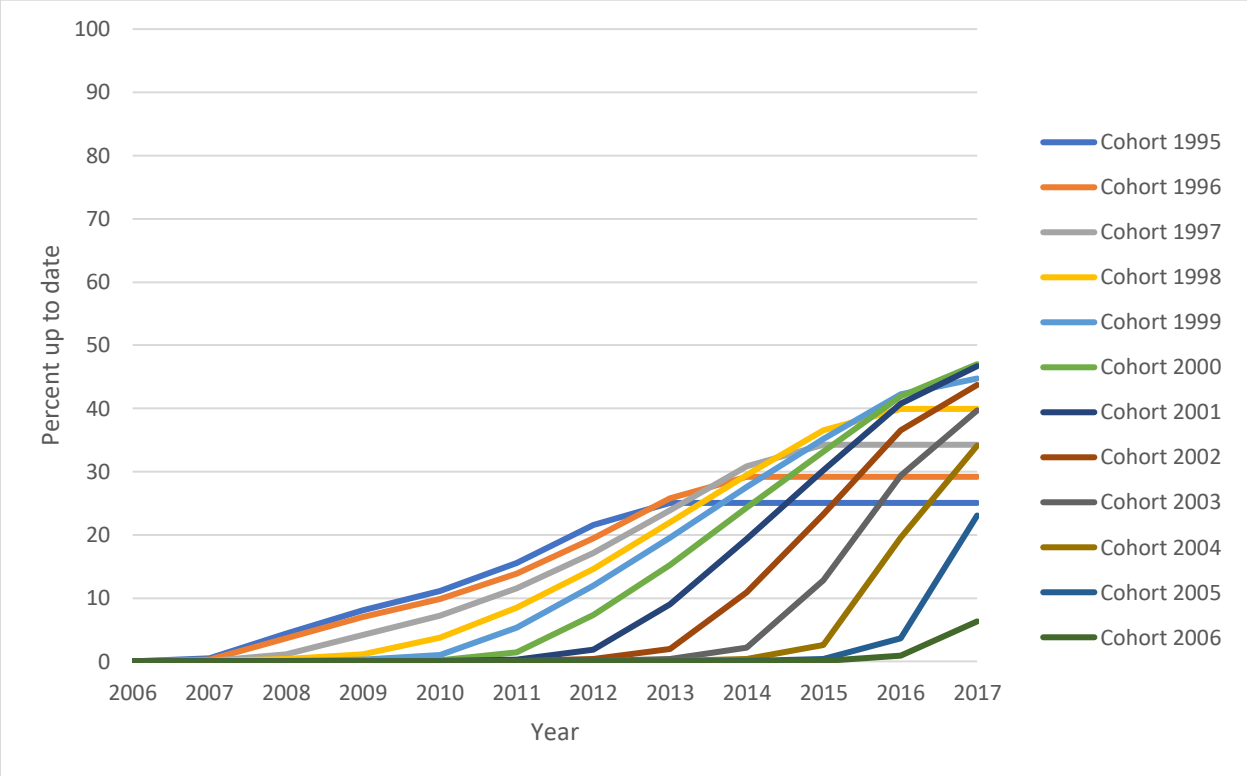


Table A7. Percent of non-Hispanic/Latino persons in each birth cohort up to date on HPV vaccinations by year between 2006-2017 from GRITS reported data. Age 11 for each birth cohort is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	0.53	4.37	8.05	11.15	15.59	21.59	25.06	25.06	25.06	25.06	25.06
Cohort 1996	0	0.3	3.68	7.05	9.84	13.87	19.51	25.77	29.19	29.19	29.19	29.19
Cohort 1997	0	0.08	1.09	4.15	7.25	11.52	17.17	23.91	30.87	34.26	34.26	34.26
Cohort 1998	0	0.02	0.37	1.09	3.79	8.47	14.62	22.01	29.5	36.52	39.93	39.93
Cohort 1999	0	0	0.04	0.26	1.01	5.29	11.97	19.6	27.61	35.14	42.23	44.74
Cohort 2000	0	0	0	0.01	0.18	1.43	7.31	15.27	24.26	33.21	41.88	47
Cohort 2001	0	0	0	0	0.02	0.32	1.81	9.05	19.33	30.19	40.77	46.69
Cohort 2002	0	0	0	0	0	0.05	0.4	1.93	10.95	23.26	36.59	43.72
Cohort 2003	0	0	0	0	0	0	0.05	0.33	2.17	12.86	29.38	39.69
Cohort 2004	0	0	0	0	0	0	0	0.04	0.36	2.64	19.52	34.12
Cohort 2005	0	0	0	0	0	0	0	0	0.04	0.38	3.61	23.07
Cohort 2006	0	0	0	0	0	0	0	0	0	0.11	0.94	6.32

Figure A4. The proportion of Non-Hispanic/Latino persons in each birth cohort up to date on HPV vaccinations between 2006-2017 in Georgia as a whole from GRITS reported data.



Race Tables and Graphs

Table A8. Percent of American Indian or Alaska Native persons in each birth cohort initiating HPV vaccination series by year between 2006-2017 from GRITS reported data. Age 11 for each birth cohort is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	6.67	13.33	19.33	28	34.67	38.67	43.33	43.33	43.33	43.33	43.33
Cohort 1996	0	4.4	11.32	16.98	24.53	28.3	33.33	39.62	42.77	42.77	42.77	42.77
Cohort 1997	0	1.01	8.08	12.12	18.18	29.29	35.86	42.93	47.47	48.99	48.99	48.99
Cohort 1998	0	0.55	4.37	7.1	16.94	26.23	38.8	45.9	50.27	53.55	57.92	57.92
Cohort 1999	0	0	0	0.44	11.89	27.31	37	44.05	53.3	57.27	63	65.2
Cohort 2000	0	0	0	0	1.61	16.47	29.72	39.76	49	55.42	62.65	66.27
Cohort 2001	0	0	0	0	0.86	2.16	21.98	34.48	43.53	53.88	60.78	68.53
Cohort 2002	0	0	0	0	0	0	0.79	12.99	36.61	49.21	55.51	59.06
Cohort 2003	0	0	0	0	0	0	0.44	0.89	21.33	45.78	58.22	65.78
Cohort 2004	0	0	0	0	0	0	0	1.7	2.98	21.28	49.79	62.98
Cohort 2005	0	0	0	0	0	0	0	0	0.52	1.57	26.7	57.59
Cohort 2006	0	0	0	0	0	0	0	0	0	0	3.73	61.94

Figure A5. The proportion of American Indian/Alaska Native persons in each birth cohort initiating HPV vaccination by year from 2006-2017 in Georgia as a whole from GRITS reported data.

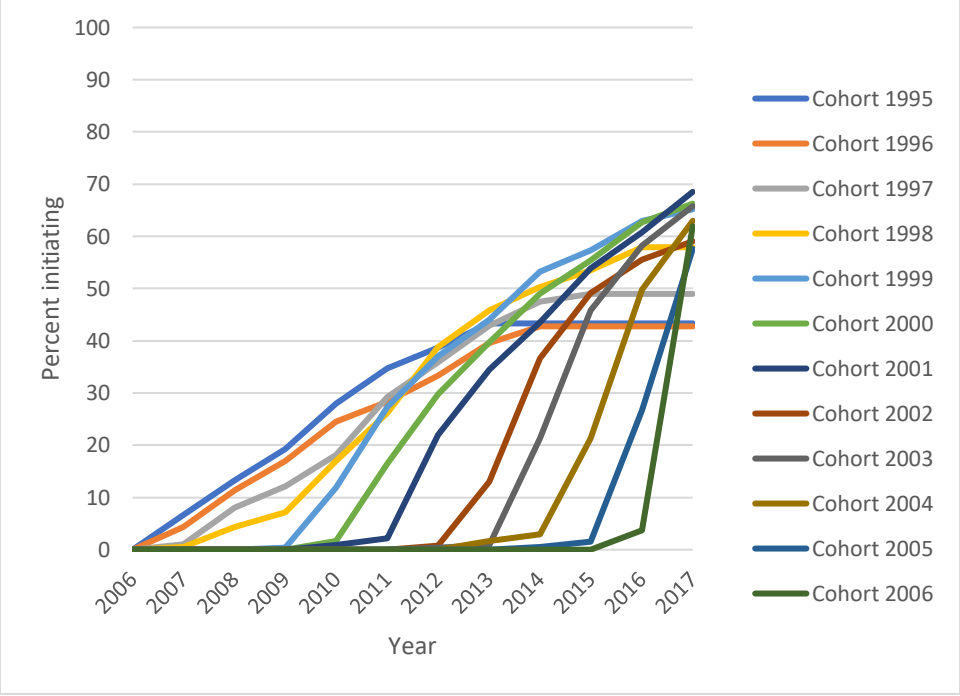


Table A9. Percent of Asian persons in each birth cohort initiating HPV vaccine series by year between 2006-2017 from GRITS reported data. Age 11 for each birth cohort is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0.24	4.71	11.35	16.22	21.76	28.92	37.09	40.27	40.27	40.27	40.27	40.27
Cohort 1996	0.15	0.12	10.22	14.2	19.33	26.22	33.65	39.56	42.7	42.7	42.7	42.7
Cohort 1997	0.03	0.82	6.3	11.98	17.55	25.86	33.75	40.33	46.38	49.29	49.29	49.29
Cohort 1998	0	0.26	1.08	5.64	13.65	22.85	31.37	39.46	46.13	52.71	55.98	55.98
Cohort 1999	0	0	0.25	0.76	8.07	18.82	27.9	37.25	44.37	51.4	56.89	59.34
Cohort 2000	0	0	0	0.21	1.01	11.4	24.15	32.77	41.54	49.12	55.68	61.12
Cohort 2001	0	0	0	0	0.38	1.55	14.85	28.67	39.15	49.01	56.94	62.5
Cohort 2002	0	0	0	0	0	0.39	1.17	14.36	32.36	45.01	53.87	60.94
Cohort 2003	0	0	0	0	0	0	0.18	0.9	18.38	38.78	53.72	62.63
Cohort 2004	0	0	0	0	0	0	0	0.6	1.22	21.26	44.64	58.08
Cohort 2005	0	0	0	0	0	0	0	0	0.43	1.3	26.82	55.17
Cohort 2006	0	0	0	0	0	0	0	0	0	0.96	3.8	51.35

Figure A6. The proportion of Asian persons in each birth cohort initiating the HPV vaccine series by year between 2006-2017 from GRITS reported data.

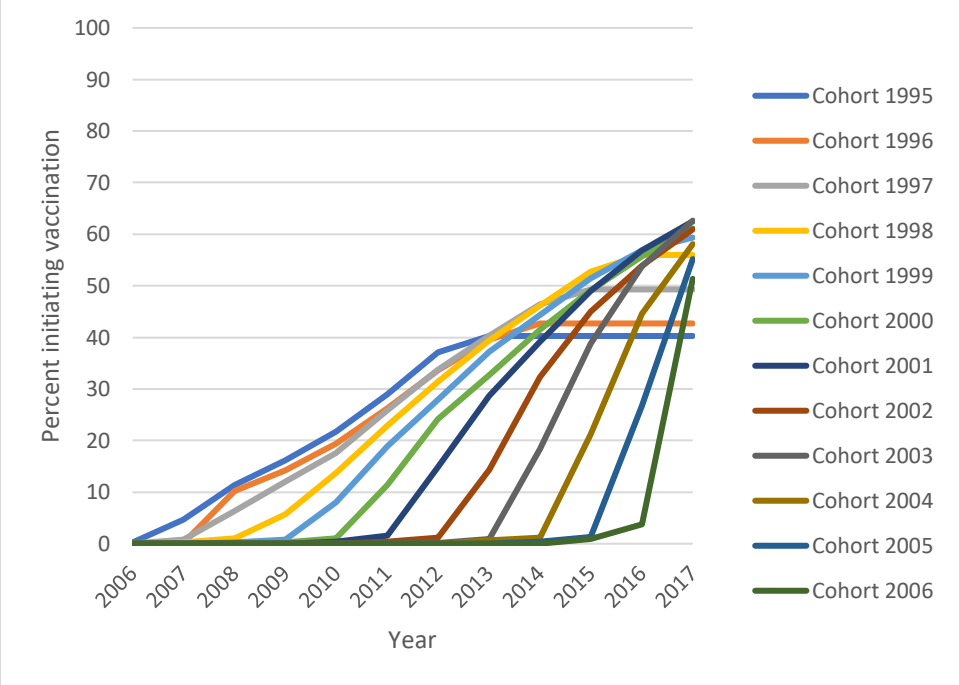


Table A10. Percent of Black persons in each birth cohort initiating HPV vaccine series by year between 2006-2017 from GRITS reported data. Age 11 for each cohort is in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0.16	6.56	13.84	18.32	24.57	32.71	40.72	44.61	44.61	44.61	44.89	44.89
Cohort 1996	0.05	5.12	13.22	17.63	23.81	31.71	39.87	46.31	49.25	49.25	49.25	49.25
Cohort 1997	0.02	1	8	14.34	21.51	30.34	39.4	46.93	52.84	55.5	55.5	55.5
Cohort 1998	0	0.43	1.4	7.39	18.13	28.42	38.56	46.75	53.8	59.48	61.9	61.9
Cohort 1999	0	0	0.36	1.04	11.14	25.2	35.9	44.88	52.47	58.53	63.22	65.29
Cohort 2000	0	0	0	0.24	1.32	14.84	31.26	42.13	51.57	58.53	64.13	68.2
Cohort 2001	0	0	0	0	0.53	1.89	18.45	35.53	49.02	57.36	63.44	68.25
Cohort 2002	0	0	0	0	0	0.62	1.63	18.5	40.84	53.77	61.27	66.31
Cohort 2003	0	0	0	0	0	0	0.54	1.49	20.95	44.22	58.21	65.04
Cohort 2004	0	0	0	0	0	0	0	0.5	1.44	22.89	49.97	63.75
Cohort 2005	0	0	0	0	0	0	0	0	0.54	2.07	30.39	62.21
Cohort 2006	0	0	0	0	0	0	0	0	0	1.56	4.25	61.75

Figure A7. Proportion of Black persons initiating the HPV vaccine series by birth cohort between 2006-2017 from GRITS reported data.

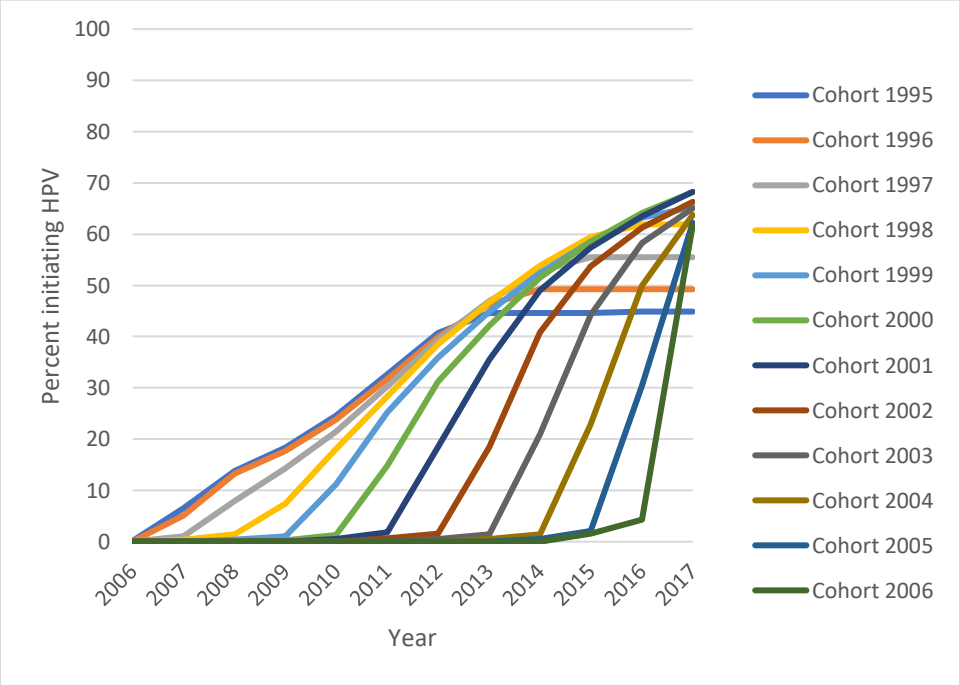


Table A11. Percent of Hispanic/Latino persons in each birth cohort initiating HPV vaccine series by year between 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0.11	7.53	15.61	20.95	29.41	40.57	49.81	53.82	53.82	53.82	53.82	54.22
Cohort 1996	0	6.19	16.67	20.37	28.57	38.94	48.62	55.34	58.36	58.36	58.36	58.36
Cohort 1997	0.05	1.23	10.35	17.53	26.65	37.93	48.59	56.59	62.94	66.15	66.15	66.15
Cohort 1998	0	0.54	1.93	9.54	24.88	35.99	45.71	55.62	61.35	67.15	70.23	70.23
Cohort 1999	0	0	0.44	1.32	15.7	31.91	42.53	50.19	56.66	62.75	68.78	70.6
Cohort 2000	0	0	0	0.38	4.16	25.53	44.4	53.91	61.78	67.14	72.66	76.87
Cohort 2001	0	0	0	0	1.92	5.52	28.69	47.91	60.15	67.02	72.6	78.41
Cohort 2002	0	0	0	0	0	1.96	4.78	31.34	54.67	64.17	72.24	77.36
Cohort 2003	0	0	0	0	0	0	2.11	4.21	32.27	55.04	67.79	75.13
Cohort 2004	0	0	0	0	0	0	0	1.86	4.44	32.57	58.85	72.59
Cohort 2005	0	0	0	0	0	0	0	0	1.65	5.27	42.46	72.68
Cohort 2006	0	0	0	0	0	0	0	0	0	2.99	7.21	71.63

Figure A8. Proportion of Hispanic/Latino persons in each birth cohort in the state of Georgia initiating the HPV vaccine series between 2006-2017 from GRITS reported data.

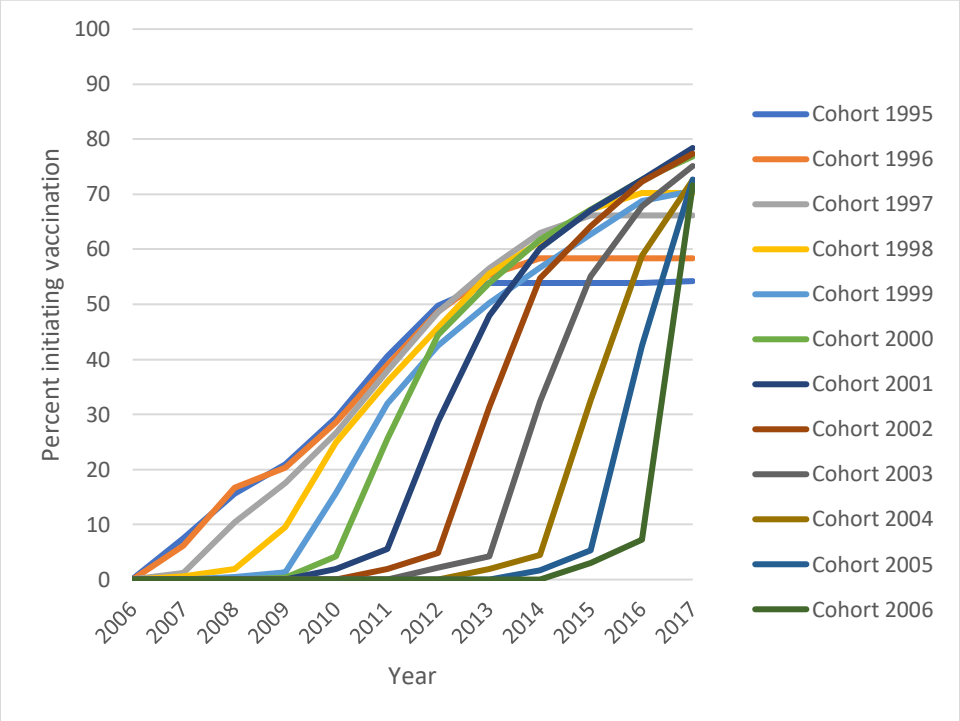


Table A12. Percent of Native Hawaiian or Pacific Islander persons in each birth cohort initiating HPV vaccine series by year between 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	6.06	9.09	12.12	12.12	21.21	30.3	30.3	30.3	30.3	30.3	35.9
Cohort 1996	0	2.56	12.82	20.51	23.08	33.33	38.46	41.03	46.15	46.15	46.15	46.15
Cohort 1997	0	0	0	6.82	15.91	25	38.64	47.73	56.82	65.91	65.91	65.91
Cohort 1998	0	0	0	2.44	12.2	24.39	26.83	29.27	41.46	48.78	58.54	58.54
Cohort 1999	0	0	0	1.35	13.51	28.38	40.54	45.95	52.7	59.46	64.86	67.57
Cohort 2000	0	0	0	0	1.28	11.54	37.18	47.44	55.13	60.26	65.38	78.21
Cohort 2001	0	0	0	0	0	3.03	21.21	37.88	51.52	62.12	69.7	74.24
Cohort 2002	0	0	0	0	0	0	1.45	18.84	37.68	46.38	59.42	69.57
Cohort 2003	0	0	0	0	0	0	0	0	23.88	40.3	59.7	73.13
Cohort 2004	0	0	0	0	0	0	0	0	1.19	20.24	39.29	57.14
Cohort 2005	0	0	0	0	0	0	0	0	0	3.06	19.39	58.16
Cohort 2006	0	0	0	0	0	0	0	0	0	1.79	7.14	53.57

Figure A9. The proportion of Native Hawaiian/Pacific Islander persons in each birth cohort reported to GRITS that initiated the HPV vaccine. Series between 2006-2017.

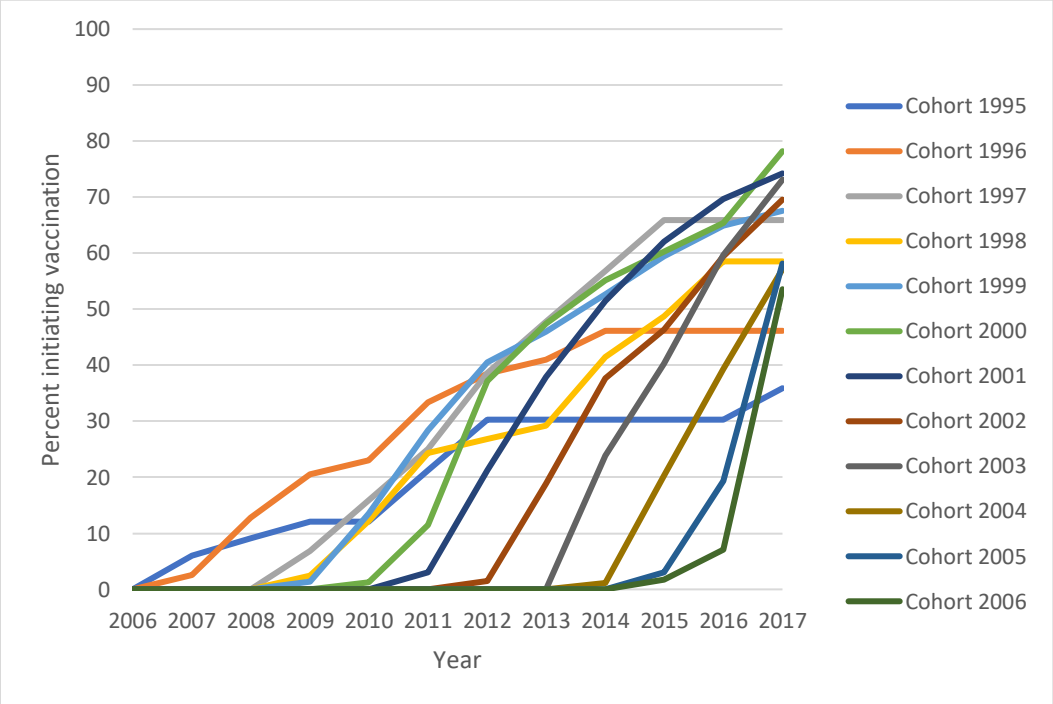


Table A13. Percent of Other race persons initiating HPV vaccine series in each birth cohort by year between the years of 2006-2017 from GRITS reported data. Age 11 for each cohort is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0.47	7.09	14.47	19.02	24.85	33.51	41.81	45.87	45.87	45.87	45.87	45.87
Cohort 1996	0.09	5.34	12.93	17.03	23.02	31.49	39.76	47.13	50.59	50.59	50.59	50.59
Cohort 1997	0.04	1.01	6.89	12.93	19.62	29.76	38.81	47.56	54.63	57.11	57.11	57.11
Cohort 1998	0	0.42	1.61	6.87	16.91	27.56	38.61	48	55.38	60.62	63.03	63.03
Cohort 1999	0	0	0.33	1.06	10.85	25.4	36.6	46.68	54.58	60.68	65.36	60.86
Cohort 2000	0	0	0	0.28	1.48	15.65	31.78	42.89	52.77	59.74	65.49	69.43
Cohort 2001	0	0	0	0	0.69	2.36	19.08	37.04	49.91	58.23	64.73	68.85
Cohort 2002	0	0	0	0	0	0.96	1.97	20.02	40.35	51.19	58.66	63.66
Cohort 2003	0	0	0	0	0	0	0.73	1.72	22.52	43.2	55.32	63.35
Cohort 2004	0	0	0	0	0	0	0	0.93	2.02	25.37	50.61	63.14
Cohort 2005	0	0	0	0	0	0	0	0	0.92	2.08	31.57	59.56
Cohort 2006	0	0	0	0	0	0	0	0	0	1.63	3.61	56.32

Figure A10. The proportion of Other race persons reported to GRITS that initiated the HPV vaccine series between 2006-2017.

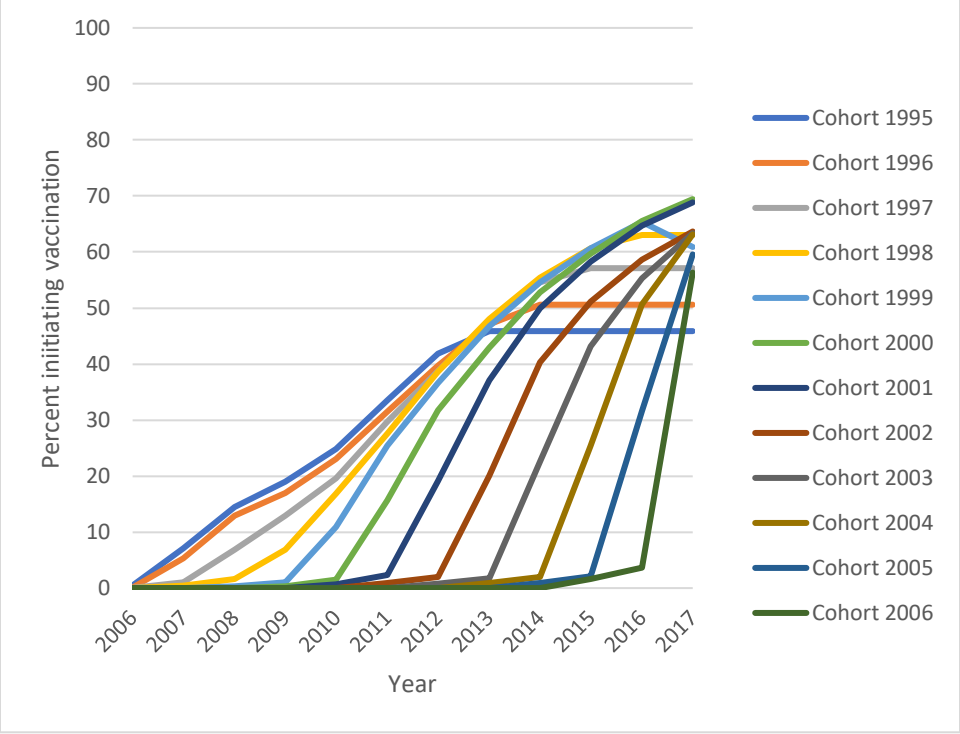


Table A14. Percent of Unknown race persons in each birth cohort initiating HPV vaccine series by year between 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow for each birth cohort.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0.82	10.19	17.14	21.1	24.84	31.74	40.39	44.16	44.16	44.16	44.16	44.16
Cohort 1996	0.33	6.43	11.62	15.18	20.56	27.94	37.79	44.26	46.57	46.57	46.57	46.57
Cohort 1997	0.18	0.91	6.55	11.16	15.87	24.44	36.96	44.93	49.67	52.02	52.02	52.02
Cohort 1998	0	0.36	0.79	4.99	10.54	19.72	33.23	42.56	48.29	53.64	56.52	56.52
Cohort 1999	0	0	0.23	0.41	5.83	15.16	28.62	39.71	47.2	53.03	58.45	59.75
Cohort 2000	0	0	0	0.15	0.45	9.31	23.65	36.64	46.88	54.63	61.55	67.44
Cohort 2001	0	0	0	0	0.15	0.49	12.95	30.03	43.4	53.78	64.37	71.26
Cohort 2002	0	0	0	0	0	0.13	0.54	15.16	34	48.89	61.22	71.8
Cohort 2003	0	0	0	0	0	0	0.04	0.36	13.91	31.48	46.23	55.76
Cohort 2004	0	0	0	0	0	0	0	0.08	0.44	13.99	34.68	48.41
Cohort 2005	0	0	0	0	0	0	0	0	0.11	0.06	21.11	43.58
Cohort 2006	0	0	0	0	0	0	0	0	0	0.84	2.26	35.09

Figure A11. The proportion of Unknown race persons in each birth cohort from GRITS reported data that initiated the HPV vaccine series between 2006-2017.

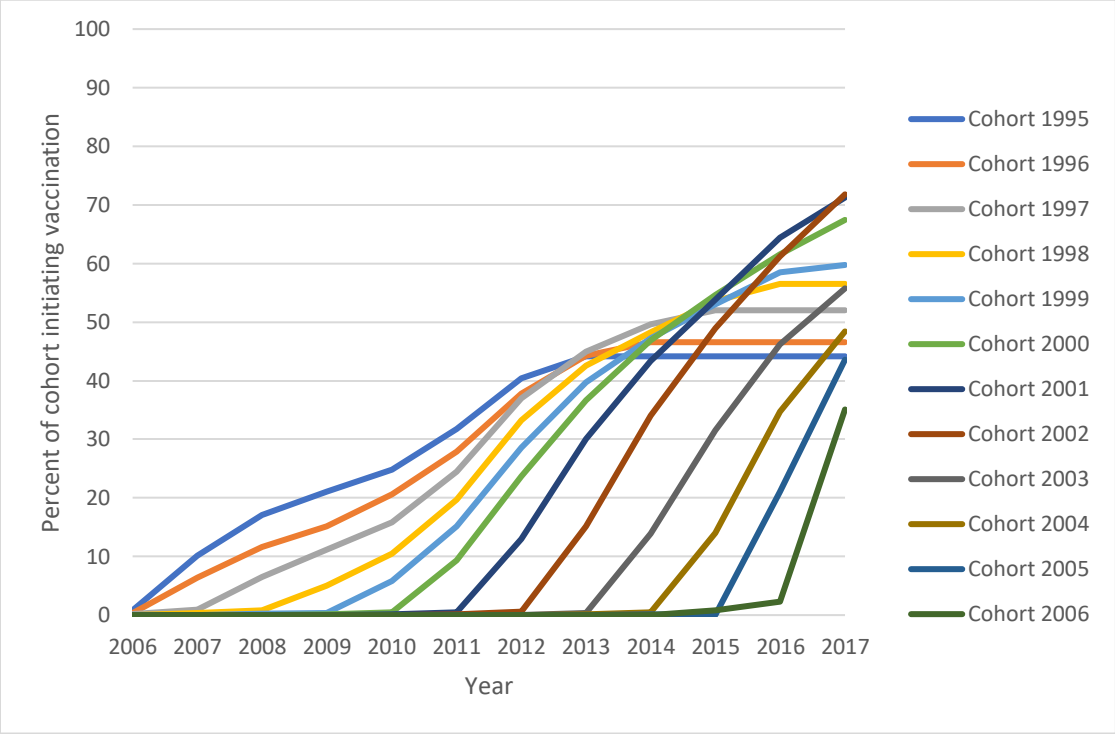


Table A15. Percent of White persons in each birth cohort initiating HPV vaccine series by year between 2006-2017 from GRITS reported data. Age 11 for each birth cohort is highlighted in red.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0.37	8.65	15.31	19.64	25.17	31.86	38.67	41.91	41.91	41.91	41.91	41.91
Cohort 1996	0.12	6.51	14.26	18.23	23.48	30.15	37.21	42.87	45.25	45.25	45.25	45.25
Cohort 1997	0.09	1.15	4.03	14.77	20.54	28.16	36.47	43.06	48.23	50.49	50.49	50.49
Cohort 1998	0	0.56	1.4	7.56	17.14	25.75	35.08	43.14	49.13	53.74	56.08	56.08
Cohort 1999	0	0	0.38	0.5	10.58	22.64	32.34	41.17	47.93	53.33	57.94	59.75
Cohort 2000	0	0	0	0.3	1.21	13.38	27.85	37.85	46.11	52.3	57.66	61.56
Cohort 2001	0	0	0	0	0.43	1.44	16.42	32.04	43.37	50.96	57.08	61.62
Cohort 2002	0	0	0	0	0	0.63	1.49	18.24	36.84	47.57	54.63	59.67
Cohort 2003	0	0	0	0	0	0	0.53	1.34	19.41	38.55	50.45	57.22
Cohort 2004	0	0	0	0	0	0	0	0.46	1.19	21.21	42.94	54.73
Cohort 2005	0	0	0	0	0	0	0	0	0.53	1.39	26.83	52.15
Cohort 2006	0	0	0	0	0	0	0	0	0	1.07	2.44	49.8

Figure A12. The proportion of White persons in each birth cohort reported by GRITS data that initiated the HPV vaccine series between 2006-2017.

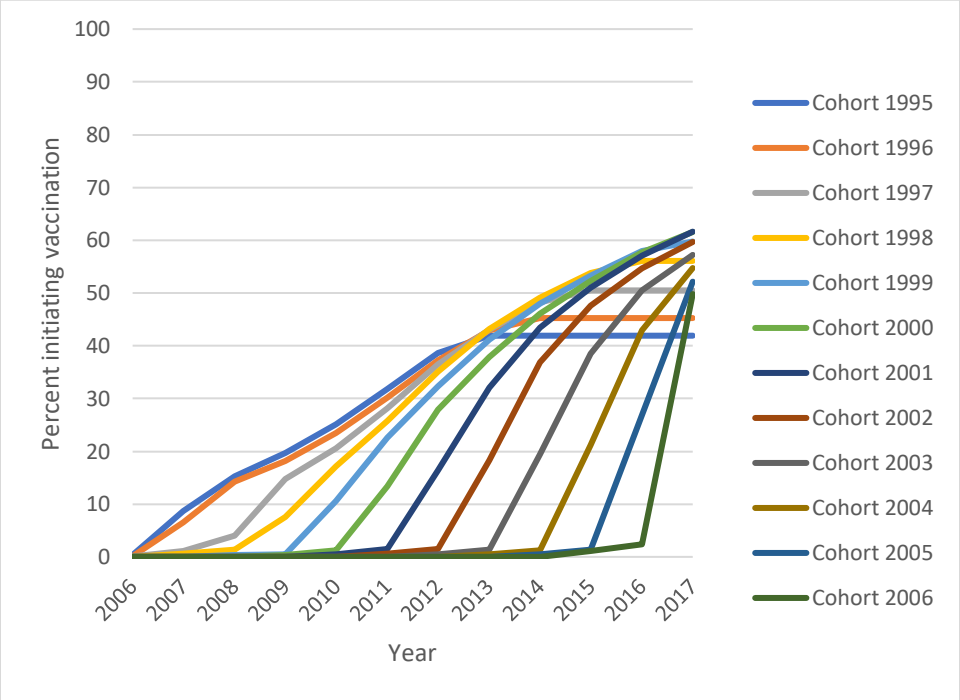


Table A16. Percent of American Indian or Alaska Native persons in each birth cohort up to date on HPV vaccination by year between the years of 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	0.67	4	9.33	14.67	17.33	23.33	25.33	25.33	25.33	25.33	25.33
Cohort 1996	0	0.63	1.89	4.4	5.66	7.55	13.84	19.5	23.27	23.27	23.27	23.27
Cohort 1997	0	0.51	2.53	5.05	6.06	11.11	16.67	24.24	28.79	32.32	32.32	32.32
Cohort 1998	0	0.55	4.37	7.1	16.94	26.23	38.8	45.9	50.27	53.55	57.92	57.92
Cohort 1999	0	0	0	0	0.88	6.17	17.18	22.03	32.6	37	44.05	47.14
Cohort 2000	0	0	0	0	0	1.61	8.03	18.88	26.91	36.14	42.57	49.4
Cohort 2001	0	0	0	0	0	0.43	3.88	12.93	22.84	33.62	44.4	51.72
Cohort 2002	0	0	0	0	0	0	0	1.97	9.06	21.65	35.43	43.31
Cohort 2003	0	0	0	0	0	0	0	0	0.89	15.11	32.89	45.33
Cohort 2004	0	0	0	0	0	0	0	0	0.43	3.4	19.15	34.89
Cohort 2005	0	0	0	0	0	0	0	0	0	0	3.66	24.08
Cohort 2006	0	0	0	0	0	0	0	0	0	0	0	6.72

Figure A13. Proportion of American Indian/Alaska Native persons in each birth cohort up to date on HPV vaccinations from GRITS reported data between 2006 and 2017.

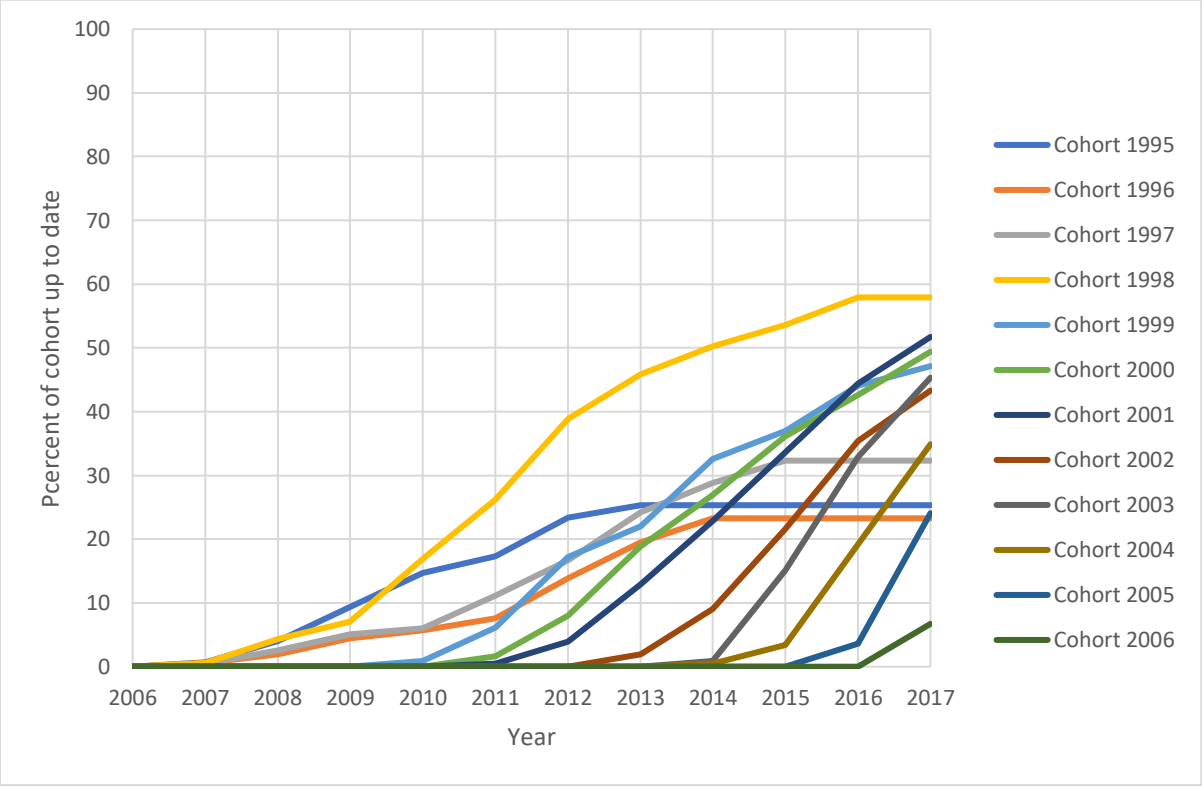


Table A17. Percent of Asian persons in each birth cohort up to date on HPV vaccination by year between the years of 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	0.61	4.04	7.77	10.77	14.96	20.62	25.28	25.28	25.28	25.28	25.28
Cohort 1996	0	0.27	3.15	6.68	8.93	13.13	17.38	23.67	26.94	26.94	26.94	26.94
Cohort 1997	0	0.03	1.05	4.21	7.32	11.73	17.44	23.66	30.27	33.86	33.86	33.86
Cohort 1998	0	0.26	1.08	5.64	13.65	22.85	31.37	39.46	46.13	52.71	55.98	55.98
Cohort 1999	0	0	0.05	0.3	1.09	4.61	10.64	18.49	25.96	32.48	39.51	42.62
Cohort 2000	0	0	0	0	0.1	1.29	7.59	15.97	23.66	31.45	39.55	45.69
Cohort 2001	0	0	0	0	0.02	0.24	1.93	9.91	18.76	28.21	38.91	45.34
Cohort 2002	0	0	0	0	0	0.03	0.34	1.58	10.16	22.36	35.3	43.22
Cohort 2003	0	0	0	0	0	0	0.03	0.13	2.36	13.27	30.17	42.39
Cohort 2004	0	0	0	0	0	0	0	0	0.35	2.56	18.92	34.83
Cohort 2005	0	0	0	0	0	0	0	0	0	0.29	4.19	24.02
Cohort 2006	0	0	0	0	0	0	0	0	0	0	0.82	7.26

Figure A14. The proportion of Asian persons in each birth cohort completing the HPV vaccine series based on GRITS reported data between 2006 and 2017.

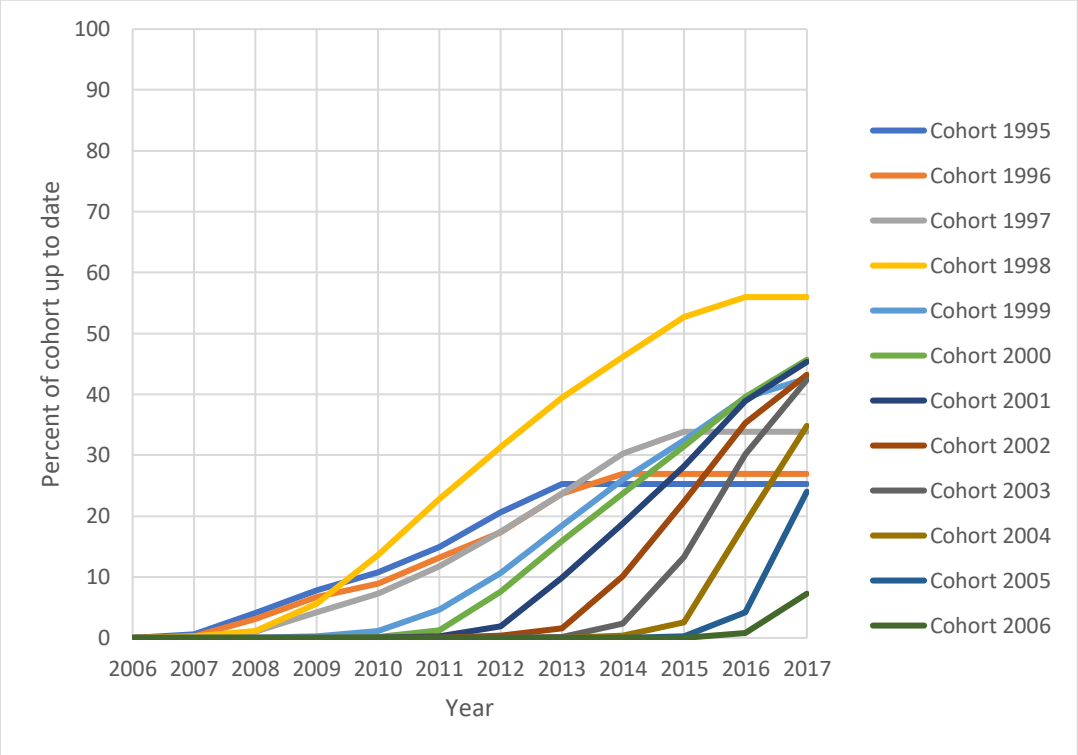


Table A18. Percent of Black persons in each birth cohort up to date on HPV vaccination by year between the years of 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	0.25	3.14	6.44	9.47	13.72	20.08	23.97	23.97	23.97	23.97	23.97
Cohort 1996	0	0.21	2.59	5.66	8.38	12.24	18.17	24.99	29.04	29.04	29.04	29.04
Cohort 1997	0	0.03	0.84	3.33	6.11	10.22	15.81	22.76	30.57	34.57	34.57	34.57
Cohort 1998	0	0.43	1.4	7.39	18.13	28.42	38.56	46.75	53.8	59.48	61.9	61.9
Cohort 1999	0	0	0.02	0.18	0.74	4.34	10.42	17.78	26.1	34.51	42.71	45.61
Cohort 2000	0	0	0	0.01	0.13	1.18	6.42	14.04	33.29	36.8	43.03	48.8
Cohort 2001	0	0	0	0	0.23	0.28	1.55	8.07	18.25	29.9	41.55	47.98
Cohort 2002	0	0	0	0	0	0.03	0.28	1.57	9.71	22.23	36.52	44.35
Cohort 2003	0	0	0	0	0	0	0.03	0.26	1.74	11.69	29.06	40.21
Cohort 2004	0	0	0	0	0	0	0	0.04	0.22	1.99	17.11	33.12
Cohort 2005	0	0	0	0	0	0	0	0	0.03	0.31	3.13	21.66
Cohort 2006	0	0	0	0	0	0	0	0	0	0.06	0.99	6.51

Figure A15. The proportion of Black persons in each birth cohort from GRITS reported data that completed the vaccine series from 2006 to 2017.

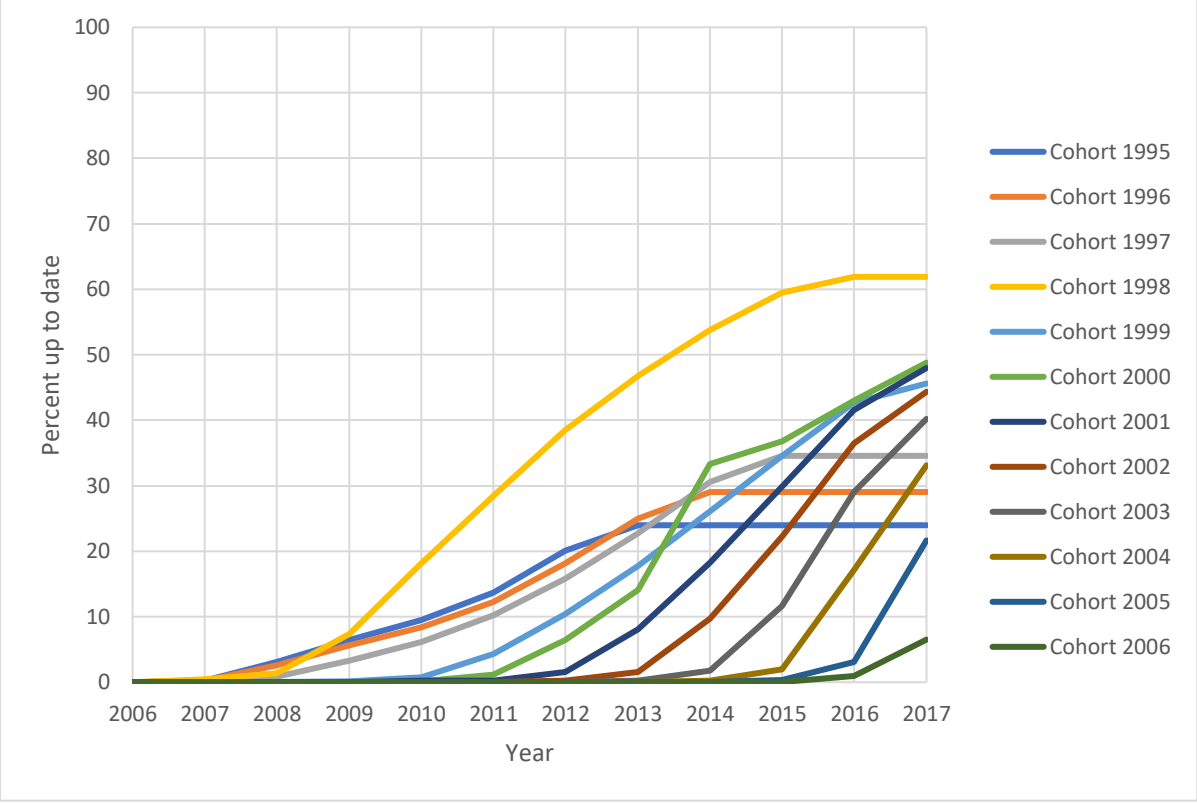


Table A19. Percent of Hispanic or Latino persons in each birth cohort up to date on HPV vaccination by year between the years of 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	0.27	5.39	9.51	12.53	17.98	26.44	32.6	32.6	32.6	32.6	32.6
Cohort 1996	0	0.16	4.44	8.99	12.12	17.83	25.82	34.23	37.99	37.99	37.99	37.99
Cohort 1997	0	0.05	1.59	5.95	9.94	16.76	24.45	33.62	42.13	45.36	45.36	45.36
Cohort 1998	0	0.54	1.93	9.54	24.88	35.99	45.71	55.62	61.35	67.15	70.23	70.23
Cohort 1999	0	0	0	0.25	1.26	8.35	16.27	25.57	34.36	40.64	47.61	49.87
Cohort 2000	0	0	0	0.05	0.55	3.99	14.87	26.41	28.21	45.05	53.03	58.28
Cohort 2001	0	0	0	0	0	1.52	4.79	17.47	32.69	43.57	55.19	61.22
Cohort 2002	0	0	0	0	0	0.17	1.04	4.67	21.49	38.88	51.32	59.68
Cohort 2003	0	0	0	0	0	0	0.4	1.76	6.49	24.3	43.82	55.55
Cohort 2004	0	0	0	0	0	0	0	0.18	1.26	5.52	28.25	46.01
Cohort 2005	0	0	0	0	0	0	0	0	0.16	1.43	7.79	38.12
Cohort 2006	0	0	0	0	0	0	0	0	0	0.48	2.59	11.97

Figure A16. The proportion of Hispanic/Latino persons in each birth cohort from GRITS reported data considered up to date on HPV vaccine series from 2006 to 2017.

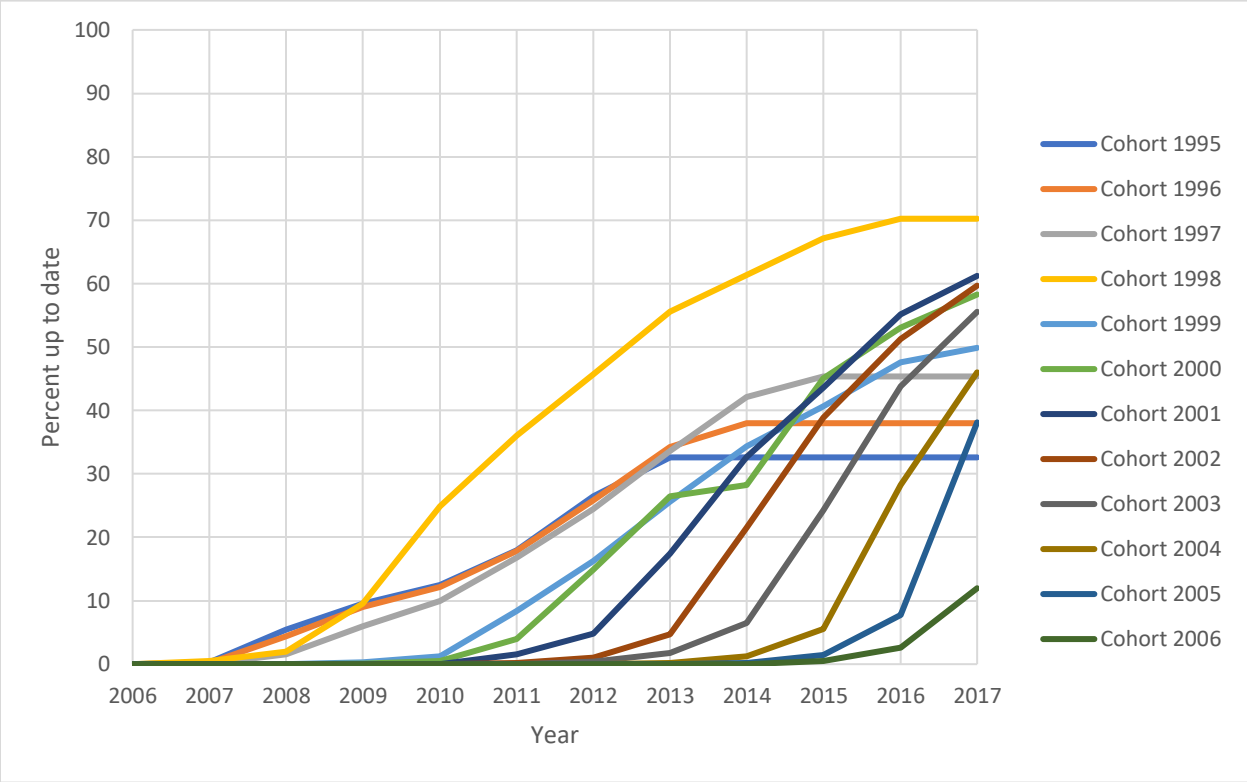


Table A20. Percent of Native Hawaiian or Pacific Islander persons in each birth cohort up to date on HPV vaccination by year between the years of 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	0	3.03	3.03	6.06	9.09	15.15	27.27	27.27	27.27	27.27	27.27
Cohort 1996	0	0	2.56	7.69	12.82	17.95	28.21	33.33	33.33	33.33	33.33	33.33
Cohort 1997	0	0	0	0	4.55	9.09	18.18	34.09	38.64	43.18	43.18	43.18
Cohort 1998	0	0	0	2.44	12.2	24.39	26.83	29.27	41.46	48.78	58.54	58.54
Cohort 1999	0	0	0	0	1.35	9.46	14.86	25.68	28.38	35.14	44.59	51.35
Cohort 2000	0	0	0	0	1.28	2.56	7.69	17.95	28.12	35.9	47.44	53.85
Cohort 2001	0	0	0	0	0	0	4.55	19.7	30.3	39.39	51.52	60.61
Cohort 2002	0	0	0	0	0	0	0	2.9	14.49	24.64	37.68	53.62
Cohort 2003	0	0	0	0	0	0	0	0	5.97	16.42	34.33	47.76
Cohort 2004	0	0	0	0	0	0	0	0	0	2.38	16.67	33.33
Cohort 2005	0	0	0	0	0	0	0	0	0	1.02	3.06	21.43
Cohort 2006	0	0	0	0	0	0	0	0	0	0	1.79	16.07

Figure A17. The proportion of Native Hawaiian/Pacific Islander persons in each birth cohort up to date on HPV vaccinations from GRITS reported data between 2006 and 2017.

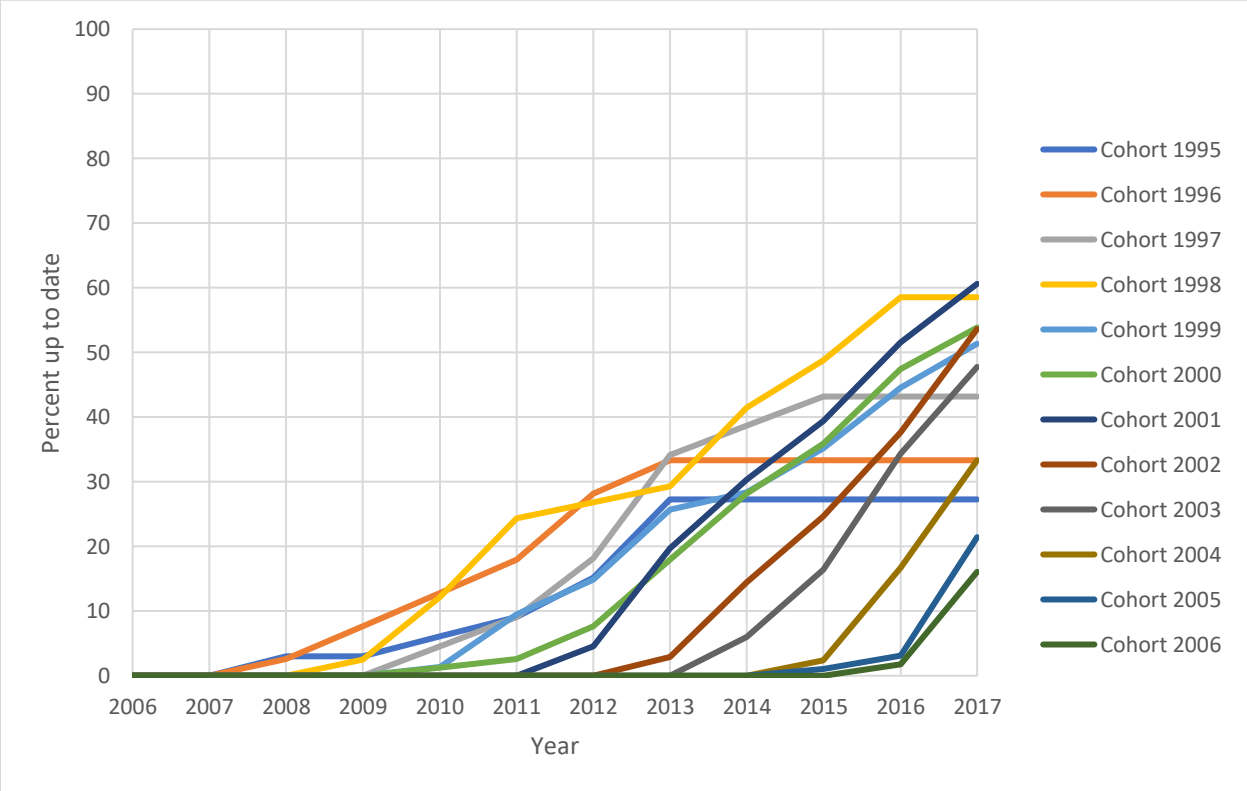


Table A21. Percent of Other race persons in each birth cohort up to date on HPV vaccination by year between the years of 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	0.85	4.82	8.45	11.33	16.31	22.8	26.89	26.89	26.89	26.89	26.89
Cohort 1996	0	0.37	4.04	7.88	10.78	14.48	20.36	27.99	32.83	32.83	32.83	32.83
Cohort 1997	0	0.09	1.3	4.02	7.02	11.79	18.41	25.68	34.59	38.63	38.63	38.63
Cohort 1998	0	0.42	1.61	6.87	16.91	27.56	38.61	48	55.38	60.62	63.03	63.03
Cohort 1999	0	0	0.03	0.27	1.06	5.81	13.25	22.43	32.19	40.51	47.89	50.73
Cohort 2000	0	0	0	0.03	0.21	1.82	8.26	17.52	27.39	37.89	47.44	52.97
Cohort 2001	0	0	0	0	0.06	0.5	2.39	10.65	22.63	34.2	45.01	51.33
Cohort 2002	0	0	0	0	0	0.08	0.68	2.36	12.91	25.23	38.72	46.32
Cohort 2003	0	0	0	0	0	0	0.05	0.44	2.82	14.32	32.55	42.78
Cohort 2004	0	0	0	0	0	0	0	0.1	0.64	3.31	21.57	37.8
Cohort 2005	0	0	0	0	0	0	0	0	0.09	0.72	3.92	25.57
Cohort 2006	0	0	0	0	0	0	0	0	0	0.27	1.4	6.95

Figure A18. The proportion of Other race persons from GRITS reported data considered up to date on HPV vaccinations between 2006 and 2017.

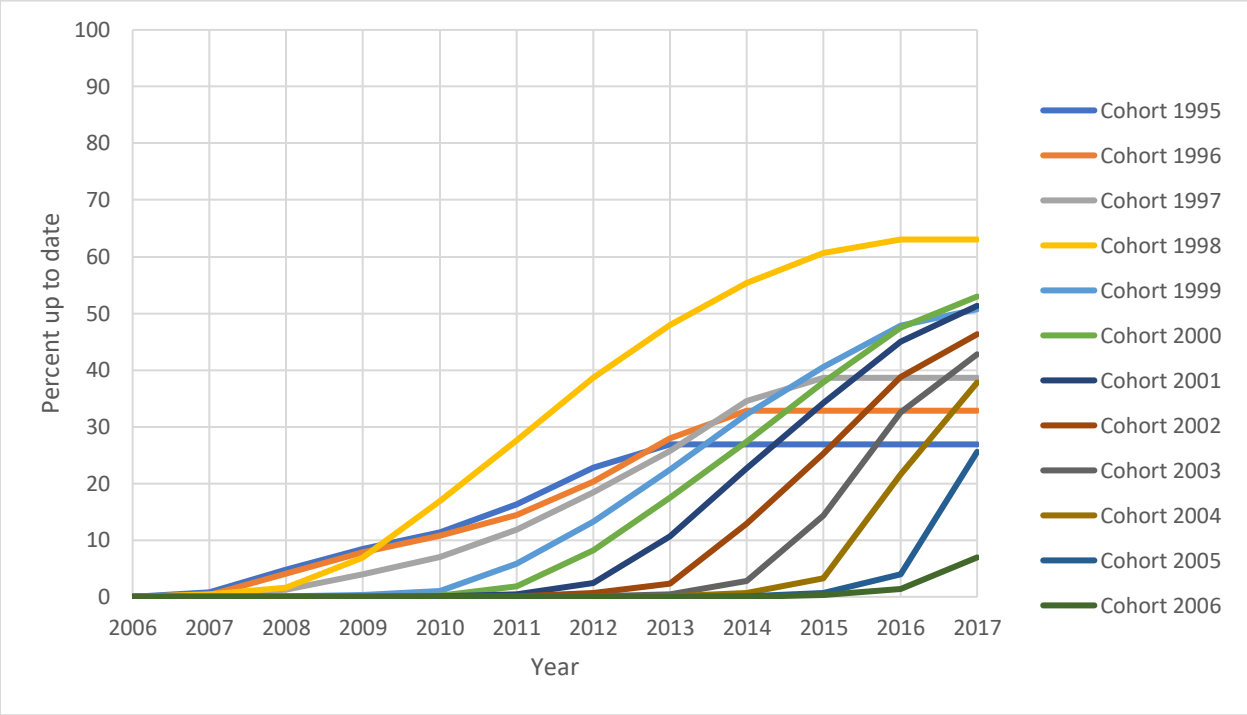


Table A22. Percent of Unknown race persons in each birth cohort up to date on HPV vaccination by year between the years of 2006-2017 from GRITS reported data. Age 11 is in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	2.57	8.92	12.63	15.76	19.67	25.88	31.05	31.05	31.05	31.05	31.05
Cohort 1996	0	1.21	5.63	8.61	11.34	15.58	21.47	30.34	34.6	34.6	34.6	34.6
Cohort 1997	0	0.03	1.75	4.86	7.85	12.13	19.61	28.73	36.51	40.65	40.65	40.65
Cohort 1998	0	0.36	0.79	4.99	10.54	19.72	33.23	42.56	48.29	53.64	56.52	56.52
Cohort 1999	0	0	0	0.05	0.67	4	10.06	19.64	29.21	37.34	46.21	49.47
Cohort 2000	0	0	0	0	0.18	1.15	6.92	16.45	24.29	36.79	47.3	55.05
Cohort 2001	0	0	0	0	0.03	0.15	1.99	9.09	21	32.68	48.67	57.39
Cohort 2002	0	0	0	0	0	0	0.03	1.62	9.4	22.04	42.35	55.19
Cohort 2003	0	0	0	0	0	0	0.02	0.07	1.04	9.42	26.4	37.67
Cohort 2004	0	0	0	0	0	0	0	0	0.05	1.01	12.15	25.76
Cohort 2005	0	0	0	0	0	0	0	0	0	0.18	2.44	17.71
Cohort 2006	0	0	0	0	0	0	0	0	0	0	1.04	2.61

Figure A19. The proportion of Unknown race persons in each cohort from GRITS reported data completing the HPV vaccine series between 2006 and 2017.

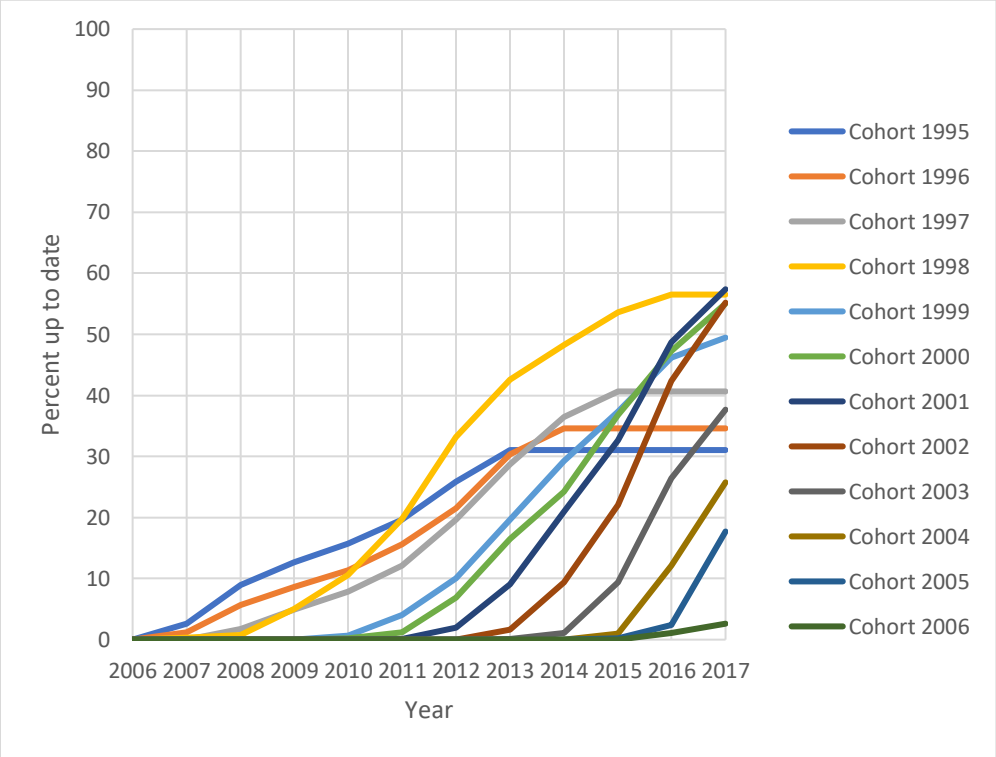
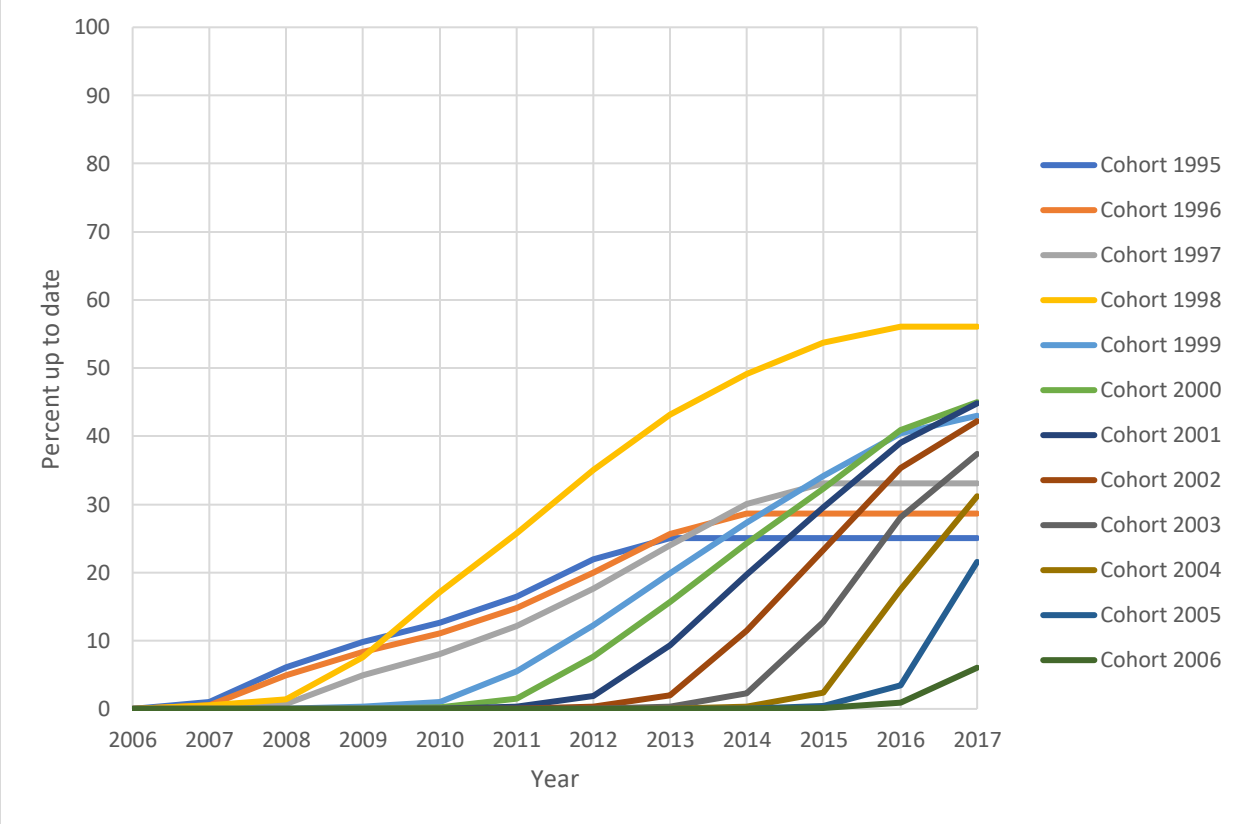


Table A23. Percent of White persons in each birth cohort up to date on HPV vaccination by year between the years of 2006-2017 from GRITS reported data. Age 11 is highlighted in yellow.

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cohort 1995	0	1.06	6.07	9.81	12.63	16.48	21.9	25.06	25.06	25.06	25.06	25.06
Cohort 1996	0	0.53	4.88	8.38	11.05	14.85	19.95	25.67	28.66	28.66	28.66	28.66
Cohort 1997	0	0.16	0.69	4.92	8.04	12.16	17.62	23.98	30.1	33.09	33.09	33.09
Cohort 1998	0	0.56	1.4	7.56	17.14	25.75	35.08	43.14	49.13	53.74	56.08	56.08
Cohort 1999	0	0	0.04	0.29	1.06	5.56	12.29	19.87	27.36	34.18	40.48	43.01
Cohort 2000	0	0	0	0.02	0.22	1.49	7.64	15.68	24.29	32.35	40.9	45
Cohort 2001	0	0	0	0	0.02	0.3	1.86	9.36	19.67	29.58	39.05	44.83
Cohort 2002	0	0	0	0	0	0.06	0.37	2.03	11.44	23.36	35.32	42.22
Cohort 2003	0	0	0	0	0	0	0.06	0.35	2.24	12.77	28.07	37.41
Cohort 2004	0	0	0	0	0	0	0	0.04	0.31	2.37	17.51	31.2
Cohort 2005	0	0	0	0	0	0	0	0	0.06	9.41	3.5	21.57
Cohort 2006	0	0	0	0	0	0	0	0	0	0.12	0.9	6.04

Figure A20. The proportion of White persons in each birth cohort from GRITS reported data completing the HPV vaccine series between 2006 and 2017.



Health district distribution of each birth cohort

Figure A21. The health district distribution of those receiving the first dose of the HPV vaccine as reported to GRITS. This figure shows district 3-4 GNR to have the greatest number of doses reported across all birth cohorts.

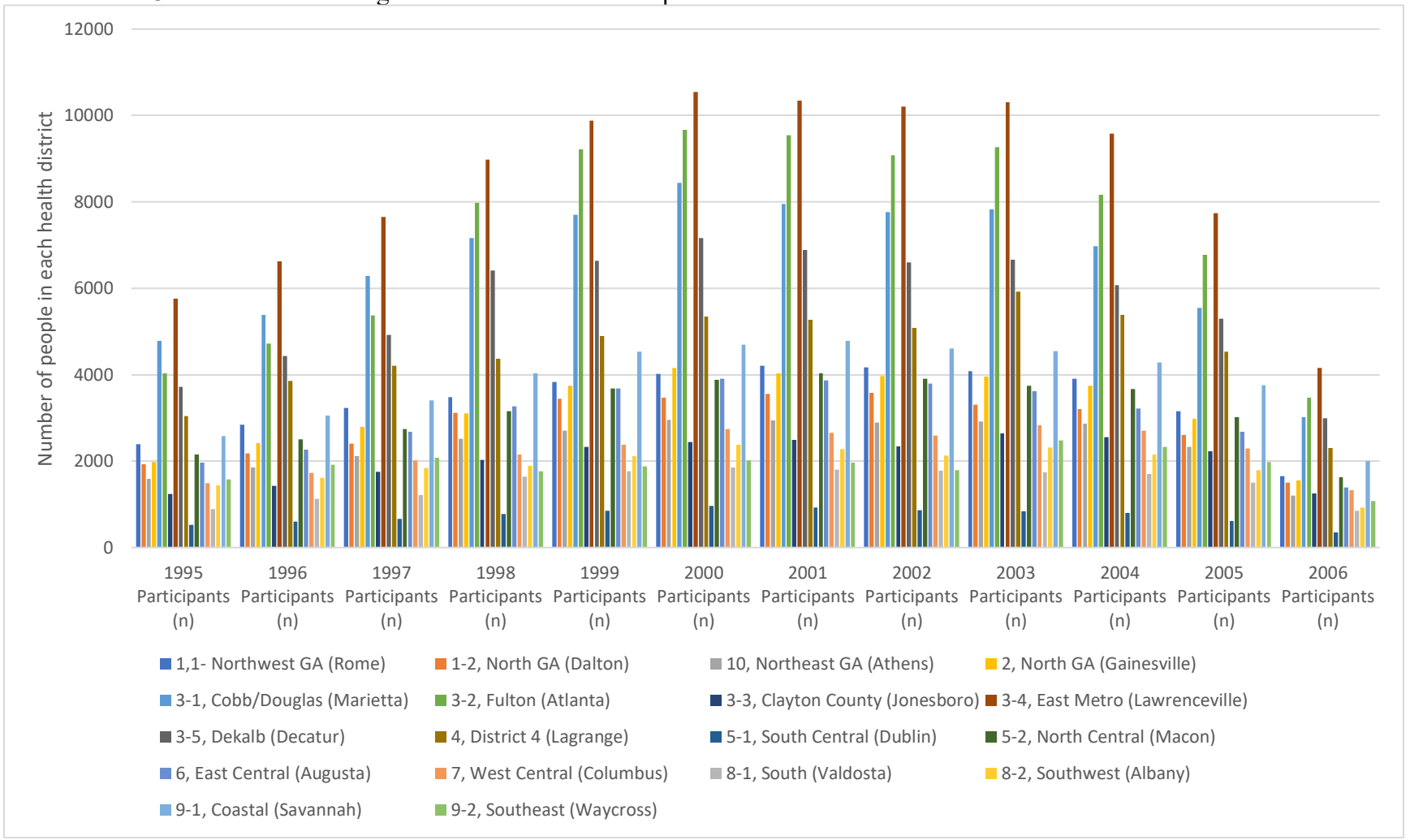


Figure A22. The health district breakdown of the second reported dose of the HPV vaccine series to GRITS. This shows the district 3-4 GNR with the highest number of observations for the second dose of HPV vaccine across all birth cohorts.

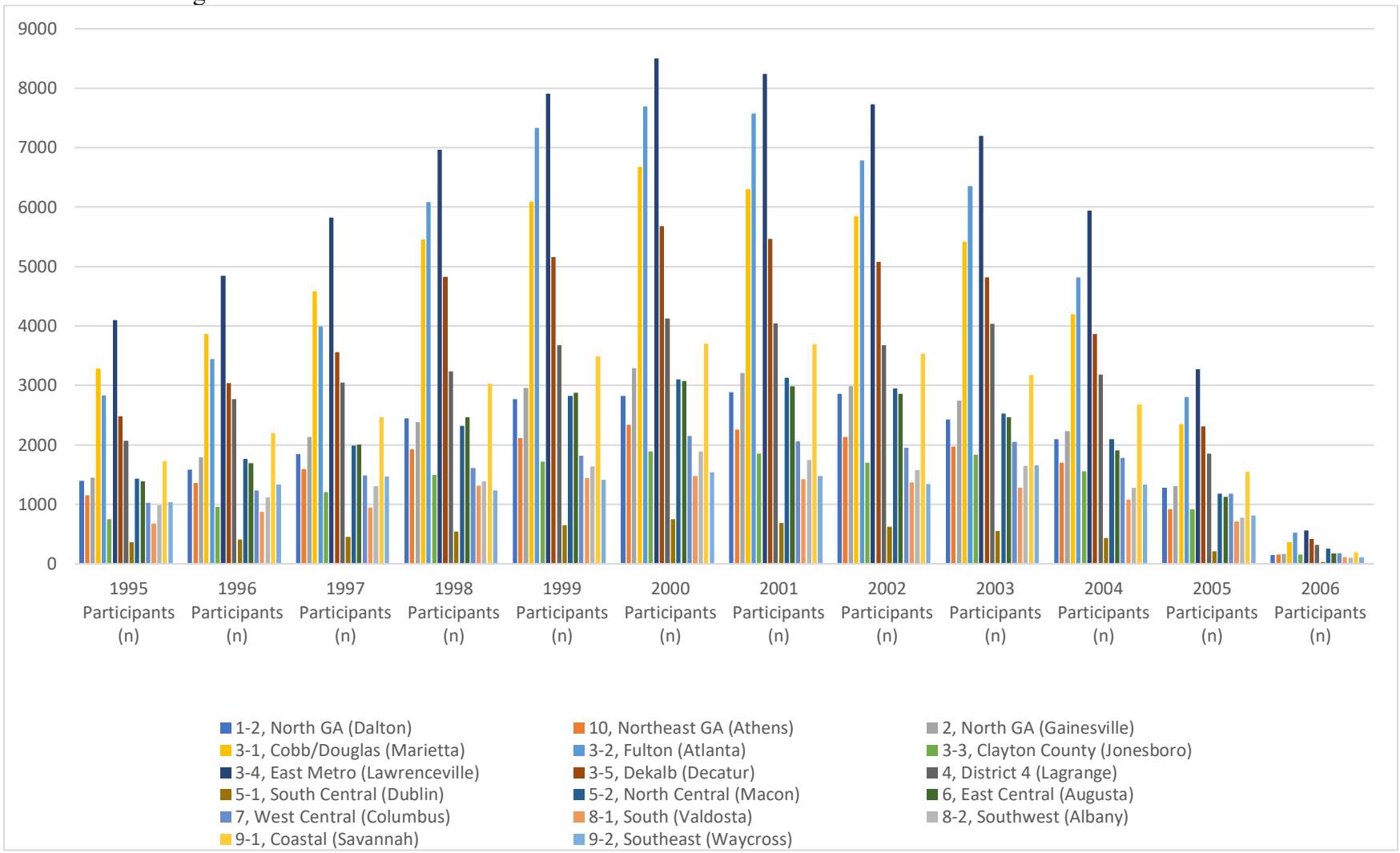
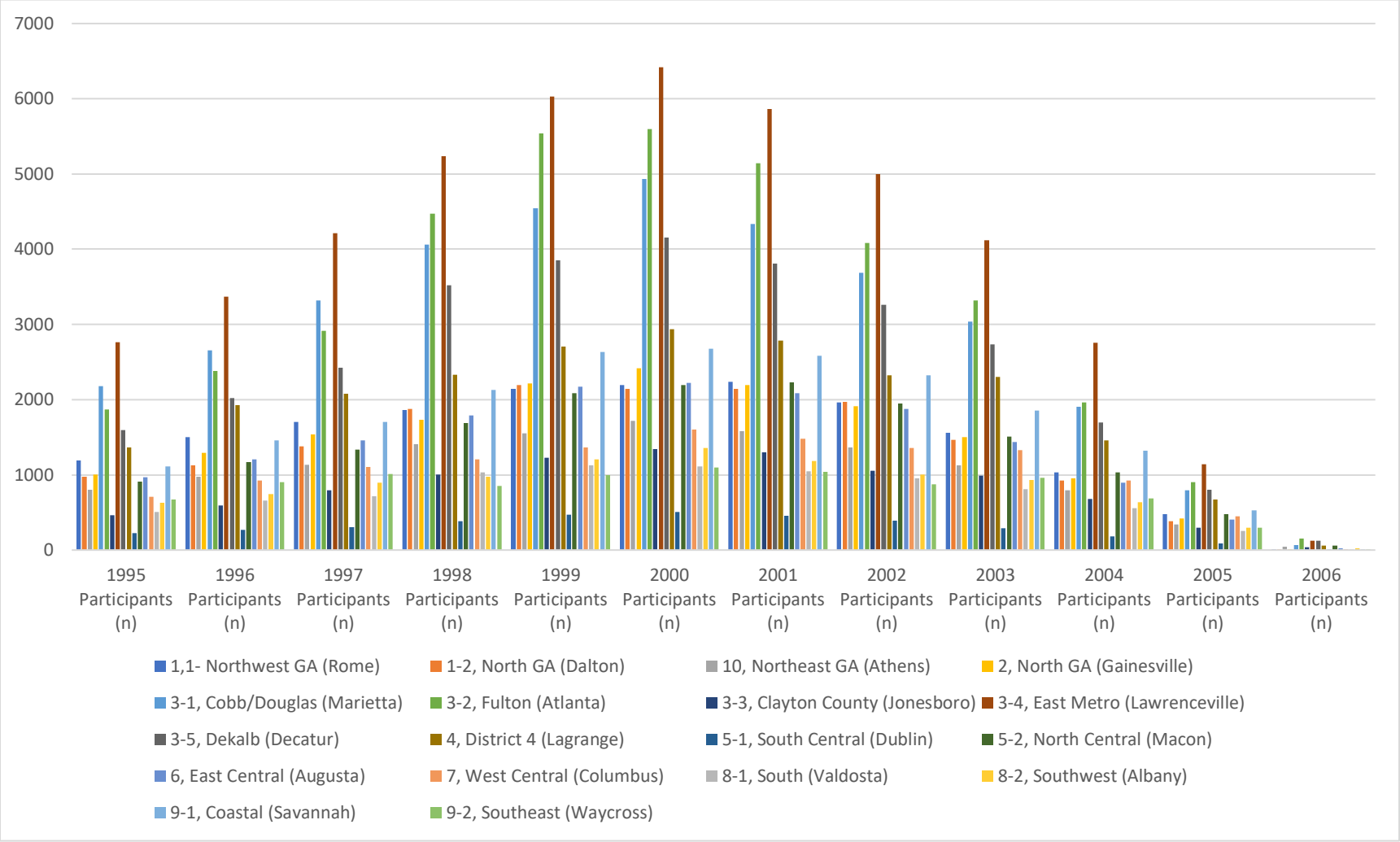


Figure A23. The health district breakdown of the third dose of the HPV vaccine as reported to GRITS. This figure shows district 3-4 GNR as having the greatest number of observations across all birth cohorts for the third dose as reported to GRITS.



Health district specific data

Table A24a. Percent of the Birth Cohort of 1995 initiating by each year (pct_i[YEAR]) per health district. The year 2006, indicated in red text, indicates when the birth cohort of 1995 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health Districts	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		133708	0.26	5.84	10.97	14.22	18.44	23.95	29.58	32.22	32.22	32.22	32.22	**32.22**
	F	65947	0.51	11.78	22.15	28.69	34.22	38.91	43.20	45.47	45.47	45.47	45.47	**45.47**
	M	67761	0.01	0.05	0.09	0.13	3.09	9.40	16.32	19.34	19.34	19.34	19.34	**19.34**
1-1 Northwest (Rome)		7382	0.22	7.42	13.13	17.15	20.50	24.78	29.78	32.40	32.40	32.40	32.40	**32.40**
1-1 Northwest (Rome)	F	3628	0.44	15.02	26.60	34.79	39.69	44.05	48.10	50.30	50.30	50.30	50.30	**50.30**
1-1 Northwest (Rome)	M	3754	0.00	0.08	0.11	0.11	1.94	6.15	12.07	15.10	15.10	15.10	15.10	**15.10**
1-2 North Georgia (D		4828	0.64	9.13	15.20	19.39	23.88	30.78	36.87	39.98	39.98	39.98	39.98	**39.98**
1-2 North Georgia (D	F	2354	1.32	18.61	30.97	39.51	45.37	50.42	54.84	57.09	57.09	57.09	57.09	**57.09**
1-2 North Georgia (D	M	2474	0.00	0.12	0.20	0.24	3.44	12.09	19.77	23.69	23.69	23.69	23.69	**23.69**
10 Northeast (Athens		9484	0.09	2.49	5.30	6.99	9.75	12.87	15.42	16.71	16.71	16.71	16.71	**16.71**
10 Northeast (Athens	F	4926	0.18	4.77	10.19	13.40	17.01	20.02	22.29	23.43	23.43	23.43	23.43	**23.43**
10 Northeast (Athens	M	4558	0.00	0.02	0.02	0.07	1.91	5.16	7.99	9.46	9.46	9.46	9.46	**9.46**
2 North (Gainesville		6797	0.15	4.80	9.80	13.51	17.10	22.35	26.89	29.17	29.17	29.17	29.17	**29.17**
2 North (Gainesville	F	3302	0.30	9.72	19.99	27.56	33.13	38.79	43.13	45.37	45.37	45.37	45.37	**45.37**
2 North (Gainesville	M	3495	0.00	0.14	0.17	0.23	1.95	6.81	11.56	13.88	13.88	13.88	13.88	**13.88**
3-1 Cobb-Douglas		10216	0.83	9.39	16.28	21.42	26.60	33.80	42.77	46.84	46.84	46.84	46.84	**46.84**

3-1 Cobb-Douglas	F	5097	1.63	18.70	32.51	42.77	49.50	54.72	60.57	63.27	63.27	63.27	63.27	**63.27**
3-1 Cobb-Douglas	M	5119	0.04	0.12	0.12	0.16	3.79	12.97	25.04	30.47	30.47	30.47	30.47	**30.47**
3-2 Fulton		13613	0.20	5.30	9.53	12.15	15.39	20.77	27.17	29.61	29.61	29.61	29.61	**29.61**
3-2 Fulton	F	6692	0.40	10.76	19.28	24.57	29.05	33.49	37.64	39.47	39.47	39.47	39.47	**39.47**
3-2 Fulton	M	6921	0.00	0.01	0.10	0.14	2.18	8.47	17.05	20.08	20.08	20.08	20.08	**20.08**
3-3 Clayton (Jonesbo		3990	0.10	3.83	9.00	12.73	16.44	21.83	27.87	31.15	31.15	31.15	31.15	**31.15**
3-3 Clayton (Jonesbo	F	1988	0.15	7.55	17.86	25.30	29.73	33.75	38.18	41.50	41.50	41.50	41.50	**41.50**
3-3 Clayton (Jonesbo	M	2002	0.05	0.15	0.20	0.25	3.25	9.99	17.63	20.88	20.88	20.88	20.88	**20.88**
3-4 GNR (Lawrencevil		11384	0.51	8.85	17.07	21.71	28.66	37.83	46.42	50.60	50.60	50.60	50.60	**50.60**
3-4 GNR (Lawrencevil	F	5545	1.03	18.07	34.90	44.31	53.58	61.32	67.54	71.09	71.09	71.09	71.09	**71.09**
3-4 GNR (Lawrencevil	M	5839	0.02	0.10	0.14	0.24	5.00	15.52	26.36	31.14	31.14	31.14	31.14	**31.14**
3-5 Dekalb		9929	0.28	5.50	11.43	15.20	19.78	27.08	34.09	37.47	37.47	37.47	37.47	**37.47**
3-5 Dekalb	F	5017	0.56	10.86	22.50	29.88	35.94	42.06	46.94	49.81	49.81	49.81	49.81	**49.81**
3-5 Dekalb	M	4912	0.00	0.02	0.12	0.20	3.28	11.79	20.97	24.86	24.86	24.86	24.86	**24.86**
4 District 4		9277	0.24	6.92	12.42	15.79	19.93	25.25	30.23	32.78	32.78	32.78	32.78	**32.78**
4 District 4	F	4593	0.48	13.96	25.04	31.83	37.73	42.26	46.29	48.70	48.70	48.70	48.70	**48.70**
4 District 4	M	4684	0.00	0.02	0.04	0.06	2.48	8.56	14.47	17.16	17.16	17.16	17.16	**17.16**
5-1 South Central (D		1898	0.16	4.90	9.27	11.49	15.75	20.39	25.24	27.40	27.40	27.40	27.40	**27.40**
5-1 South Central (D	F	867	0.35	10.73	20.30	25.14	31.37	35.52	38.87	41.64	41.64	41.64	41.64	**41.64**
5-1 South Central (D	M	1031	0.00	0.00	0.00	0.00	2.62	7.66	13.77	15.42	15.42	15.42	15.42	**15.42**
5-2 North Central (M		7526	0.27	5.38	9.62	12.04	15.69	20.65	26.10	28.63	28.63	28.63	28.63	**28.63**

5-2 North Central (M	F	3812	0.52	10.57	18.91	23.61	28.86	32.95	37.67	40.01	40.01	40.01	40.01	**40.01**
5-2 North Central (M	M	3714	0.00	0.05	0.08	0.16	2.18	8.02	14.22	16.96	16.96	16.96	16.96	**16.96**
6 East Central		6407	0.11	5.20	10.29	13.05	17.78	22.82	28.30	30.67	30.67	30.67	30.67	**30.67**
6 East Central	F	3208	0.22	10.32	20.45	25.94	31.27	35.63	40.34	42.27	42.27	42.27	42.27	**42.27**
6 East Central	M	3199	0.00	0.06	0.09	0.13	4.25	9.97	16.22	19.04	19.04	19.04	19.04	**19.04**
7 West Central (Colu		5768	0.03	5.15	10.26	13.16	17.16	20.79	24.08	25.88	25.88	25.88	25.88	**25.88**
7 West Central (Colu	F	2658	0.08	11.17	22.23	28.48	32.62	35.44	37.70	39.16	39.16	39.16	39.16	**39.16**
7 West Central (Colu	M	3110	0.00	0.00	0.03	0.06	3.95	8.26	12.44	14.53	14.53	14.53	14.53	**14.53**
8-1 South (Valdosta)		4594	0.13	3.94	7.47	10.03	12.84	15.74	18.31	19.37	19.37	19.37	19.37	**19.37**
8-1 South (Valdosta)	F	2309	0.26	7.84	14.81	19.92	23.21	25.99	28.11	29.15	29.15	29.15	29.15	**29.15**
8-1 South (Valdosta)	M	2285	0.00	0.00	0.04	0.04	2.36	5.38	8.40	9.50	9.50	9.50	9.50	**9.50**
8-2 Southwest (Alban		4673	0.06	4.81	10.72	13.78	18.10	23.45	28.78	30.92	30.92	30.92	30.92	**30.92**
8-2 Southwest (Alban	F	2303	0.13	9.77	21.71	27.92	34.04	38.99	43.60	45.68	45.68	45.68	45.68	**45.68**
8-2 Southwest (Alban	M	2370	0.00	0.00	0.04	0.04	2.62	8.35	14.39	16.58	16.58	16.58	16.58	**16.58**
9-1 Coastal (Savanna		9535	0.09	4.22	7.91	10.23	15.12	20.08	24.82	26.98	26.98	26.98	26.98	**26.98**
9-1 Coastal (Savanna	F	4717	0.19	8.50	15.96	20.65	25.52	29.04	33.01	35.04	35.04	35.04	35.04	**35.04**
9-1 Coastal (Savanna	M	4818	0.00	0.02	0.02	0.02	4.94	11.31	16.81	19.10	19.10	19.10	19.10	**19.10**
9-2 Southeast (Waycr		6407	0.05	4.50	7.73	9.86	13.64	17.95	22.32	24.57	24.57	24.57	24.57	**24.57**

9-2 Southeast (Waycr	F	2931	0.10	9.79	16.85	21.49	27.12	32.04	36.23	38.62	38.62	38.62	38.62	**38.62**
9-2 Southeast (Waycr	M	3476	0.00	0.03	0.03	0.06	2.27	6.07	10.59	12.72	12.72	12.72	12.72	**12.72**

Table A24b. Percent of the Birth Cohort of 1995 completing by each year (pct_c[YEAR]) per health district. The year 2006, indicated in red text, indicates when the birth cohort of 1995 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health Districts	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		133708	0.00	0.64	3.81	6.49	8.65	11.66	16.06	18.79	18.79	18.79	18.79	**18.79**
	F	65947	0.00	1.30	7.70	13.12	17.45	22.01	26.80	29.45	29.45	29.45	29.45	**29.45**
	M	67761	0.00	0.00	0.03	0.04	0.10	1.58	5.61	8.41	8.41	8.41	8.41	**8.41**
1-1 Northwest (Rome)		7382	0.00	0.60	4.65	8.18	10.92	13.72	17.16	19.28	19.28	19.28	19.28	**19.28**
1-1 Northwest (Rome)	F	3628	0.00	1.21	9.40	16.59	22.11	26.98	31.37	33.90	33.90	33.90	33.90	**33.90**
1-1 Northwest (Rome)	M	3754	0.00	0.00	0.05	0.05	0.11	0.91	3.44	5.14	5.14	5.14	5.14	**5.14**
1-2 North Georgia (D		4828	0.00	1.16	5.78	9.22	12.10	15.80	21.46	24.50	24.50	24.50	24.50	**24.50**
1-2 North Georgia (D	F	2354	0.00	2.38	11.77	18.78	24.64	30.42	36.07	38.45	38.45	38.45	38.45	**38.45**
1-2 North Georgia (D	M	2474	0.00	0.00	0.08	0.12	0.16	1.90	7.56	11.24	11.24	11.24	11.24	**11.24**
10 Northeast (Athens		9484	0.00	0.32	1.87	3.49	4.72	6.79	8.90	10.40	10.40	10.40	10.40	**10.40**
10 Northeast (Athens	F	4926	0.00	0.61	3.57	6.70	9.03	11.88	14.43	16.12	16.12	16.12	16.12	**16.12**
10 Northeast (Athens	M	4558	0.00	0.00	0.02	0.02	0.07	1.29	2.92	4.21	4.21	4.21	4.21	**4.21**

2 North (Gainesville		6797	0.00	0.66	3.88	6.72	8.81	11.52	15.24	17.40	17.40	17.40	17.40	**17.40**
2 North (Gainesville	F	3302	0.00	1.33	7.90	13.72	17.99	22.17	26.71	29.16	29.16	29.16	29.16	**29.16**
2 North (Gainesville	M	3495	0.00	0.03	0.09	0.11	0.14	1.46	4.41	6.29	6.29	6.29	6.29	**6.29**
3-1 Cobb-Douglas		10216	0.00	1.46	6.42	10.26	13.31	17.08	23.33	27.12	27.12	27.12	27.12	**27.12**
3-1 Cobb-Douglas	F	5097	0.00	2.92	12.83	20.50	26.55	32.45	38.63	41.83	41.83	41.83	41.83	**41.83**
3-1 Cobb-Douglas	M	5119	0.00	0.00	0.04	0.06	0.14	1.78	8.09	12.48	12.48	12.48	12.48	**12.48**
3-2 Fulton		13613	0.00	0.79	3.72	5.94	7.82	10.09	14.51	17.84	17.84	17.84	17.84	**17.84**
3-2 Fulton	F	6692	0.00	1.58	7.53	12.01	15.82	19.46	23.92	26.67	26.67	26.67	26.67	**26.67**
3-2 Fulton	M	6921	0.00	0.01	0.03	0.06	0.09	1.04	5.40	9.31	9.31	9.31	9.31	**9.31**
3-3 Clayton (Jonesbo		3990	0.00	0.43	2.38	4.36	6.22	8.92	13.13	15.94	15.94	15.94	15.94	**15.94**
3-3 Clayton (Jonesbo	F	1988	0.00	0.86	4.73	8.70	12.37	16.55	21.23	23.79	23.79	23.79	23.79	**23.79**
3-3 Clayton (Jonesbo	M	2002	0.00	0.00	0.05	0.05	0.10	1.35	5.09	8.14	8.14	8.14	8.14	**8.14**
3-4 GNR (Lawrencevil		11384	0.00	1.19	6.23	10.38	13.78	18.47	26.15	30.60	30.60	30.60	30.60	**30.60**
3-4 GNR (Lawrencevil	F	5545	0.00	2.43	12.77	21.30	28.13	35.20	43.28	47.29	47.29	47.29	47.29	**47.29**
3-4 GNR (Lawrencevil	M	5839	0.00	0.00	0.02	0.02	0.15	2.59	9.88	14.76	14.76	14.76	14.76	**14.76**
3-5 Dekalb		9929	0.00	0.72	3.87	6.74	9.06	12.43	17.84	21.23	21.23	21.23	21.23	**21.23**
3-5 Dekalb	F	5017	0.00	1.42	7.65	13.29	17.80	23.20	28.98	32.19	32.19	32.19	32.19	**32.19**
3-5 Dekalb	M	4912	0.00	0.00	0.00	0.04	0.14	1.43	6.45	10.04	10.04	10.04	10.04	**10.04**
4 District 4		9277	0.00	0.70	4.32	7.14	9.26	11.78	15.64	18.25	18.25	18.25	18.25	**18.25**
4 District 4	F	4593	0.00	1.42	8.73	14.39	18.62	22.66	27.15	29.54	29.54	29.54	29.54	**29.54**
4 District 4	M	4684	0.00	0.00	0.00	0.02	0.09	1.11	4.36	7.17	7.17	7.17	7.17	**7.17**
5-1 South Central (D		1898	0.00	0.21	2.79	4.37	6.06	9.22	13.07	15.49	15.49	15.49	15.49	**15.49**

5-1 South Central (D	F	867	0.00	0.46	6.11	9.57	13.26	18.45	23.30	25.95	25.95	25.95	25.95	**25.95**
5-1 South Central (D	M	1031	0.00	0.00	0.00	0.00	0.00	1.45	4.46	6.69	6.69	6.69	6.69	**6.69**
5-2 North Central (M		7526	0.00	0.62	3.08	4.94	6.70	9.10	13.03	15.51	15.51	15.51	15.51	**15.51**
5-2 North Central (M	F	3812	0.00	1.23	6.06	9.73	13.17	17.03	21.56	24.53	24.53	24.53	24.53	**24.53**
5-2 North Central (M	M	3714	0.00	0.00	0.03	0.03	0.05	0.97	4.28	6.25	6.25	6.25	6.25	**6.25**
6 East Central		6407	0.00	0.31	3.20	5.84	8.01	11.50	15.84	18.45	18.45	18.45	18.45	**18.45**
6 East Central	F	3208	0.00	0.62	6.33	11.56	15.80	20.36	24.88	27.87	27.87	27.87	27.87	**27.87**
6 East Central	M	3199	0.00	0.00	0.06	0.09	0.19	2.63	6.78	9.00	9.00	9.00	9.00	**9.00**
7 West Central (Colu		5768	0.00	0.17	2.83	5.65	7.75	10.61	13.64	15.24	15.24	15.24	15.24	**15.24**
7 West Central (Colu	F	2658	0.00	0.38	6.13	12.26	16.82	20.65	23.85	25.36	25.36	25.36	25.36	**25.36**
7 West Central (Colu	M	3110	0.00	0.00	0.00	0.00	0.00	2.03	4.92	6.59	6.59	6.59	6.59	**6.59**
8-1 South (Valdosta)		4594	0.00	0.26	2.59	5.16	6.75	9.06	11.47	12.89	12.89	12.89	12.89	**12.89**
8-1 South (Valdosta)	F	2309	0.00	0.52	5.15	10.26	13.34	16.33	19.10	20.74	20.74	20.74	20.74	**20.74**
8-1 South (Valdosta)	M	2285	0.00	0.00	0.00	0.00	0.09	1.71	3.76	4.95	4.95	4.95	4.95	**4.95**
8-2 Southwest (Alban		4673	0.00	0.19	2.89	5.56	7.45	10.94	15.15	17.63	17.63	17.63	17.63	**17.63**
8-2 Southwest (Alban	F	2303	0.00	0.39	5.82	11.25	15.07	20.71	26.14	28.92	28.92	28.92	28.92	**28.92**
8-2 Southwest (Alban	M	2370	0.00	0.00	0.04	0.04	0.04	1.43	4.47	6.67	6.67	6.67	6.67	**6.67**
9-1 Coastal (Savanna		9535	0.00	0.29	2.45	4.14	5.85	8.80	13.02	15.10	15.10	15.10	15.10	**15.10**

9-1 Coastal (Savanna	F	4717	0.00	0.59	4.96	8.37	11.79	15.45	19.38	21.24	21.24	21.24	21.24	**21.24**
9-1 Coastal (Savanna	M	4818	0.00	0.00	0.00	0.00	0.04	2.28	6.79	9.09	9.09	9.09	9.09	**9.09**
9-2 Southeast (Waycr		6407	0.00	0.12	2.23	3.92	5.28	7.88	11.07	13.25	13.25	13.25	13.25	**13.25**
9-2 Southeast (Waycr	F	2931	0.00	0.27	4.88	8.56	11.50	15.93	20.16	22.93	22.93	22.93	22.93	**22.93**
9-2 Southeast (Waycr	M	3476	0.00	0.00	0.00	0.00	0.03	1.09	3.39	5.09	5.09	5.09	5.09	**5.09**

Table A25a. Percent of the Birth Cohort of 1996 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2007, indicated in red text, indicates when the birth cohort of 1996 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		137251	0.08	4.58	10.60	13.77	18.16	23.90	29.98	34.74	36.82	36.82	36.82	**36.82**
	F	67821	0.17	9.21	21.36	27.75	33.41	38.34	42.82	46.56	48.41	48.41	48.41	**48.41**
	M	69430	0.00	0.05	0.09	0.12	3.27	9.79	17.44	23.19	25.50	25.50	25.50	**25.50**
1-1 Northwest (Rome)		7634	0.14	6.27	13.56	16.98	20.95	25.03	30.73	35.45	37.16	37.16	37.16	**37.16**
1-1 Northwest (Rome)	F	3743	0.29	12.77	27.54	34.49	40.21	44.54	48.73	52.60	53.94	53.94	53.94	**53.94**
1-1 Northwest (Rome)	M	3891	0.00	0.03	0.10	0.13	2.42	6.27	13.42	18.94	21.02	21.02	21.02	**21.02**
1-2 North Georgia (D		4720	0.17	6.97	14.26	17.69	22.71	30.00	37.94	43.94	46.17	46.17	46.17	**46.17**
1-2 North Georgia (D	F	2300	0.35	14.22	29.17	36.17	42.78	48.09	53.70	57.91	59.57	59.57	59.57	**59.57**
1-2 North Georgia (D	M	2420	0.00	0.08	0.08	0.12	3.64	12.81	22.98	30.66	33.43	33.43	33.43	**33.43**
10 Northeast (Athens		10570	0.01	2.02	5.18	6.93	9.23	11.86	14.34	16.53	17.53	17.53	17.53	**17.53**

10 Northeast (Athens	F	5626	0.02	3.75	9.69	12.96	15.64	17.76	20.05	21.81	22.77	22.77	22.77	**22.77**
10 Northeast (Athens	M	4944	0.00	0.04	0.06	0.08	1.94	5.16	7.85	10.52	11.57	11.57	11.57	**11.57**
2 North (Gainesville		7032	0.13	3.24	8.70	12.46	16.44	21.54	27.82	32.65	34.41	34.41	34.41	**34.41**
2 North (Gainesville	F	3511	0.26	6.47	17.32	24.84	30.90	35.86	40.70	44.75	46.25	46.25	46.25	**46.25**
2 North (Gainesville	M	3521	0.00	0.03	0.11	0.11	2.02	7.27	14.97	20.59	22.61	22.61	22.61	**22.61**
3-1 Cobb-Douglas		10087	0.27	7.06	14.73	19.52	25.36	33.42	42.70	50.41	53.40	53.40	53.40	**53.40**
3-1 Cobb-Douglas	F	4956	0.54	14.29	29.86	39.57	47.32	54.88	61.38	66.81	69.23	69.23	69.23	**69.23**
3-1 Cobb-Douglas	M	5131	0.00	0.08	0.12	0.16	4.15	12.69	24.65	34.57	38.10	38.10	38.10	**38.10**
3-2 Fulton		13777	0.10	3.80	8.36	10.96	14.50	20.39	27.36	32.40	34.26	34.26	34.26	**34.26**
3-2 Fulton	F	6771	0.19	7.67	16.93	22.20	27.26	32.21	36.69	40.25	42.02	42.02	42.02	**42.02**
3-2 Fulton	M	7006	0.01	0.07	0.09	0.10	2.17	8.96	18.36	24.82	26.76	26.76	26.76	**26.76**
3-3 Clayton (Jonesbo		3933	0.03	2.75	8.70	12.36	16.70	22.43	28.10	33.74	36.36	36.36	36.36	**36.36**
3-3 Clayton (Jonesbo	F	2031	0.05	5.27	16.74	23.83	29.54	34.07	37.91	42.20	44.61	44.61	44.61	**44.61**
3-3 Clayton (Jonesbo	M	1902	0.00	0.05	0.11	0.11	3.00	9.99	17.61	24.71	27.55	27.55	27.55	**27.55**
3-4 GNR (Lawrencevil		11111	0.10	6.39	15.17	20.33	27.98	38.20	48.64	56.21	59.67	59.67	59.67	**59.67**
3-4 GNR (Lawrencevil	F	5283	0.21	13.36	31.80	42.65	53.66	62.92	70.26	75.92	79.05	79.05	79.05	**79.05**
3-4 GNR (Lawrencevil	M	5828	0.00	0.07	0.10	0.10	4.70	15.79	29.03	38.33	42.11	42.11	42.11	**42.11**
3-5 Dekalb		10000	0.09	4.27	10.77	14.50	19.28	27.08	35.16	41.40	44.34	44.34	44.34	**44.34**
3-5 Dekalb	F	5099	0.18	8.35	21.02	28.24	34.38	40.01	45.46	50.07	52.42	52.42	52.42	**52.42**
3-5 Dekalb	M	4901	0.00	0.02	0.10	0.20	3.57	13.63	24.44	32.38	35.93	35.93	35.93	**35.93**
4 District 4		9666	0.11	6.77	13.65	16.79	21.02	27.03	32.37	37.35	39.84	39.84	39.84	**39.84**

4 District 4	F	4882	0.23	13.31	26.89	33.08	38.43	43.81	48.05	52.23	54.77	54.77	54.77	**54.77**
4 District 4	M	4784	0.00	0.08	0.13	0.17	3.26	9.91	16.37	22.16	24.60	24.60	24.60	**24.60**
5-1 South Central (D		1994	0.15	3.46	9.53	11.79	16.20	19.81	24.12	28.03	29.84	29.84	29.84	**29.84**
5-1 South Central (D	F	879	0.34	7.85	21.50	26.51	32.88	36.52	40.84	45.16	46.76	46.76	46.76	**46.76**
5-1 South Central (D	M	1115	0.00	0.00	0.09	0.18	3.05	6.64	10.94	14.53	16.50	16.50	16.50	**16.50**
5-2 North Central (M		7821	0.04	4.31	9.76	12.43	16.08	21.07	26.28	30.29	32.03	32.03	32.03	**32.03**
5-2 North Central (M	F	3999	0.08	8.38	19.03	24.26	28.88	32.66	36.63	40.26	41.89	41.89	41.89	**41.89**
5-2 North Central (M	M	3822	0.00	0.05	0.05	0.05	2.69	8.95	15.44	19.86	21.72	21.72	21.72	**21.72**
6 East Central		6415	0.05	4.54	10.65	13.17	18.13	23.83	29.48	33.30	35.40	35.40	35.40	**35.40**
6 East Central	F	3152	0.10	9.20	21.61	26.71	32.30	37.72	42.80	46.19	48.32	48.32	48.32	**48.32**
6 East Central	M	3263	0.00	0.03	0.06	0.09	4.44	10.42	16.61	20.84	22.92	22.92	22.92	**22.92**
7 West Central (Colu		5626	0.02	4.78	11.46	13.70	18.49	22.48	26.50	29.31	30.73	30.73	30.73	**30.73**
7 West Central (Colu	F	2523	0.04	10.62	25.49	30.44	34.88	37.34	40.63	43.00	44.00	44.00	44.00	**44.00**
7 West Central (Colu	M	3103	0.00	0.03	0.06	0.10	5.16	10.41	15.02	18.18	19.95	19.95	19.95	**19.95**
8-1 South (Valdosta)		4957	0.00	2.72	8.53	11.30	13.58	16.52	19.39	21.61	22.65	22.65	22.65	**22.65**
8-1 South (Valdosta)	F	2501	0.00	5.40	16.83	22.27	24.91	27.59	29.31	30.99	31.71	31.71	31.71	**31.71**
8-1 South (Valdosta)	M	2456	0.00	0.00	0.08	0.12	2.04	5.25	9.28	12.05	13.44	13.44	13.44	**13.44**
8-2 Southwest (Alban		5055	0.02	3.22	9.65	12.50	16.82	21.38	26.23	30.11	31.87	31.87	31.87	**31.87**
8-2 Southwest (Alban	F	2484	0.04	6.48	19.52	25.28	31.16	35.23	38.57	41.75	43.48	43.48	43.48	**43.48**

8-2 Southwest (Alban	M	2571	0.00	0.08	0.12	0.16	2.96	8.01	14.31	18.86	20.65	20.65	20.65	**20.65**
9-1 Coastal (Savanna		9769	0.02	3.46	8.35	10.97	15.72	20.71	25.77	29.32	31.28	31.28	31.28	**31.28**
9-1 Coastal (Savanna	F	4804	0.04	6.99	16.94	22.21	26.89	30.89	34.80	37.82	39.61	39.61	39.61	**39.61**
9-1 Coastal (Savanna	M	4965	0.00	0.04	0.04	0.10	4.91	10.86	17.02	21.09	23.22	23.22	23.22	**23.22**
9-2 Southeast (Waycr		7084	0.01	4.19	8.63	11.01	14.09	18.58	22.37	25.64	26.96	26.96	26.96	**26.96**
9-2 Southeast (Waycr	F	3277	0.03	9.00	18.52	23.68	28.04	32.59	36.34	39.49	40.89	40.89	40.89	**40.89**
9-2 Southeast (Waycr	M	3807	0.00	0.05	0.11	0.11	2.08	6.51	10.35	13.71	14.97	14.97	14.97	**14.97**

Table A25b. Percent of the Birth Cohort of 1996 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2007, indicated in red text, indicates when the birth cohort of 1996 was age 11. Highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		137251	0.00	0.35	3.14	5.76	7.85	10.87	15.16	20.21	23.01	23.01	23.01	**23.01**
	F	67821	0.00	0.70	6.33	11.62	15.78	20.42	25.29	29.95	32.61	32.61	32.61	**32.61**
	M	69430	0.00	0.01	0.02	0.03	0.10	1.54	5.27	10.71	13.63	13.63	13.63	**13.63**
1-1 Northwest (Rome)		7634	0.00	0.50	4.51	7.70	10.24	13.11	16.33	20.95	23.17	23.17	23.17	**23.17**
1-1 Northwest (Rome)	F	3743	0.00	1.02	9.19	15.71	20.84	25.54	29.95	34.60	36.98	36.98	36.98	**36.98**
1-1 Northwest (Rome)	M	3891	0.00	0.00	0.00	0.00	0.05	1.16	3.24	7.81	9.89	9.89	9.89	**9.89**
1-2 North Georgia (D		4720	0.00	0.47	4.81	7.71	10.36	14.53	19.70	26.27	29.62	29.62	29.62	**29.62**
1-2 North Georgia (D	F	2300	0.00	0.96	9.87	15.83	21.09	27.09	32.91	38.52	41.52	41.52	41.52	**41.52**

1-2 North Georgia (D	M	2420	0.00	0.00	0.00	0.00	0.17	2.60	7.15	14.63	18.31	18.31	18.31	18.31
10 Northeast (Athens		10570	0.00	0.12	1.52	3.00	4.05	5.65	7.79	9.88	11.16	11.16	11.16	11.16
10 Northeast (Athens	F	5626	0.00	0.21	2.84	5.62	7.57	9.85	12.12	14.45	15.82	15.82	15.82	15.82
10 Northeast (Athens	M	4944	0.00	0.02	0.02	0.02	0.04	0.87	2.85	4.67	5.87	5.87	5.87	5.87
2 North (Gainesville		7032	0.00	0.36	2.57	5.79	8.19	11.21	14.95	19.75	22.14	22.14	22.14	22.14
2 North (Gainesville	F	3511	0.00	0.71	5.16	11.56	16.32	21.02	24.98	29.74	32.16	32.16	32.16	32.16
2 North (Gainesville	M	3521	0.00	0.00	0.00	0.03	0.09	1.42	4.94	9.80	12.16	12.16	12.16	12.16
3-1 Cobb-Douglas		10087	0.00	0.86	4.83	8.48	11.60	15.41	21.46	28.81	33.24	33.24	33.24	33.24
3-1 Cobb-Douglas	F	4956	0.00	1.72	9.79	17.17	23.53	29.56	36.68	43.10	46.71	46.71	46.71	46.71
3-1 Cobb-Douglas	M	5131	0.00	0.04	0.04	0.08	0.08	1.73	6.76	15.01	20.23	20.23	20.23	20.23
3-2 Fulton		13777	0.00	0.59	2.69	4.75	6.50	8.95	13.16	18.88	22.06	22.06	22.06	22.06
3-2 Fulton	F	6771	0.00	1.17	5.42	9.61	13.14	17.24	21.64	26.14	28.70	28.70	28.70	28.70
3-2 Fulton	M	7006	0.00	0.03	0.04	0.06	0.07	0.94	4.97	11.86	15.64	15.64	15.64	15.64
3-3 Clayton (Jonesbo		3933	0.00	0.08	2.08	4.09	5.49	8.29	11.92	17.32	20.39	20.39	20.39	20.39
3-3 Clayton (Jonesbo	F	2031	0.00	0.15	3.99	7.83	10.54	14.92	19.50	23.63	26.93	26.93	26.93	26.93
3-3 Clayton (Jonesbo	M	1902	0.00	0.00	0.05	0.11	0.11	1.21	3.84	10.57	13.41	13.41	13.41	13.41
3-4 GNR (Lawrencevil		11111	0.00	0.56	4.96	9.16	12.47	17.71	24.82	33.48	38.15	38.15	38.15	38.15
3-4 GNR (Lawrencevil	F	5283	0.00	1.17	10.43	19.27	26.08	34.39	42.48	49.80	54.02	54.02	54.02	54.02
3-4 GNR (Lawrencevil	M	5828	0.00	0.00	0.00	0.00	0.12	2.59	8.82	18.69	23.76	23.76	23.76	23.76
3-5 Dekalb		10000	0.00	0.30	2.66	5.64	7.74	11.09	16.39	23.13	26.72	26.72	26.72	26.72
3-5 Dekalb	F	5099	0.00	0.57	5.20	11.04	15.08	20.04	25.89	31.83	34.71	34.71	34.71	34.71
3-5 Dekalb	M	4901	0.00	0.02	0.02	0.02	0.10	1.78	6.51	14.08	18.40	18.40	18.40	18.40

4 District 4		9666	0.00	0.54	4.56	7.51	9.64	12.64	16.97	21.73	24.64	24.64	24.64	**24.64**
4 District 4	F	4882	0.00	1.07	8.99	14.83	18.95	23.54	28.19	32.98	36.17	36.17	36.17	**36.17**
4 District 4	M	4784	0.00	0.00	0.04	0.04	0.15	1.53	5.52	10.24	12.88	12.88	12.88	**12.88**
5-1 South Central (D		1994	0.00	0.25	1.96	4.11	6.02	8.38	11.53	14.59	16.90	16.90	16.90	**16.90**
5-1 South Central (D	F	879	0.00	0.57	4.44	9.33	13.54	17.63	22.41	26.28	29.58	29.58	29.58	**29.58**
5-1 South Central (D	M	1115	0.00	0.00	0.00	0.00	0.09	1.08	2.96	5.38	6.91	6.91	6.91	**6.91**
5-2 North Central (M		7821	0.00	0.22	2.63	4.60	6.16	8.44	12.04	16.33	18.87	18.87	18.87	**18.87**
5-2 North Central (M	F	3999	0.00	0.43	5.13	8.98	11.95	15.50	19.75	23.98	26.43	26.43	26.43	**26.43**
5-2 North Central (M	M	3822	0.00	0.00	0.03	0.03	0.10	1.05	3.98	8.32	10.96	10.96	10.96	**10.96**
6 East Central		6415	0.00	0.20	2.98	5.42	7.58	11.04	16.07	20.33	22.87	22.87	22.87	**22.87**
6 East Central	F	3152	0.00	0.41	6.06	10.98	15.26	19.89	25.86	30.46	33.31	33.31	33.31	**33.31**
6 East Central	M	3263	0.00	0.00	0.00	0.06	0.15	2.48	6.62	10.54	12.78	12.78	12.78	**12.78**
7 West Central (Colu		5626	0.00	0.21	3.06	5.79	7.95	10.68	14.84	18.08	19.89	19.89	19.89	**19.89**
7 West Central (Colu	F	2523	0.00	0.48	6.82	12.84	17.52	21.48	25.76	28.46	30.28	30.28	30.28	**30.28**
7 West Central (Colu	M	3103	0.00	0.00	0.00	0.06	0.16	1.90	5.96	9.64	11.44	11.44	11.44	**11.44**
8-1 South (Valdosta)		4957	0.00	0.06	2.12	5.06	7.14	9.30	11.92	14.52	15.80	15.80	15.80	**15.80**
8-1 South (Valdosta)	F	2501	0.00	0.12	4.16	10.00	14.07	17.07	20.03	22.35	23.59	23.59	23.59	**23.59**
8-1 South (Valdosta)	M	2456	0.00	0.00	0.04	0.04	0.08	1.38	3.66	6.56	7.86	7.86	7.86	**7.86**
8-2 Southwest (Alban		5055	0.00	0.08	2.22	4.11	5.86	8.76	12.15	16.50	18.83	18.83	18.83	**18.83**
8-2 Southwest (Alban	F	2484	0.00	0.16	4.51	8.33	11.84	16.87	20.81	25.56	28.14	28.14	28.14	**28.14**

8-2 Southwest (Alban	M	2571	0.00	0.00	0.00	0.04	0.08	0.93	3.77	7.74	9.84	9.84	9.84	**9.84**
9-1 Coastal (Savanna		9769	0.00	0.10	2.13	3.92	5.63	8.73	12.81	17.29	19.48	19.48	19.48	**19.48**
9-1 Coastal (Savanna	F	4804	0.00	0.21	4.33	7.95	11.32	15.80	20.02	24.08	26.10	26.10	26.10	**26.10**
9-1 Coastal (Savanna	M	4965	0.00	0.00	0.00	0.02	0.12	1.89	5.82	10.72	13.07	13.07	13.07	**13.07**
9-2 Southeast (Waycr		7084	0.00	0.10	2.30	4.11	5.48	7.65	11.02	14.38	16.23	16.23	16.23	**16.23**
9-2 Southeast (Waycr	F	3277	0.00	0.21	4.97	8.88	11.81	15.44	20.23	24.53	27.10	27.10	27.10	**27.10**
9-2 Southeast (Waycr	M	3807	0.00	0.00	0.00	0.00	0.03	0.95	3.10	5.65	6.88	6.88	6.88	**6.88**

Table A26a. Percent of the Birth Cohort of 1997 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2008, indicated in red text, indicates when the birth cohort of 1997 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		143471	0.05	0.81	6.06	10.85	15.59	21.88	28.59	33.96	38.15	39.99	39.99	**39.99**
	F	70402	0.09	1.63	12.27	21.98	28.44	34.56	39.80	44.00	47.48	49.14	49.14	**49.14**
	M	73069	0.00	0.01	0.07	0.12	3.21	9.67	17.79	24.28	29.16	31.16	31.16	**31.16**
1-1 Northwest (Rome)		8178	0.01	0.84	7.45	14.03	18.01	23.03	28.52	33.88	37.96	39.45	39.45	**39.45**
1-1 Northwest (Rome)	F	4016	0.02	1.72	15.14	28.46	34.19	39.07	43.60	47.14	50.45	51.77	51.77	**51.77**
1-1 Northwest (Rome)	M	4162	0.00	0.00	0.02	0.10	2.40	7.54	13.96	21.10	25.90	27.56	27.56	**27.56**
1-2 North Georgia (D		5137	0.10	0.95	7.79	14.31	19.47	27.19	34.92	40.69	44.91	46.82	46.82	**46.82**
1-2 North Georgia (D	F	2423	0.21	2.02	16.51	30.17	37.68	44.82	50.64	54.64	58.11	59.76	59.76	**59.76**

1-2 North Georgia (D	M	2714	0.00	0.00	0.00	0.15	3.21	11.46	20.89	28.22	33.12	35.26	35.26	35.26
10 Northeast (Athens		10446	0.01	0.34	3.34	6.01	8.81	12.46	15.57	17.66	19.50	20.21	20.21	20.21
10 Northeast (Athens	F	5718	0.02	0.61	6.09	10.95	14.04	16.89	19.25	20.90	22.54	23.12	23.12	23.12
10 Northeast (Athens	M	4728	0.00	0.02	0.02	0.04	2.47	7.11	11.10	13.75	15.82	16.69	16.69	16.69
2 North (Gainesville		7589	0.12	0.59	4.92	9.67	13.86	19.38	26.08	31.39	35.37	36.83	36.83	36.83
2 North (Gainesville	F	3739	0.24	1.20	9.92	19.55	25.76	31.67	36.67	41.27	44.50	45.84	45.84	45.84
2 North (Gainesville	M	3850	0.00	0.00	0.05	0.08	2.31	7.45	15.79	21.79	26.49	28.08	28.08	28.08
3-1 Cobb-Douglas		10303	0.10	1.54	8.76	15.90	22.42	31.63	42.61	51.04	58.05	60.98	60.98	60.98
3-1 Cobb-Douglas	F	5008	0.20	3.15	17.95	32.59	41.93	51.50	59.92	66.69	72.14	74.72	74.72	74.72
3-1 Cobb-Douglas	M	5295	0.00	0.02	0.08	0.11	3.97	12.84	26.23	36.24	44.72	47.99	47.99	47.99
3-2 Fulton		13558	0.05	0.61	4.41	8.34	12.51	19.49	27.64	33.47	37.77	39.60	39.60	39.60
3-2 Fulton	F	6536	0.11	1.27	9.13	17.24	23.87	31.20	37.38	41.74	45.15	46.66	46.66	46.66
3-2 Fulton	M	7022	0.00	0.00	0.01	0.06	1.94	8.59	18.57	25.78	30.90	33.02	33.02	33.02
3-3 Clayton (Jonesbo		4004	0.02	0.75	5.74	10.86	16.03	22.93	29.95	36.69	41.48	43.76	43.76	43.76
3-3 Clayton (Jonesbo	F	2032	0.05	1.48	11.22	21.31	27.95	34.01	39.17	44.09	48.33	50.49	50.49	50.49
3-3 Clayton (Jonesbo	M	1972	0.00	0.00	0.10	0.10	3.75	11.51	20.44	29.06	34.43	36.82	36.82	36.82
3-4 GNR (Lawrencevil		11738	0.09	1.19	8.76	16.25	24.31	35.40	46.76	55.48	62.09	65.21	65.21	65.21
3-4 GNR (Lawrencevil	F	5448	0.17	2.53	18.67	34.71	46.66	58.48	67.99	75.37	81.19	84.09	84.09	84.09
3-4 GNR (Lawrencevil	M	6290	0.02	0.03	0.17	0.27	4.94	15.41	28.38	38.25	45.55	48.86	48.86	48.86
3-5 Dekalb		9924	0.05	0.61	6.17	11.40	16.80	25.07	33.54	40.75	47.05	49.61	49.61	49.61
3-5 Dekalb	F	4838	0.10	1.26	12.46	23.09	30.55	38.38	44.36	49.96	55.08	57.42	57.42	57.42
3-5 Dekalb	M	5086	0.00	0.00	0.18	0.28	3.72	12.41	23.26	31.99	39.40	42.17	42.17	42.17

4 District 4		10484	0.08	1.29	7.50	12.16	16.72	22.20	28.27	33.61	37.90	40.16	40.16	**40.16**
4 District 4	F	5239	0.15	2.56	14.93	24.16	30.62	36.44	41.48	45.91	49.17	51.17	51.17	**51.17**
4 District 4	M	5245	0.00	0.02	0.08	0.17	2.84	7.97	15.08	21.33	26.63	29.15	29.15	**29.15**
5-1 South Central (D		2269	0.00	0.53	4.85	7.93	11.11	14.90	20.54	24.42	27.72	29.22	29.22	**29.22**
5-1 South Central (D	F	1062	0.00	1.13	10.26	16.85	20.81	24.58	29.38	31.73	35.31	37.01	37.01	**37.01**
5-1 South Central (D	M	1207	0.00	0.00	0.08	0.08	2.57	6.38	12.76	17.98	21.04	22.37	22.37	**22.37**
5-2 North Central (M		8829	0.01	0.53	5.13	8.55	12.61	17.45	22.57	26.95	29.78	31.07	31.07	**31.07**
5-2 North Central (M	F	4690	0.02	0.98	9.57	15.99	21.00	25.46	29.57	32.94	35.16	36.23	36.23	**36.23**
5-2 North Central (M	M	4139	0.00	0.02	0.10	0.12	3.09	8.38	14.64	20.15	23.68	25.22	25.22	**25.22**
6 East Central		6712	0.03	1.10	6.42	10.65	15.97	22.36	29.38	34.37	38.41	39.96	39.96	**39.96**
6 East Central	F	3163	0.06	2.34	13.50	22.48	28.64	35.28	41.42	45.84	49.67	51.44	51.44	**51.44**
6 East Central	M	3549	0.00	0.00	0.11	0.11	4.68	10.85	18.65	24.15	28.37	29.73	29.73	**29.73**
7 West Central (Colu		6016	0.00	0.95	7.03	11.44	16.24	20.98	25.00	27.96	31.93	33.56	33.56	**33.56**
7 West Central (Colu	F	2616	0.00	2.18	16.13	26.19	31.46	35.36	38.88	41.44	45.37	47.02	47.02	**47.02**
7 West Central (Colu	M	3400	0.00	0.00	0.03	0.09	4.53	9.91	14.32	17.59	21.59	23.21	23.21	**23.21**
8-1 South (Valdosta)		5259	0.02	0.27	4.72	8.29	10.97	14.22	18.05	20.35	22.25	23.07	23.07	**23.07**
8-1 South (Valdosta)	F	2689	0.04	0.52	9.22	16.18	20.08	22.98	25.25	26.44	27.93	28.52	28.52	**28.52**
8-1 South (Valdosta)	M	2570	0.00	0.00	0.00	0.04	1.44	5.06	10.51	13.97	16.30	17.35	17.35	**17.35**
8-2 Southwest (Alban		5364	0.00	0.78	5.37	9.90	14.41	20.04	24.85	29.29	32.46	34.19	34.19	**34.19**

8-2 Southwest (Alban	F	2656	0.00	1.58	10.84	19.95	26.02	31.59	35.58	38.63	41.23	42.55	42.55	**42.55**
8-2 Southwest (Alban	M	2708	0.00	0.00	0.00	0.04	3.03	8.71	14.33	20.13	23.86	26.00	26.00	**26.00**
9-1 Coastal (Savanna		9959	0.04	0.67	4.84	8.71	13.69	18.96	24.44	29.24	32.66	34.16	34.16	**34.16**
9-1 Coastal (Savanna	F	4843	0.08	1.38	9.93	17.86	23.77	28.08	32.54	36.22	39.19	40.93	40.93	**40.93**
9-1 Coastal (Savanna	M	5116	0.00	0.00	0.02	0.04	4.14	10.32	16.77	22.63	26.49	27.76	27.76	**27.76**
9-2 Southeast (Waycr		7702	0.03	0.48	4.74	8.15	11.39	15.55	19.75	23.51	25.84	27.04	27.04	**27.04**
9-2 Southeast (Waycr	F	3686	0.05	1.00	9.85	16.90	21.73	25.75	29.38	33.23	35.35	36.57	36.57	**36.57**
9-2 Southeast (Waycr	M	4016	0.00	0.00	0.05	0.12	1.89	6.20	10.91	14.59	17.11	18.30	18.30	**18.30**

Table A26b. Percent of the Birth Cohort of 1997 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2008, indicated in red text, indicates when the birth cohort of 1997 was age 11. Highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		143471	0.00	0.08	0.93	3.29	5.56	8.74	13.04	18.18	23.44	26.07	26.07	**26.07**
	F	70402	0.00	0.17	1.89	6.69	11.24	16.16	21.31	26.32	31.14	33.74	33.74	**33.74**
	M	73069	0.00	0.00	0.00	0.02	0.08	1.59	5.08	10.33	16.02	18.67	18.67	**18.67**
1-1 Northwest (Rome)		8178	0.00	0.09	0.92	4.28	7.53	10.06	13.46	17.75	22.70	24.93	24.93	**24.93**
1-1 Northwest (Rome)	F	4016	0.00	0.17	1.87	8.69	15.29	19.47	23.85	28.29	33.14	35.26	35.26	**35.26**
1-1 Northwest (Rome)	M	4162	0.00	0.00	0.00	0.02	0.05	0.99	3.44	7.59	12.61	14.97	14.97	**14.97**
1-2 North Georgia (D		5137	0.00	0.12	1.40	4.48	7.81	11.62	16.62	23.44	29.59	32.55	32.55	**32.55**

1-2 North Georgia (D	F	2423	0.00	0.25	2.97	9.45	16.43	22.91	28.48	34.96	40.53	43.66	43.66	43.66
1-2 North Georgia (D	M	2714	0.00	0.00	0.00	0.04	0.11	1.55	6.04	13.15	19.82	22.62	22.62	22.62
10 Northeast (Athens		10446	0.00	0.03	0.56	1.95	3.24	5.27	7.68	10.16	12.30	13.34	13.34	13.34
10 Northeast (Athens	F	5718	0.00	0.05	1.01	3.57	5.86	8.22	10.58	12.73	14.88	16.00	16.00	16.00
10 Northeast (Athens	M	4728	0.00	0.00	0.00	0.00	0.06	1.71	4.17	7.04	9.18	10.11	10.11	10.11
2 North (Gainesville		7589	0.00	0.11	0.91	3.29	5.56	8.43	12.50	17.49	22.14	24.58	24.58	24.58
2 North (Gainesville	F	3739	0.00	0.21	1.85	6.69	11.26	15.75	21.02	26.05	30.20	32.39	32.39	32.39
2 North (Gainesville	M	3850	0.00	0.00	0.00	0.00	0.03	1.32	4.23	9.17	14.31	16.99	16.99	16.99
3-1 Cobb-Douglas		10303	0.00	0.14	1.65	5.06	7.93	12.42	18.57	26.24	35.41	39.65	39.65	39.65
3-1 Cobb-Douglas	F	5008	0.00	0.28	3.39	10.38	16.19	23.56	30.95	38.28	46.81	51.26	51.26	51.26
3-1 Cobb-Douglas	M	5295	0.00	0.00	0.00	0.02	0.11	1.89	6.86	14.84	24.63	28.67	28.67	28.67
3-2 Fulton		13558	0.00	0.10	0.80	2.52	4.54	7.40	12.13	17.85	23.99	26.88	26.88	26.88
3-2 Fulton	F	6536	0.00	0.20	1.67	5.23	9.39	14.17	19.83	25.03	30.26	32.59	32.59	32.59
3-2 Fulton	M	7022	0.00	0.00	0.00	0.00	0.01	1.10	4.96	11.16	18.14	21.56	21.56	21.56
3-3 Clayton (Jonesbo		4004	0.00	0.05	0.85	2.72	4.77	7.59	11.59	17.53	23.28	26.25	26.25	26.25
3-3 Clayton (Jonesbo	F	2032	0.00	0.10	1.62	5.31	9.25	13.73	18.11	23.33	28.49	31.45	31.45	31.45
3-3 Clayton (Jonesbo	M	1972	0.00	0.00	0.05	0.05	0.15	1.27	4.87	11.56	17.90	20.89	20.89	20.89
3-4 GNR (Lawrencevil		11738	0.00	0.14	1.46	5.35	8.87	14.37	22.31	31.39	39.60	44.14	44.14	44.14
3-4 GNR (Lawrencevil	F	5448	0.00	0.28	3.12	11.45	18.94	28.19	38.11	46.93	54.39	59.12	59.12	59.12
3-4 GNR (Lawrencevil	M	6290	0.00	0.02	0.02	0.06	0.14	2.40	8.63	17.93	26.79	31.16	31.16	31.16
3-5 Dekalb		9924	0.00	0.09	0.62	2.79	5.18	8.70	13.73	20.23	27.69	31.54	31.54	31.54

3-5 Dekalb	F	4838	0.00	0.19	1.28	5.66	10.38	15.92	21.81	28.32	34.79	38.55	38.55	**38.55**
3-5 Dekalb	M	5086	0.00	0.00	0.00	0.06	0.24	1.83	6.06	12.54	20.94	24.87	24.87	**24.87**
4 District 4		10484	0.00	0.15	1.44	3.96	6.12	9.16	13.09	17.71	22.51	25.12	25.12	**25.12**
4 District 4	F	5239	0.00	0.31	2.88	7.90	12.22	17.18	22.43	27.03	31.78	34.40	34.40	**34.40**
4 District 4	M	5245	0.00	0.00	0.00	0.02	0.04	1.14	3.76	8.41	13.25	15.86	15.86	**15.86**
5-1 South Central (D		2269	0.00	0.13	0.62	1.98	3.53	5.38	8.42	12.03	16.13	17.67	17.67	**17.67**
5-1 South Central (D	F	1062	0.00	0.28	1.32	4.24	7.53	10.55	14.69	18.17	21.94	24.11	24.11	**24.11**
5-1 South Central (D	M	1207	0.00	0.00	0.00	0.00	0.00	0.83	2.90	6.63	11.02	12.01	12.01	**12.01**
5-2 North Central (M		8829	0.00	0.02	0.55	1.96	3.55	6.03	9.24	13.50	17.44	19.28	19.28	**19.28**
5-2 North Central (M	F	4690	0.00	0.04	1.04	3.69	6.57	10.13	13.84	18.42	22.17	24.09	24.09	**24.09**
5-2 North Central (M	M	4139	0.00	0.00	0.00	0.00	0.12	1.38	4.03	7.92	12.08	13.82	13.82	**13.82**
6 East Central		6712	0.00	0.06	1.15	3.68	5.97	10.03	14.65	19.28	23.96	26.49	26.49	**26.49**
6 East Central	F	3163	0.00	0.13	2.43	7.78	12.58	18.08	23.81	28.77	33.42	36.20	36.20	**36.20**
6 East Central	M	3549	0.00	0.00	0.00	0.03	0.08	2.85	6.48	10.82	15.53	17.84	17.84	**17.84**
7 West Central (Colu		6016	0.00	0.05	1.03	3.99	6.72	9.91	13.20	16.56	20.30	22.04	22.04	**22.04**
7 West Central (Colu	F	2616	0.00	0.11	2.37	9.17	15.21	19.92	23.24	26.72	30.70	32.38	32.38	**32.38**
7 West Central (Colu	M	3400	0.00	0.00	0.00	0.00	0.18	2.21	5.47	8.74	12.29	14.09	14.09	**14.09**
8-1 South (Valdosta)		5259	0.00	0.00	0.49	3.16	4.68	6.83	9.51	11.98	14.70	16.05	16.05	**16.05**
8-1 South (Valdosta)	F	2689	0.00	0.00	0.97	6.17	9.15	12.20	15.47	17.81	19.67	20.94	20.94	**20.94**
8-1 South (Valdosta)	M	2570	0.00	0.00	0.00	0.00	0.00	1.21	3.27	5.88	9.49	10.93	10.93	**10.93**
8-2 Southwest (Alban		5364	0.00	0.07	0.86	2.52	4.42	7.27	10.92	14.99	19.50	21.74	21.74	**21.74**
8-2 Southwest (Alban	F	2656	0.00	0.15	1.73	5.08	8.89	13.44	18.22	22.33	27.07	29.25	29.25	**29.25**

8-2 Southwest (Alban	M	2708	0.00	0.00	0.00	0.00	0.04	1.22	3.77	7.79	12.08	14.36	14.36	**14.36**
9-1 Coastal (Savanna		9959	0.00	0.09	0.50	2.17	4.09	7.04	10.91	15.48	19.98	22.13	22.13	**22.13**
9-1 Coastal (Savanna	F	4843	0.00	0.19	1.03	4.46	8.36	12.47	16.87	21.43	25.40	27.40	27.40	**27.40**
9-1 Coastal (Savanna	M	5116	0.00	0.00	0.00	0.00	0.04	1.90	5.28	9.85	14.86	17.14	17.14	**17.14**
9-2 Southeast (Waycr		7702	0.00	0.03	0.45	2.31	3.78	5.95	8.78	12.05	15.01	16.65	16.65	**16.65**
9-2 Southeast (Waycr	F	3686	0.00	0.05	0.95	4.83	7.87	11.39	15.17	19.05	21.89	24.01	24.01	**24.01**
9-2 Southeast (Waycr	M	4016	0.00	0.00	0.00	0.00	0.02	0.95	2.91	5.63	8.69	9.89	9.89	**9.89**

Table A27a. Percent of the Birth Cohort of 1998 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2009, indicated in red text, indicates when the birth cohort of 1998 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiating among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		145913	0.00	0.38	1.08	5.79	13.55	20.99	28.87	35.45	40.52	44.58	46.48	**46.48**
	F	71619	0.00	0.76	2.17	11.71	23.12	31.10	37.90	43.42	47.72	51.39	53.27	**53.27**
	M	74294	0.00	0.01	0.03	0.09	4.32	11.23	20.16	27.78	33.57	38.01	39.94	**39.94**
1-1 Northwest (Rome)		8717	0.00	0.53	1.12	7.03	14.16	19.23	25.63	31.42	35.02	38.45	39.98	**39.98**
1-1 Northwest (Rome)	F	4380	0.00	1.03	2.21	13.95	24.38	29.52	34.73	38.63	41.69	44.32	45.59	**45.59**
1-1 Northwest (Rome)	M	4337	0.00	0.02	0.02	0.05	3.83	8.83	16.44	24.14	28.29	32.53	34.31	**34.31**
1-2 North Georgia (D		5142	0.00	0.41	1.03	8.67	20.23	31.33	41.37	49.16	54.32	58.77	60.74	**60.74**
1-2 North Georgia (D	F	2423	0.00	0.87	2.15	18.16	36.24	47.38	55.92	62.69	67.40	71.56	73.42	**73.42**
1-2 North Georgia (D	M	2719	0.00	0.00	0.04	0.22	5.96	17.03	28.39	37.11	42.66	47.37	49.43	**49.43**

10 Northeast (Athens		9934	0.00	0.19	0.78	3.71	9.08	13.25	17.01	20.08	22.58	24.39	25.39	**25.39**
10 Northeast (Athens	F	5415	0.00	0.35	1.42	6.76	13.55	17.30	20.50	22.97	25.12	26.89	27.76	**27.76**
10 Northeast (Athens	M	4519	0.00	0.00	0.00	0.07	3.72	8.39	12.83	16.62	19.54	21.40	22.55	**22.55**
2 North (Gainesville		7974	0.00	0.23	0.54	4.19	9.73	15.76	22.90	29.19	33.71	37.18	38.93	**38.93**
2 North (Gainesville	F	3924	0.00	0.46	1.10	8.51	17.64	24.57	30.78	36.47	40.42	43.68	45.39	**45.39**
2 North (Gainesville	M	4050	0.00	0.00	0.00	0.00	2.07	7.23	15.26	22.15	27.21	30.89	32.67	**32.67**
3-1 Cobb-Douglas		10159	0.00	0.54	1.73	8.08	18.75	28.82	41.49	52.44	60.91	67.53	70.55	**70.55**
3-1 Cobb-Douglas	F	4911	0.00	1.12	3.58	16.58	32.72	43.58	53.98	63.16	70.35	76.20	79.21	**79.21**
3-1 Cobb-Douglas	M	5248	0.00	0.00	0.00	0.13	5.68	15.02	29.80	42.40	52.08	59.41	62.44	**62.44**
3-2 Fulton		14090	0.00	0.31	1.23	5.23	11.81	21.50	32.85	42.40	49.13	54.25	56.60	**56.60**
3-2 Fulton	F	6916	0.00	0.61	2.43	10.56	20.68	31.72	41.69	49.88	55.22	59.89	62.16	**62.16**
3-2 Fulton	M	7174	0.00	0.03	0.08	0.10	3.26	11.65	24.32	35.18	43.27	48.82	51.24	**51.24**
3-3 Clayton (Jonesbo		3971	0.00	0.53	1.18	6.72	14.53	22.49	30.92	37.75	43.36	48.38	51.02	**51.02**
3-3 Clayton (Jonesbo	F	1958	0.00	1.07	2.35	13.43	24.41	31.92	38.51	43.51	48.26	52.86	55.62	**55.62**
3-3 Clayton (Jonesbo	M	2013	0.00	0.00	0.05	0.20	4.92	13.31	23.55	32.14	38.60	44.01	46.55	**46.55**
3-4 GNR (Lawrencevil		11936	0.00	0.53	1.40	8.70	20.64	33.03	46.45	57.31	65.25	71.79	75.26	**75.26**
3-4 GNR (Lawrencevil	F	5552	0.00	1.12	2.97	18.59	37.34	51.80	64.45	73.88	80.48	86.44	89.88	**89.88**
3-4 GNR (Lawrencevil	M	6384	0.00	0.02	0.03	0.09	6.12	16.70	30.80	42.90	52.01	59.05	62.55	**62.55**
3-5 Dekalb		9132	0.00	0.30	1.13	7.15	17.16	28.79	41.52	51.38	60.01	67.36	70.19	**70.19**
3-5 Dekalb	F	4557	0.00	0.57	2.22	14.22	28.86	40.90	50.43	58.77	66.25	72.77	75.53	**75.53**
3-5 Dekalb	M	4575	0.00	0.02	0.04	0.11	5.51	16.72	32.66	44.02	53.79	61.97	64.87	**64.87**
4 District 4		11402	0.00	0.70	1.46	5.41	11.51	17.16	22.71	28.18	32.70	36.34	38.28	**38.28**

4 District 4	F	5683	0.00	1.41	2.89	10.77	20.64	26.98	31.66	36.34	40.37	43.71	45.66	**45.66**
4 District 4	M	5719	0.00	0.00	0.05	0.09	2.43	7.41	13.81	20.07	25.09	29.03	30.95	**30.95**
5-1 South Central (D		2523	0.00	0.32	1.27	4.24	10.11	15.74	19.94	23.94	26.79	29.81	30.88	**30.88**
5-1 South Central (D	F	1169	0.00	0.68	2.74	9.07	18.65	25.83	30.54	33.53	36.27	38.84	39.95	**39.95**
5-1 South Central (D	M	1354	0.00	0.00	0.00	0.07	2.73	7.02	10.78	15.66	18.61	22.01	23.04	**23.04**
5-2 North Central (M		9042	0.00	0.22	0.66	4.50	11.05	16.76	22.72	27.49	30.90	33.42	34.83	**34.83**
5-2 North Central (M	F	4665	0.00	0.41	1.26	8.68	17.51	23.11	28.27	32.05	34.66	36.89	38.29	**38.29**
5-2 North Central (M	M	4377	0.00	0.02	0.02	0.05	4.16	9.98	16.79	22.64	26.89	29.72	31.14	**31.14**
6 East Central		6983	0.00	0.53	1.37	5.79	14.81	22.33	29.94	35.84	41.20	45.17	46.86	**46.86**
6 East Central	F	3238	0.00	1.14	2.93	12.29	25.08	33.82	42.31	48.24	53.58	57.69	59.64	**59.64**
6 East Central	M	3745	0.00	0.00	0.03	0.16	5.93	12.39	19.25	25.13	30.49	34.34	35.81	**35.81**
7 West Central (Colu		6282	0.00	0.37	1.32	5.67	14.37	19.29	23.35	26.47	30.23	32.94	34.29	**34.29**
7 West Central (Colu	F	2797	0.00	0.82	2.97	12.51	24.03	28.78	32.25	34.86	38.11	40.47	41.97	**41.97**
7 West Central (Colu	M	3485	0.00	0.00	0.00	0.17	6.63	11.68	16.21	19.74	23.90	26.89	28.12	**28.12**
8-1 South (Valdosta)		5596	0.00	0.25	0.79	6.17	11.51	16.19	20.62	23.86	26.27	28.25	29.20	**29.20**
8-1 South (Valdosta)	F	2844	0.00	0.49	1.55	12.10	20.04	25.04	28.20	30.10	31.72	33.40	34.28	**34.28**
8-1 South (Valdosta)	M	2752	0.00	0.00	0.00	0.04	2.69	7.05	12.79	17.41	20.64	22.93	23.95	**23.95**
8-2 Southwest (Alban		5584	0.00	0.23	1.02	4.24	10.82	17.16	22.55	26.15	29.57	32.36	33.83	**33.83**
8-2 Southwest (Alban	F	2787	0.00	0.47	1.97	8.43	18.37	26.09	31.00	34.12	36.78	39.47	40.72	**40.72**
8-2 Southwest (Alban	M	2797	0.00	0.00	0.07	0.07	3.29	8.26	14.12	18.20	22.38	25.28	26.96	**26.96**

9-1 Coastal (Savanna		9636	0.00	0.33	0.76	5.12	13.39	20.10	26.40	32.20	36.89	40.36	41.82	**41.82**
9-1 Coastal (Savanna	F	4721	0.00	0.66	1.53	10.40	21.75	28.60	34.15	39.19	43.74	47.05	48.68	**48.68**
9-1 Coastal (Savanna	M	4915	0.00	0.02	0.02	0.04	5.35	11.94	18.96	25.49	30.32	33.94	35.24	**35.24**
9-2 Southeast (Waycr		7810	0.00	0.10	0.35	2.68	7.67	11.50	15.15	18.44	20.33	21.98	22.54	**22.54**
9-2 Southeast (Waycr	F	3679	0.00	0.22	0.73	5.68	13.16	17.21	20.77	23.87	25.50	27.07	27.72	**27.72**
9-2 Southeast (Waycr	M	4131	0.00	0.00	0.00	0.00	2.78	6.41	10.14	13.60	15.73	17.45	17.91	**17.91**

Table A27b. Percent of the Birth Cohort of 1998 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2009, indicated in red text, indicates when the birth cohort of 1998 was age 11. Highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		145913	0.00	0.02	0.31	0.93	2.98	6.58	11.44	17.37	23.39	28.98	31.72	**31.72**
	F	71619	0.00	0.03	0.62	1.89	5.98	11.54	17.70	23.82	29.68	34.97	37.72	**37.72**
	M	74294	0.00	0.00	0.00	0.01	0.08	1.79	5.41	11.17	17.31	23.21	25.94	**25.94**
1-1 Northwest (Rome)		8717	0.00	0.05	0.32	1.18	3.74	6.88	10.46	14.98	19.86	24.35	26.12	**26.12**
1-1 Northwest (Rome)	F	4380	0.00	0.09	0.62	2.33	7.40	12.12	16.94	21.23	25.80	29.70	31.21	**31.21**
1-1 Northwest (Rome)	M	4337	0.00	0.00	0.02	0.02	0.05	1.59	3.92	8.67	13.86	18.95	20.98	**20.98**
1-2 North Georgia (D		5142	0.00	0.02	0.27	1.05	4.61	10.23	18.22	26.76	33.43	39.87	42.98	**42.98**
1-2 North Georgia (D	F	2423	0.00	0.04	0.58	2.23	9.49	18.98	29.14	38.42	44.53	50.93	54.27	**54.27**
1-2 North Georgia (D	M	2719	0.00	0.00	0.00	0.00	0.26	2.43	8.50	16.37	23.54	30.01	32.92	**32.92**

10 Northeast (Athens		9934	0.00	0.00	0.17	0.67	2.21	4.79	7.51	10.55	13.42	15.80	17.47	**17.47**
10 Northeast (Athens	F	5415	0.00	0.00	0.31	1.24	4.01	7.18	10.29	13.39	16.25	18.54	20.31	**20.31**
10 Northeast (Athens	M	4519	0.00	0.00	0.00	0.00	0.07	1.93	4.18	7.15	10.02	12.52	14.05	**14.05**
2 North (Gainesville		7974	0.00	0.00	0.15	0.74	2.16	5.09	8.87	14.02	19.40	24.19	26.55	**26.55**
2 North (Gainesville	F	3924	0.00	0.00	0.31	1.50	4.38	9.48	14.04	19.78	24.85	29.23	31.75	**31.75**
2 North (Gainesville	M	4050	0.00	0.00	0.00	0.00	0.00	0.84	3.85	8.44	14.12	19.31	21.51	**21.51**
3-1 Cobb-Douglas		10159	0.00	0.00	0.41	1.39	4.24	8.75	16.17	25.12	35.00	44.27	48.69	**48.69**
3-1 Cobb-Douglas	F	4911	0.00	0.00	0.86	2.85	8.65	16.07	25.72	34.84	44.63	52.76	57.10	**57.10**
3-1 Cobb-Douglas	M	5248	0.00	0.00	0.00	0.02	0.11	1.91	7.24	16.03	25.99	36.32	40.82	**40.82**
3-2 Fulton		14090	0.00	0.03	0.28	0.81	2.58	5.91	11.65	20.04	28.57	36.01	39.84	**39.84**
3-2 Fulton	F	6916	0.00	0.06	0.56	1.65	5.22	10.80	18.28	26.87	34.79	41.60	45.33	**45.33**
3-2 Fulton	M	7174	0.00	0.00	0.00	0.00	0.04	1.20	5.26	13.45	22.58	30.62	34.56	**34.56**
3-3 Clayton (Jonesbo		3971	0.00	0.00	0.30	0.93	2.92	6.47	10.58	16.39	23.57	30.22	33.42	**33.42**
3-3 Clayton (Jonesbo	F	1958	0.00	0.00	0.61	1.89	5.82	11.54	16.50	21.60	28.29	34.01	37.33	**37.33**
3-3 Clayton (Jonesbo	M	2013	0.00	0.00	0.00	0.00	0.10	1.54	4.82	11.33	18.98	26.53	29.61	**29.61**
3-4 GNR (Lawrencevil		11936	0.00	0.03	0.44	1.35	4.48	10.82	19.23	29.52	39.84	48.57	53.02	**53.02**
3-4 GNR (Lawrencevil	F	5552	0.00	0.05	0.94	2.85	9.42	20.39	31.97	42.81	53.51	61.98	66.62	**66.62**
3-4 GNR (Lawrencevil	M	6384	0.00	0.00	0.02	0.05	0.19	2.51	8.15	17.95	27.94	36.90	41.18	**41.18**
3-5 Dekalb		9132	0.00	0.01	0.16	0.78	3.47	8.34	15.25	24.61	33.71	43.28	47.76	**47.76**
3-5 Dekalb	F	4557	0.00	0.02	0.33	1.56	6.91	14.22	22.58	31.56	40.20	48.83	53.08	**53.08**
3-5 Dekalb	M	4575	0.00	0.00	0.00	0.00	0.04	2.49	7.96	17.68	27.23	37.75	42.45	**42.45**
4 District 4		11402	0.00	0.05	0.56	1.32	3.08	5.79	9.45	13.67	18.52	23.06	25.19	**25.19**

4 District 4	F	5683	0.00	0.11	1.13	2.64	6.07	10.33	14.97	19.44	24.44	28.84	30.90	**30.90**
4 District 4	M	5719	0.00	0.00	0.00	0.02	0.10	1.28	3.95	7.94	12.64	17.31	19.51	**19.51**
5-1 South Central (D		2523	0.00	0.00	0.52	0.83	2.30	4.44	7.06	10.62	14.11	17.84	19.54	**19.54**
5-1 South Central (D	F	1169	0.00	0.00	1.11	1.80	4.88	8.38	12.15	16.42	20.62	24.38	25.83	**25.83**
5-1 South Central (D	M	1354	0.00	0.00	0.00	0.00	0.07	1.03	2.66	5.61	8.49	12.19	14.11	**14.11**
5-2 North Central (M		9042	0.00	0.01	0.23	0.52	1.85	4.56	7.86	12.59	17.18	20.88	23.04	**23.04**
5-2 North Central (M	F	4665	0.00	0.02	0.45	1.01	3.54	7.44	11.28	15.97	20.26	23.94	26.00	**26.00**
5-2 North Central (M	M	4377	0.00	0.00	0.00	0.00	0.05	1.49	4.23	8.98	13.89	17.61	19.88	**19.88**
6 East Central		6983	0.00	0.01	0.50	1.19	2.88	6.90	12.46	17.50	23.27	28.93	31.62	**31.62**
6 East Central	F	3238	0.00	0.03	1.08	2.56	6.18	11.89	19.12	25.39	32.43	39.19	42.31	**42.31**
6 East Central	M	3745	0.00	0.00	0.00	0.00	0.03	2.59	6.70	10.68	15.35	20.05	22.38	**22.38**
7 West Central (Colu		6282	0.00	0.00	0.32	1.05	3.22	6.80	10.55	14.10	17.48	21.47	23.35	**23.35**
7 West Central (Colu	F	2797	0.00	0.00	0.72	2.36	7.08	12.05	16.55	19.99	23.31	27.35	29.17	**29.17**
7 West Central (Colu	M	3485	0.00	0.00	0.00	0.00	0.11	2.58	5.74	9.38	12.80	16.76	18.68	**18.68**
8-1 South (Valdosta)		5596	0.00	0.02	0.30	0.93	3.36	6.83	10.76	14.10	17.08	20.07	21.37	**21.37**
8-1 South (Valdosta)	F	2844	0.00	0.04	0.60	1.79	6.50	11.29	16.24	19.76	22.40	24.96	26.02	**26.02**
8-1 South (Valdosta)	M	2752	0.00	0.00	0.00	0.04	0.11	2.22	5.09	8.25	11.59	15.01	16.57	**16.57**
8-2 Southwest (Alban		5584	0.00	0.00	0.23	0.79	2.18	4.82	8.15	12.20	16.08	20.34	22.22	**22.22**
8-2 Southwest (Alban	F	2787	0.00	0.00	0.47	1.58	4.27	8.25	12.88	17.62	21.64	25.62	27.77	**27.77**

8-2 Southwest (Alban	M	2797	0.00	0.00	0.00	0.00	0.11	1.39	3.43	6.79	10.55	15.09	16.70	**16.70**
9-1 Coastal (Savanna		9636	0.00	0.00	0.27	0.65	2.57	6.02	10.55	15.82	20.83	25.86	28.25	**28.25**
9-1 Coastal (Savanna	F	4721	0.00	0.00	0.55	1.33	5.17	10.04	15.46	20.80	25.50	30.50	33.13	**33.13**
9-1 Coastal (Savanna	M	4915	0.00	0.00	0.00	0.00	0.08	2.16	5.84	11.03	16.34	21.40	23.56	**23.56**
9-2 Southeast (Waycr		7810	0.00	0.00	0.08	0.33	1.15	3.00	5.51	8.21	10.72	12.88	13.91	**13.91**
9-2 Southeast (Waycr	F	3679	0.00	0.00	0.16	0.71	2.45	5.27	8.62	11.69	14.11	16.80	17.99	**17.99**
9-2 Southeast (Waycr	M	4131	0.00	0.00	0.00	0.00	0.00	0.97	2.74	5.11	7.70	9.39	10.26	**10.26**

Table A28a. Percent of the Birth Cohort of 1999 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2010, indicated in red text, indicates when the birth cohort of 1999 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts and stratified by males and females in each district. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		144164	0.00	0.00	0.30	0.83	8.80	19.54	28.25	35.91	41.87	46.66	50.58	**52.20**
	F	70726	0.00	0.00	0.60	1.67	13.72	26.89	35.16	42.12	47.48	51.89	55.57	**57.18**
	M	73438	0.00	0.00	0.00	0.01	4.06	12.46	21.60	29.94	36.46	41.63	45.78	**47.41**
1-1 Northwest (Rome)		9212	0.00	0.00	0.21	0.88	8.17	16.76	23.59	29.82	34.43	37.70	40.63	**41.57**
1-1 Northwest (Rome)	F	4598	0.00	0.00	0.39	1.72	13.22	24.03	30.36	35.65	39.45	42.32	44.74	**45.52**
1-1 Northwest (Rome)	M	4614	0.00	0.00	0.02	0.04	3.14	9.51	16.84	24.01	29.43	33.09	36.54	**37.62**
1-2 North Georgia (D		5863	0.00	0.00	0.14	0.60	10.40	24.65	35.58	44.02	49.31	53.95	57.33	**58.67**
1-2 North Georgia (D	F	2805	0.00	0.00	0.29	1.25	16.54	33.08	44.10	51.41	55.79	60.50	63.32	**64.60**
1-2 North Georgia (D	M	3058	0.00	0.00	0.00	0.00	4.77	16.91	27.76	37.25	43.36	47.94	51.83	**53.24**

10 Northeast (Athens		7722	0.00	0.00	0.32	0.79	7.38	15.14	20.49	24.55	28.10	31.03	33.71	**34.95**
10 Northeast (Athens	F	4199	0.00	0.00	0.60	1.45	10.12	18.53	23.39	26.91	29.82	32.15	34.65	**35.72**
10 Northeast (Athens	M	3523	0.00	0.00	0.00	0.00	4.12	11.10	17.03	21.74	26.06	29.69	32.59	**34.03**
2 North (Gainesville		8263	0.00	0.00	0.25	0.68	6.16	14.10	22.47	30.17	35.29	39.79	43.65	**45.24**
2 North (Gainesville	F	3975	0.00	0.00	0.53	1.41	10.54	21.64	30.06	38.06	42.97	47.07	50.67	**52.25**
2 North (Gainesville	M	4288	0.00	0.00	0.00	0.00	2.10	7.11	15.44	22.85	28.17	33.05	37.15	**38.74**
3-1 Cobb-Douglas		11428	0.00	0.00	0.41	1.23	10.15	22.14	33.44	44.20	52.82	59.80	65.35	**67.44**
3-1 Cobb-Douglas	F	5470	0.00	0.00	0.86	2.50	16.51	31.28	41.97	51.70	59.52	66.18	71.22	**73.58**
3-1 Cobb-Douglas	M	5958	0.00	0.00	0.00	0.05	4.31	13.75	25.61	37.31	46.66	53.94	59.95	**61.80**
3-2 Fulton		13367	0.00	0.00	0.41	1.16	8.63	21.36	34.14	45.77	54.58	61.82	66.80	**68.95**
3-2 Fulton	F	6534	0.00	0.00	0.84	2.36	13.88	29.54	41.67	52.33	60.04	66.71	71.20	**73.06**
3-2 Fulton	M	6833	0.00	0.00	0.00	0.01	3.60	13.54	26.93	39.50	49.36	57.15	62.59	**65.02**
3-3 Clayton (Jonesbo		4027	0.00	0.00	0.27	0.99	9.51	21.46	31.02	38.96	45.44	51.25	55.70	**57.83**
3-3 Clayton (Jonesbo	F	1910	0.00	0.00	0.58	2.09	15.39	29.58	38.59	46.54	53.04	58.17	63.14	**65.60**
3-3 Clayton (Jonesbo	M	2117	0.00	0.00	0.00	0.00	4.20	14.12	24.19	32.12	38.59	45.02	48.98	**50.83**
3-4 GNR (Lawrencevil		14205	0.00	0.00	0.32	0.93	10.95	24.16	36.14	47.14	55.40	61.66	67.23	**69.54**
3-4 GNR (Lawrencevil	F	6695	0.00	0.00	0.67	1.96	17.63	34.41	45.97	56.36	64.11	70.02	75.49	**77.88**
3-4 GNR (Lawrencevil	M	7510	0.00	0.00	0.01	0.01	5.01	15.02	27.38	38.92	47.64	54.21	59.87	**62.10**
3-5 Dekalb		8869	0.00	0.00	0.39	0.83	9.72	25.03	38.35	49.25	58.59	65.99	72.35	**74.82**
3-5 Dekalb	F	4392	0.00	0.00	0.80	1.68	15.37	33.47	45.90	56.01	64.44	70.83	76.53	**78.80**
3-5 Dekalb	M	4477	0.00	0.00	0.00	0.00	4.18	16.75	30.94	42.62	52.85	61.25	68.26	**70.92**
4 District 4		12591	0.00	0.00	0.34	0.82	6.76	14.92	20.38	26.09	30.55	34.48	37.49	**38.88**
4 District 4	F	6179	0.00	0.00	0.68	1.63	11.44	22.11	27.66	32.92	37.19	40.78	43.79	**45.36**
4 District 4	M	6412	0.00	0.00	0.02	0.03	2.25	7.99	13.37	19.51	24.14	28.42	31.41	**32.63**
5-1 South Central (D		2451	0.00	0.00	0.29	0.37	6.65	13.91	19.22	24.07	28.07	30.80	33.33	**34.52**
5-1 South Central (D	F	1157	0.00	0.00	0.61	0.78	11.93	21.09	26.53	31.03	34.31	36.65	39.33	**40.80**

5-1 South Central (D	M	1294	0.00	0.00	0.00	0.00	1.93	7.50	12.67	17.85	22.49	25.58	27.98	**28.90**
5-2 North Central (M		8175	0.00	0.00	0.24	0.73	9.05	19.60	26.78	32.75	36.99	40.42	43.47	**45.08**
5-2 North Central (M	F	4081	0.00	0.00	0.49	1.45	13.23	25.46	32.59	37.83	41.93	45.60	48.81	**50.21**
5-2 North Central (M	M	4094	0.00	0.00	0.00	0.02	4.89	13.75	20.98	27.67	32.07	35.25	38.15	**39.96**
6 East Central		7365	0.00	0.00	0.29	0.75	10.39	21.25	28.45	34.79	40.68	44.83	48.31	**49.95**
6 East Central	F	3467	0.00	0.00	0.61	1.59	15.92	29.94	37.99	44.59	50.48	54.40	57.83	**59.45**
6 East Central	M	3898	0.00	0.00	0.00	0.00	5.46	13.52	19.96	26.06	31.97	36.33	39.84	**41.51**
7 West Central (Colu		5807	0.00	0.00	0.43	0.96	11.14	20.34	26.00	29.40	34.20	37.39	40.14	**40.97**
7 West Central (Colu	F	2704	0.00	0.00	0.92	2.07	15.50	26.15	31.18	34.43	38.98	42.09	44.42	**45.27**
7 West Central (Colu	M	3103	0.00	0.00	0.00	0.00	7.35	15.28	21.50	25.01	30.04	33.29	36.42	**37.22**
8-1 South (Valdosta)		4511	0.00	0.00	0.16	0.62	8.89	17.96	24.61	29.46	32.83	35.71	38.24	**39.15**
8-1 South (Valdosta)	F	2360	0.00	0.00	0.30	1.19	13.43	24.83	29.87	33.22	35.59	38.31	40.21	**40.93**
8-1 South (Valdosta)	M	2151	0.00	0.00	0.00	0.00	3.91	10.41	18.83	25.34	29.80	32.87	36.08	**37.19**
8-2 Southwest (Alban		5551	0.00	0.00	0.22	0.65	6.43	16.27	22.68	28.01	31.17	34.41	36.98	**38.19**
8-2 Southwest (Alban	F	2760	0.00	0.00	0.43	1.30	10.33	22.57	28.59	33.19	36.16	38.88	41.20	**42.50**
8-2 Southwest (Alban	M	2791	0.00	0.00	0.00	0.00	2.58	10.03	16.84	22.90	26.23	29.99	32.82	**33.93**
9-1 Coastal (Savanna		8573	0.00	0.00	0.20	0.58	9.34	20.90	28.96	36.66	42.59	47.46	51.38	**52.93**
9-1 Coastal (Savanna	F	4361	0.00	0.00	0.39	1.15	12.93	26.53	33.85	40.13	45.47	50.01	54.37	**56.11**
9-1 Coastal (Savanna	M	4212	0.00	0.00	0.00	0.00	5.63	15.08	23.91	33.07	39.60	44.82	48.29	**49.64**
9-2 Southeast (Waycr		6184	0.00	0.00	0.11	0.34	6.45	14.07	19.03	22.74	25.52	27.72	29.67	**30.27**
9-2 Southeast (Waycr	F	3079	0.00	0.00	0.23	0.68	9.87	19.62	23.71	26.99	29.20	31.28	32.97	**33.61**
9-2 Southeast (Waycr	M	3105	0.00	0.00	0.00	0.00	3.06	8.57	14.40	18.52	21.87	24.19	26.41	**26.96**

Table A28b. Percent of the Birth Cohort of 1999 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2010, indicated in red text, indicates when the birth cohort of 1999 was age 11. Highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		144164	0.00	0.00	0.02	0.20	0.77	4.26	9.70	16.20	22.96	29.22	35.13	**37.39**
	F	70726	0.00	0.00	0.05	0.40	1.52	6.85	13.92	21.03	27.86	34.07	39.83	**42.09**
	M	73438	0.00	0.00	0.00	0.00	0.05	1.76	5.64	11.55	18.25	24.56	30.61	**32.87**
1-1 Northwest (Rome)		9212	0.00	0.00	0.02	0.21	0.89	3.81	7.77	12.78	18.11	22.74	27.06	**28.61**
1-1 Northwest (Rome)	F	4598	0.00	0.00	0.04	0.39	1.70	6.29	11.79	17.29	22.84	27.38	31.17	**32.62**
1-1 Northwest (Rome)	M	4614	0.00	0.00	0.00	0.02	0.09	1.34	3.77	8.28	13.39	18.12	22.97	**24.62**
1-2 North Georgia (D		5863	0.00	0.00	0.00	0.09	0.80	5.39	12.89	21.58	29.61	36.14	42.13	**43.90**
1-2 North Georgia (D	F	2805	0.00	0.00	0.00	0.18	1.57	9.02	18.18	27.49	35.65	41.85	47.52	**49.38**
1-2 North Georgia (D	M	3058	0.00	0.00	0.00	0.00	0.10	2.06	8.04	16.15	24.07	30.90	37.18	**38.88**
10 Northeast (Athens		7722	0.00	0.00	0.01	0.27	0.75	3.52	7.83	12.11	16.06	19.55	23.49	**25.03**
10 Northeast (Athens	F	4199	0.00	0.00	0.02	0.50	1.21	5.00	9.91	13.84	17.72	20.81	25.10	**26.67**
10 Northeast (Athens	M	3523	0.00	0.00	0.00	0.00	0.20	1.76	5.36	10.05	14.08	18.05	21.57	**23.08**
2 North (Gainesville		8263	0.00	0.00	0.02	0.16	0.62	2.92	7.49	13.51	19.56	24.68	30.17	**32.39**
2 North (Gainesville	F	3975	0.00	0.00	0.05	0.33	1.26	5.23	11.04	18.11	24.55	30.42	35.77	**37.94**
2 North (Gainesville	M	4288	0.00	0.00	0.00	0.00	0.02	0.77	4.20	9.24	14.93	19.36	24.98	**27.24**
3-1 Cobb-Douglas		11428	0.00	0.00	0.04	0.29	1.19	4.85	11.02	19.30	28.54	37.17	45.50	**48.69**
3-1 Cobb-Douglas	F	5470	0.00	0.00	0.07	0.60	2.36	8.45	16.80	25.67	34.88	43.36	51.30	**54.31**
3-1 Cobb-Douglas	M	5958	0.00	0.00	0.00	0.00	0.12	1.54	5.71	13.46	22.71	31.49	40.18	**43.52**
3-2 Fulton		13367	0.00	0.00	0.03	0.22	0.73	3.93	10.25	19.69	29.71	39.19	48.10	**51.29**
3-2 Fulton	F	6534	0.00	0.00	0.06	0.46	1.47	6.54	15.29	25.90	35.97	44.93	53.44	**56.18**

3-2 Fulton	M	6833	0.00	0.00	0.00	0.00	0.03	1.43	5.43	13.76	23.74	33.69	43.00	**46.61**
3-3 Clayton (Jonesbo		4027	0.00	0.00	0.02	0.15	0.77	3.90	9.31	15.50	22.45	29.38	36.68	**39.01**
3-3 Clayton (Jonesbo	F	1910	0.00	0.00	0.05	0.31	1.57	6.96	14.08	20.73	27.70	34.66	42.30	**44.71**
3-3 Clayton (Jonesbo	M	2117	0.00	0.00	0.00	0.00	0.05	1.13	5.01	10.77	17.71	24.61	31.60	**33.87**
3-4 GNR (Lawrencevil		14205	0.00	0.00	0.00	0.22	1.03	5.59	13.28	22.57	31.79	40.17	47.87	**51.14**
3-4 GNR (Lawrencevil	F	6695	0.00	0.00	0.00	0.46	2.14	9.26	19.69	29.99	39.48	47.78	55.44	**58.83**
3-4 GNR (Lawrencevil	M	7510	0.00	0.00	0.00	0.00	0.04	2.32	7.58	15.95	24.94	33.38	41.12	**44.29**
3-5 Dekalb		8869	0.00	0.00	0.01	0.18	0.77	4.62	11.53	20.80	31.19	41.01	50.34	**53.94**
3-5 Dekalb	F	4392	0.00	0.00	0.02	0.36	1.53	7.45	16.87	26.82	37.14	46.43	54.58	**58.04**
3-5 Dekalb	M	4477	0.00	0.00	0.00	0.00	0.02	1.85	6.30	14.90	25.35	35.69	46.19	**49.92**
4 District 4		12591	0.00	0.00	0.03	0.18	0.71	3.52	7.22	11.73	16.20	20.55	24.74	**26.39**
4 District 4	F	6179	0.00	0.00	0.06	0.37	1.41	6.00	10.99	16.35	21.20	25.78	29.99	**31.75**
4 District 4	M	6412	0.00	0.00	0.00	0.00	0.03	1.12	3.59	7.28	11.38	15.52	19.68	**21.23**
5-1 South Central (D		2451	0.00	0.00	0.04	0.12	0.24	2.61	5.96	9.38	14.12	19.26	23.34	**24.48**
5-1 South Central (D	F	1157	0.00	0.00	0.09	0.26	0.52	4.49	9.16	12.88	18.58	24.03	28.78	**29.82**
5-1 South Central (D	M	1294	0.00	0.00	0.00	0.00	0.00	0.93	3.09	6.26	10.12	14.99	18.47	**19.71**
5-2 North Central (M		8175	0.00	0.00	0.02	0.18	0.57	3.63	8.31	13.93	19.56	24.93	29.35	**31.50**
5-2 North Central (M	F	4081	0.00	0.00	0.05	0.37	1.15	5.59	11.52	17.74	23.62	29.50	34.04	**36.54**
5-2 North Central (M	M	4094	0.00	0.00	0.00	0.00	0.00	1.69	5.11	10.14	15.51	20.37	24.67	**26.48**
6 East Central		7365	0.00	0.00	0.07	0.20	0.73	5.68	11.81	17.43	23.11	28.49	33.60	**35.61**
6 East Central	F	3467	0.00	0.00	0.14	0.43	1.53	8.28	16.64	23.42	29.88	36.03	41.65	**44.10**
6 East Central	M	3898	0.00	0.00	0.00	0.00	0.03	3.36	7.52	12.11	17.09	21.78	26.45	**28.07**
7 West Central (Colu		5807	0.00	0.00	0.00	0.26	0.79	5.20	10.14	14.16	18.74	23.32	26.88	**28.41**
7 West Central (Colu	F	2704	0.00	0.00	0.00	0.55	1.66	7.88	13.87	18.16	22.71	26.92	30.77	**32.36**

7 West Central (Colu	M	3103	0.00	0.00	0.00	0.00	0.03	2.87	6.90	10.67	15.28	20.17	23.49	**24.98**
8-1 South (Valdosta)		4511	0.00	0.00	0.04	0.18	0.95	5.90	11.33	15.85	20.13	24.36	27.84	**29.06**
8-1 South (Valdosta)	F	2360	0.00	0.00	0.08	0.34	1.74	8.52	15.00	19.15	23.14	27.25	30.30	**31.19**
8-1 South (Valdosta)	M	2151	0.00	0.00	0.00	0.00	0.09	3.02	7.30	12.23	16.83	21.20	25.15	**26.73**
8-2 Southwest (Alban		5551	0.00	0.00	0.02	0.18	0.65	3.35	7.26	11.57	16.29	20.83	25.26	**26.77**
8-2 Southwest (Alban	F	2760	0.00	0.00	0.04	0.36	1.27	5.40	9.96	15.04	19.75	24.53	29.09	**30.91**
8-2 Southwest (Alban	M	2791	0.00	0.00	0.00	0.00	0.04	1.33	4.59	8.13	12.86	17.16	21.46	**22.68**
9-1 Coastal (Savanna		8573	0.00	0.00	0.01	0.15	0.64	4.44	10.24	16.69	23.43	29.46	35.46	**37.47**
9-1 Coastal (Savanna	F	4361	0.00	0.00	0.02	0.30	1.22	6.67	13.64	20.45	26.39	32.03	38.11	**40.17**
9-1 Coastal (Savanna	M	4212	0.00	0.00	0.00	0.00	0.05	2.14	6.72	12.80	20.37	26.80	32.72	**34.66**
9-2 Southeast (Waycr		6184	0.00	0.00	0.03	0.10	0.37	2.65	6.32	9.83	13.37	16.54	19.24	**20.55**
9-2 Southeast (Waycr	F	3079	0.00	0.00	0.06	0.19	0.71	4.06	8.54	12.37	15.95	19.52	22.25	**23.71**
9-2 Southeast (Waycr	M	3105	0.00	0.00	0.00	0.00	0.03	1.26	4.12	7.31	10.82	13.59	16.26	**17.42**

Table A29a. Percent of the Birth Cohort of 2000 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2011, indicated in red text, indicates when the birth cohort of 2000 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		142171	0.00	0.00	0.00	0.23	1.11	12.20	25.58	34.76	42.54	48.29	53.15	**56.69**
	F	69135	0.00	0.00	0.00	0.46	1.79	16.10	31.12	40.37	47.80	53.23	57.90	**61.28**
	M	73036	0.00	0.00	0.00	0.01	0.46	8.50	20.34	29.45	37.56	43.61	48.66	**52.35**
1-1 Northwest (Rome)		9457	0.00	0.00	0.00	0.31	0.93	10.08	20.64	27.21	32.15	36.26	39.88	**42.49**

1-1 Northwest (Rome)	F	4565	0.00	0.00	0.00	0.61	1.71	14.04	26.05	32.20	36.74	40.44	43.83	**46.42**
1-1 Northwest (Rome)	M	4892	0.00	0.00	0.00	0.02	0.20	6.38	15.60	22.55	27.86	32.36	36.18	**38.82**
1-2 North Georgia (D		6226	0.00	0.00	0.00	0.19	0.69	13.72	28.40	38.05	44.30	49.16	53.18	**55.61**
1-2 North Georgia (D	F	3025	0.00	0.00	0.00	0.40	1.39	17.45	33.92	43.17	49.65	54.31	57.98	**60.20**
1-2 North Georgia (D	M	3201	0.00	0.00	0.00	0.00	0.03	10.18	23.18	33.21	39.24	44.30	48.64	**51.27**
10 Northeast (Athens		6092	0.00	0.00	0.00	0.53	1.77	12.54	23.87	30.93	36.79	41.46	45.63	**48.59**
10 Northeast (Athens	F	2944	0.00	0.00	0.00	1.09	2.62	16.34	29.35	36.24	42.05	46.74	50.71	**53.63**
10 Northeast (Athens	M	3148	0.00	0.00	0.00	0.00	0.98	8.99	18.74	25.95	31.86	36.53	40.88	**43.87**
2 North (Gainesville		8429	0.00	0.00	0.00	0.19	0.71	8.98	20.89	28.91	35.82	41.00	45.71	**49.33**
2 North (Gainesville	F	4026	0.00	0.00	0.00	0.37	1.29	12.59	25.76	34.33	41.46	47.04	51.59	**55.34**
2 North (Gainesville	M	4403	0.00	0.00	0.00	0.02	0.18	5.68	16.44	23.96	30.66	35.48	40.34	**43.83**
3-1 Cobb-Douglas		12232	0.00	0.00	0.00	0.31	1.32	13.60	28.76	40.81	51.07	58.26	64.63	**68.97**
3-1 Cobb-Douglas	F	6103	0.00	0.00	0.00	0.62	2.05	17.63	33.98	45.65	55.14	61.26	67.08	**71.33**
3-1 Cobb-Douglas	M	6129	0.00	0.00	0.00	0.00	0.59	9.58	23.56	35.99	47.02	55.26	62.18	**66.63**
3-2 Fulton		12085	0.00	0.00	0.00	0.21	1.56	13.85	31.44	46.11	58.49	67.84	74.84	**79.96**
3-2 Fulton	F	6011	0.00	0.00	0.00	0.40	2.56	17.52	36.92	51.90	63.40	71.64	78.17	**82.62**
3-2 Fulton	M	6074	0.00	0.00	0.00	0.02	0.58	10.22	26.01	40.37	53.62	64.09	71.53	**77.33**
3-3 Clayton (Jonesbo		4190	0.00	0.00	0.00	0.17	1.12	11.91	26.21	34.89	43.08	49.36	54.65	**58.14**
3-3 Clayton (Jonesbo	F	2033	0.00	0.00	0.00	0.34	2.02	16.23	31.73	39.94	47.42	53.07	58.04	**61.63**
3-3 Clayton (Jonesbo	M	2157	0.00	0.00	0.00	0.00	0.28	7.83	21.00	30.13	38.99	45.85	51.46	**54.84**
3-4 GNR (Lawrencevil		16259	0.00	0.00	0.00	0.23	1.22	12.22	27.06	38.29	47.66	54.53	60.31	**64.86**
3-4 GNR (Lawrencevil	F	7883	0.00	0.00	0.00	0.47	1.92	16.52	33.01	44.63	53.51	59.80	65.18	**69.12**
3-4 GNR (Lawrencevil	M	8376	0.00	0.00	0.00	0.00	0.56	8.18	21.47	32.32	42.16	49.57	55.73	**60.85**
3-5 Dekalb		9065	0.00	0.00	0.00	0.19	1.35	16.03	33.58	46.20	57.34	66.32	73.90	**79.03**
3-5 Dekalb	F	4364	0.00	0.00	0.00	0.39	2.06	20.85	41.20	54.40	65.15	73.56	81.05	**86.21**

3-5 Dekalb	M	4701	0.00	0.00	0.00	0.00	0.68	11.55	26.50	38.59	50.10	59.60	67.26	**72.37**
4 District 4		13261	0.00	0.00	0.00	0.22	0.96	8.83	17.98	24.20	29.39	33.77	37.33	**40.28**
4 District 4	F	6451	0.00	0.00	0.00	0.45	1.67	12.00	22.54	28.65	33.62	38.16	41.73	**44.63**
4 District 4	M	6810	0.00	0.00	0.00	0.00	0.28	5.83	13.66	19.99	25.37	29.60	33.16	**36.17**
5-1 South Central (D		2224	0.00	0.00	0.00	0.04	0.22	8.18	18.48	26.03	31.34	36.06	40.74	**43.39**
5-1 South Central (D	F	1014	0.00	0.00	0.00	0.10	0.39	13.31	26.23	34.22	39.74	45.17	50.10	**53.16**
5-1 South Central (D	M	1210	0.00	0.00	0.00	0.00	0.08	3.88	11.98	19.17	24.30	28.43	32.89	**35.21**
5-2 North Central (M		7629	0.00	0.00	0.00	0.05	1.14	12.66	25.90	33.16	39.61	43.85	47.75	**50.88**
5-2 North Central (M	F	3667	0.00	0.00	0.00	0.11	1.50	16.36	31.06	38.72	45.16	49.60	53.61	**56.72**
5-2 North Central (M	M	3962	0.00	0.00	0.00	0.00	0.81	9.24	21.13	28.02	34.48	38.52	42.33	**45.48**
6 East Central		7195	0.00	0.00	0.00	0.26	1.15	13.40	26.32	34.40	41.71	46.91	50.84	**54.23**
6 East Central	F	3429	0.00	0.00	0.00	0.55	1.78	18.34	33.89	43.19	50.86	56.02	59.70	**63.11**
6 East Central	M	3766	0.00	0.00	0.00	0.00	0.58	8.90	19.44	26.39	33.38	38.61	42.78	**46.15**
7 West Central (Colu		5687	0.00	0.00	0.00	0.49	1.65	13.56	25.06	30.88	38.10	41.94	45.67	**48.14**
7 West Central (Colu	F	2790	0.00	0.00	0.00	1.00	2.51	16.31	29.39	35.23	41.72	45.20	48.39	**50.72**
7 West Central (Colu	M	2897	0.00	0.00	0.00	0.00	0.83	10.91	20.88	26.68	34.62	38.80	43.04	**45.67**
8-1 South (Valdosta)		3557	0.00	0.00	0.00	0.14	1.04	14.76	28.11	35.48	41.92	45.85	49.51	**51.93**
8-1 South (Valdosta)	F	1726	0.00	0.00	0.00	0.29	1.91	21.03	35.86	42.24	48.15	51.56	55.33	**57.47**
8-1 South (Valdosta)	M	1831	0.00	0.00	0.00	0.00	0.22	8.85	20.81	29.11	36.05	40.47	44.02	**46.70**
8-2 Southwest (Alban		5343	0.00	0.00	0.00	0.15	0.67	10.78	22.87	29.52	35.15	38.95	42.09	**44.41**
8-2 Southwest (Alban	F	2624	0.00	0.00	0.00	0.30	1.14	14.18	28.51	34.53	39.63	43.29	46.30	**48.36**
8-2 Southwest (Alban	M	2719	0.00	0.00	0.00	0.00	0.22	7.50	17.43	24.68	30.82	34.76	38.03	**40.60**
9-1 Coastal (Savanna		8137	0.00	0.00	0.00	0.15	0.76	13.15	26.95	36.02	44.03	49.75	54.41	**57.66**
9-1 Coastal (Savanna	F	3987	0.00	0.00	0.00	0.28	1.15	16.75	30.98	39.58	46.98	52.60	57.69	**61.17**
9-1 Coastal (Savanna	M	4150	0.00	0.00	0.00	0.02	0.39	9.69	23.08	32.60	41.20	47.01	51.25	**54.29**

9-2 Southeast (Waycr		5103	0.00	0.00	0.00	0.10	0.51	10.07	20.95	27.30	31.65	34.61	37.61	**39.51**
9-2 Southeast (Waycr	F	2493	0.00	0.00	0.00	0.20	0.72	12.35	24.79	31.33	35.22	38.15	41.12	**42.60**
9-2 Southeast (Waycr	M	2610	0.00	0.00	0.00	0.00	0.31	7.89	17.28	23.45	28.24	31.23	34.25	**36.55**

Table A29b. Percent of the Birth Cohort of 2000 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2011, indicated in red text, indicates when the birth cohort of 2000 was age 11. Highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		142171	0.00	0.00	0.00	0.01	0.16	1.23	6.35	13.42	21.37	29.12	36.64	**41.34**
	F	69135	0.00	0.00	0.00	0.03	0.31	1.92	8.67	16.97	25.63	33.56	41.07	**45.79**
	M	73036	0.00	0.00	0.00	0.00	0.02	0.58	4.16	10.06	17.34	24.91	32.45	**37.12**
1-1 Northwest (Rome)		9457	0.00	0.00	0.00	0.03	0.26	1.16	5.22	10.13	15.43	20.81	25.84	**29.66**
1-1 Northwest (Rome)	F	4565	0.00	0.00	0.00	0.07	0.53	1.95	7.69	13.91	19.30	24.56	29.31	**33.25**
1-1 Northwest (Rome)	M	4892	0.00	0.00	0.00	0.00	0.02	0.43	2.92	6.60	11.82	17.31	22.61	**26.31**
1-2 North Georgia (D		6226	0.00	0.00	0.00	0.02	0.13	0.84	6.78	15.45	23.98	31.75	38.44	**41.94**
1-2 North Georgia (D	F	3025	0.00	0.00	0.00	0.03	0.26	1.52	9.52	20.03	29.29	37.42	43.67	**46.88**
1-2 North Georgia (D	M	3201	0.00	0.00	0.00	0.00	0.00	0.19	4.19	11.12	18.96	26.40	33.49	**37.27**
10 Northeast (Athens		6092	0.00	0.00	0.00	0.03	0.36	1.82	7.21	12.75	19.71	25.62	31.66	**35.01**
10 Northeast (Athens	F	2944	0.00	0.00	0.00	0.07	0.61	2.72	9.95	16.24	24.15	30.50	36.41	**39.88**
10 Northeast (Athens	M	3148	0.00	0.00	0.00	0.00	0.13	0.98	4.64	9.50	15.57	21.06	27.22	**30.46**
2 North (Gainesville		8429	0.00	0.00	0.00	0.02	0.15	0.97	4.85	11.39	18.13	24.66	31.12	**35.76**
2 North (Gainesville	F	4026	0.00	0.00	0.00	0.05	0.32	1.59	6.73	14.51	22.38	29.11	35.74	**40.59**

2 North (Gainesville	M	4403	0.00	0.00	0.00	0.00	0.00	0.41	3.13	8.54	14.24	20.60	26.89	**31.34**
3-1 Cobb-Douglas		12232	0.00	0.00	0.00	0.00	0.18	1.40	6.81	14.98	25.14	35.17	44.35	**50.21**
3-1 Cobb-Douglas	F	6103	0.00	0.00	0.00	0.00	0.36	2.10	9.16	18.42	28.94	38.49	47.34	**52.60**
3-1 Cobb-Douglas	M	6129	0.00	0.00	0.00	0.00	0.00	0.70	4.47	11.55	21.36	31.86	41.38	**47.84**
3-2 Fulton		12085	0.00	0.00	0.00	0.00	0.13	1.21	6.49	16.09	28.17	40.14	51.93	**59.61**
3-2 Fulton	F	6011	0.00	0.00	0.00	0.00	0.25	1.95	8.82	20.20	32.69	45.35	56.21	**63.30**
3-2 Fulton	M	6074	0.00	0.00	0.00	0.00	0.02	0.48	4.18	12.03	23.69	34.99	47.70	**55.96**
3-3 Clayton (Jonesbo		4190	0.00	0.00	0.00	0.00	0.07	1.26	5.82	12.96	20.84	28.21	36.90	**41.58**
3-3 Clayton (Jonesbo	F	2033	0.00	0.00	0.00	0.00	0.10	2.02	7.67	15.40	23.91	31.48	40.58	**45.35**
3-3 Clayton (Jonesbo	M	2157	0.00	0.00	0.00	0.00	0.05	0.56	4.08	10.66	17.94	25.13	33.43	**38.02**
3-4 GNR (Lawrencevil		16259	0.00	0.00	0.00	0.01	0.19	1.48	7.09	15.38	25.00	34.01	42.55	**48.34**
3-4 GNR (Lawrencevil	F	7883	0.00	0.00	0.00	0.03	0.36	2.22	9.98	19.66	30.67	39.50	47.68	**53.25**
3-4 GNR (Lawrencevil	M	8376	0.00	0.00	0.00	0.00	0.04	0.78	4.36	11.35	19.66	28.83	37.71	**43.72**
3-5 Dekalb		9065	0.00	0.00	0.00	0.01	0.15	1.24	7.69	17.53	28.49	40.17	51.76	**58.36**
3-5 Dekalb	F	4364	0.00	0.00	0.00	0.02	0.30	1.81	10.33	22.25	34.88	46.45	57.58	**64.85**
3-5 Dekalb	M	4701	0.00	0.00	0.00	0.00	0.02	0.70	5.23	13.15	22.57	34.33	46.35	**52.33**
4 District 4		13261	0.00	0.00	0.00	0.02	0.14	0.95	4.73	9.22	14.37	19.54	24.88	**28.19**
4 District 4	F	6451	0.00	0.00	0.00	0.03	0.28	1.50	6.82	12.14	17.80	23.17	29.10	**32.55**
4 District 4	M	6810	0.00	0.00	0.00	0.00	0.00	0.43	2.75	6.46	11.12	16.09	20.88	**24.05**
5-1 South Central (D		2224	0.00	0.00	0.00	0.00	0.04	0.58	3.91	8.36	14.16	20.23	26.26	**30.40**
5-1 South Central (D	F	1014	0.00	0.00	0.00	0.00	0.10	1.08	6.31	12.13	18.54	25.74	33.53	**37.57**
5-1 South Central (D	M	1210	0.00	0.00	0.00	0.00	0.00	0.17	1.90	5.21	10.50	15.62	20.17	**24.38**
5-2 North Central (M		7629	0.00	0.00	0.00	0.01	0.08	1.11	5.81	12.79	20.36	26.91	33.04	**37.25**
5-2 North Central (M	F	3667	0.00	0.00	0.00	0.03	0.14	1.47	7.53	15.43	24.00	31.47	38.42	**42.60**
5-2 North Central (M	M	3962	0.00	0.00	0.00	0.00	0.03	0.78	4.22	10.35	16.99	22.69	28.07	**32.31**
6 East Central		7195	0.00	0.00	0.00	0.03	0.19	1.39	7.81	14.80	21.70	28.33	35.33	**39.33**

6 East Central	F	3429	0.00	0.00	0.00	0.06	0.41	2.25	10.53	19.74	27.62	34.91	42.81	**47.51**
6 East Central	M	3766	0.00	0.00	0.00	0.00	0.00	0.61	5.34	10.30	16.30	22.33	28.52	**31.89**
7 West Central (Colu		5687	0.00	0.00	0.00	0.04	0.28	1.74	7.70	13.84	20.33	26.20	31.46	**34.90**
7 West Central (Colu	F	2790	0.00	0.00	0.00	0.07	0.57	2.69	9.46	16.34	23.05	28.96	34.01	**37.38**
7 West Central (Colu	M	2897	0.00	0.00	0.00	0.00	0.00	0.83	6.01	11.43	17.71	23.54	29.00	**32.52**
8-1 South (Valdosta)		3557	0.00	0.00	0.00	0.00	0.14	1.69	8.74	15.69	22.60	29.18	35.17	**37.93**
8-1 South (Valdosta)	F	1726	0.00	0.00	0.00	0.00	0.23	2.61	12.34	20.28	27.17	33.95	40.15	**43.16**
8-1 South (Valdosta)	M	1831	0.00	0.00	0.00	0.00	0.05	0.82	5.35	11.36	18.30	24.69	30.48	**32.99**
8-2 Southwest (Alban		5343	0.00	0.00	0.00	0.02	0.15	1.03	5.28	10.22	16.19	22.42	29.38	**32.64**
8-2 Southwest (Alban	F	2624	0.00	0.00	0.00	0.04	0.27	1.64	7.28	13.22	19.21	25.91	33.16	**36.89**
8-2 Southwest (Alban	M	2719	0.00	0.00	0.00	0.00	0.04	0.44	3.35	7.32	13.28	19.05	25.74	**28.54**
9-1 Coastal (Savanna		8137	0.00	0.00	0.00	0.00	0.05	1.04	6.60	13.96	21.52	29.68	37.16	**41.60**
9-1 Coastal (Savanna	F	3987	0.00	0.00	0.00	0.00	0.10	1.68	8.20	15.93	23.80	31.88	39.20	**43.84**
9-1 Coastal (Savanna	M	4150	0.00	0.00	0.00	0.00	0.00	0.43	5.06	12.07	19.33	27.57	35.20	**39.45**
9-2 Southeast (Waycr		5103	0.00	0.00	0.00	0.00	0.06	0.92	5.33	10.48	15.62	20.22	24.89	**27.85**
9-2 Southeast (Waycr	F	2493	0.00	0.00	0.00	0.00	0.12	1.44	6.90	12.88	18.33	22.94	27.68	**30.97**
9-2 Southeast (Waycr	M	2610	0.00	0.00	0.00	0.00	0.00	0.42	3.83	8.20	13.03	17.62	22.22	**24.87**

Table A30a. Percent of the Birth Cohort of 2001 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2012, indicated in red text, indicates when the birth cohort of 2001 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		139923	0.00	0.00	0.00	0.00	0.42	1.46	15.11	29.35	40.11	47.18	52.71	**56.81**

	F	68435	0.00	0.00	0.00	0.00	0.60	1.98	17.75	32.74	43.60	50.46	55.70	**59.62**
	M	71488	0.00	0.00	0.00	0.00	0.26	0.97	12.58	26.11	36.77	44.04	49.85	**54.13**
1-1 Northwest (Rome)		9553	0.00	0.00	0.00	0.00	0.25	0.86	13.06	25.27	33.68	38.25	41.67	**44.05**
1-1 Northwest (Rome)	F	4599	0.00	0.00	0.00	0.00	0.43	1.39	16.79	29.27	37.60	41.81	45.05	**47.38**
1-1 Northwest (Rome)	M	4954	0.00	0.00	0.00	0.00	0.08	0.36	9.61	21.56	30.04	34.94	38.53	**40.96**
1-2 North Georgia (D		6256	0.00	0.00	0.00	0.00	0.10	0.56	17.79	34.34	42.84	48.87	53.47	**56.81**
1-2 North Georgia (D	F	3037	0.00	0.00	0.00	0.00	0.10	0.82	20.35	37.57	46.26	52.16	56.60	**59.66**
1-2 North Georgia (D	M	3219	0.00	0.00	0.00	0.00	0.09	0.31	15.38	31.28	39.61	45.76	50.51	**54.12**
10 Northeast (Athens		6143	0.00	0.00	0.00	0.00	0.93	2.28	13.90	25.22	33.66	39.26	44.10	**47.84**
10 Northeast (Athens	F	3055	0.00	0.00	0.00	0.00	0.95	2.59	15.78	27.30	36.30	41.47	46.55	**49.66**
10 Northeast (Athens	M	3088	0.00	0.00	0.00	0.00	0.91	1.98	12.05	23.15	31.06	37.08	41.68	**46.05**
2 North (Gainesville		8544	0.00	0.00	0.00	0.00	0.22	0.98	11.20	22.51	31.33	37.57	43.18	**47.14**
2 North (Gainesville	F	4058	0.00	0.00	0.00	0.00	0.37	1.45	13.60	25.97	36.10	42.63	47.95	**52.05**
2 North (Gainesville	M	4486	0.00	0.00	0.00	0.00	0.09	0.56	9.03	19.37	27.02	32.99	38.85	**42.71**
3-1 Cobb-Douglas		12281	0.00	0.00	0.00	0.00	0.56	1.95	16.26	31.36	43.74	52.57	59.69	**64.72**
3-1 Cobb-Douglas	F	6021	0.00	0.00	0.00	0.00	0.85	2.62	19.08	35.09	47.63	55.97	62.03	**66.45**
3-1 Cobb-Douglas	M	6260	0.00	0.00	0.00	0.00	0.29	1.31	13.55	27.76	40.00	49.30	57.44	**63.05**
3-2 Fulton		11964	0.00	0.00	0.00	0.00	0.53	2.16	18.66	37.67	53.55	65.32	73.91	**79.75**
3-2 Fulton	F	5980	0.00	0.00	0.00	0.00	0.77	3.09	21.29	41.09	56.24	67.36	75.23	**80.99**
3-2 Fulton	M	5984	0.00	0.00	0.00	0.00	0.30	1.24	16.03	34.26	50.87	63.29	72.58	**78.51**
3-3 Clayton (Jonesbo		4122	0.00	0.00	0.00	0.00	0.51	1.70	16.11	30.57	42.26	50.05	55.85	**60.31**
3-3 Clayton (Jonesbo	F	2045	0.00	0.00	0.00	0.00	0.64	2.15	17.95	33.01	44.11	52.22	57.21	**61.86**
3-3 Clayton (Jonesbo	M	2077	0.00	0.00	0.00	0.00	0.39	1.25	14.30	28.17	40.44	47.91	54.50	**58.79**
3-4 GNR (Lawrencevil		16191	0.00	0.00	0.00	0.00	0.56	1.67	15.54	31.21	43.10	51.64	58.63	**63.86**
3-4 GNR (Lawrencevil	F	7952	0.00	0.00	0.00	0.00	0.74	2.09	18.12	35.05	46.74	54.68	61.41	**66.26**

3-4 GNR (Lawrencevil	M	8239	0.00	0.00	0.00	0.00	0.39	1.27	13.05	27.50	39.59	48.71	55.94	**61.54**
3-5 Dekalb		8799	0.00	0.00	0.00	0.00	0.53	1.83	19.66	38.69	53.31	64.23	72.21	**78.22**
3-5 Dekalb	F	4312	0.00	0.00	0.00	0.00	0.81	2.50	22.19	42.46	56.40	67.23	74.86	**80.29**
3-5 Dekalb	M	4487	0.00	0.00	0.00	0.00	0.27	1.18	17.23	35.06	50.35	61.36	69.67	**76.24**
4 District 4		13118	0.00	0.00	0.00	0.00	0.24	0.98	10.51	20.84	28.05	32.83	37.05	**40.21**
4 District 4	F	6509	0.00	0.00	0.00	0.00	0.45	1.35	12.64	23.20	30.08	34.54	39.02	**42.26**
4 District 4	M	6609	0.00	0.00	0.00	0.00	0.03	0.62	8.41	18.52	26.06	31.14	35.10	**38.19**
5-1 South Central (D		2134	0.00	0.00	0.00	0.00	0.05	0.33	10.31	21.32	30.04	35.57	39.97	**43.30**
5-1 South Central (D	F	986	0.00	0.00	0.00	0.00	0.10	0.41	13.49	25.76	36.71	41.78	46.35	**49.70**
5-1 South Central (D	M	1148	0.00	0.00	0.00	0.00	0.00	0.26	7.58	17.51	24.30	30.23	34.49	**37.80**
5-2 North Central (M		7420	0.00	0.00	0.00	0.00	0.58	2.12	16.20	29.73	39.89	46.13	50.66	**54.33**
5-2 North Central (M	F	3526	0.00	0.00	0.00	0.00	0.74	2.61	20.02	34.63	45.63	51.73	56.72	**60.35**
5-2 North Central (M	M	3894	0.00	0.00	0.00	0.00	0.44	1.67	12.74	25.30	34.69	41.06	45.17	**48.87**
6 East Central		6873	0.00	0.00	0.00	0.00	0.61	1.83	16.05	29.83	41.41	47.84	52.48	**56.22**
6 East Central	F	3374	0.00	0.00	0.00	0.00	0.86	2.49	18.23	33.88	45.97	52.73	56.79	**60.25**
6 East Central	M	3499	0.00	0.00	0.00	0.00	0.37	1.20	13.95	25.92	37.01	43.13	48.33	**52.33**
7 West Central (Colu		5218	0.00	0.00	0.00	0.00	0.59	1.69	16.56	28.56	39.17	44.12	47.93	**50.75**
7 West Central (Colu	F	2580	0.00	0.00	0.00	0.00	0.78	2.13	18.72	31.20	42.13	47.05	49.92	**52.64**
7 West Central (Colu	M	2638	0.00	0.00	0.00	0.00	0.42	1.25	14.44	25.97	36.28	41.24	45.98	**48.90**
8-1 South (Valdosta)		3387	0.00	0.00	0.00	0.00	0.21	1.12	16.95	31.27	40.74	46.06	50.22	**53.29**
8-1 South (Valdosta)	F	1628	0.00	0.00	0.00	0.00	0.18	1.90	20.45	35.44	44.96	50.25	54.12	**56.82**
8-1 South (Valdosta)	M	1759	0.00	0.00	0.00	0.00	0.23	0.40	13.70	27.40	36.84	42.18	46.62	**50.03**
8-2 Southwest (Alban		5121	0.00	0.00	0.00	0.00	0.33	1.33	13.18	24.39	33.92	38.22	41.75	**44.52**
8-2 Southwest (Alban	F	2503	0.00	0.00	0.00	0.00	0.40	1.76	15.54	26.81	36.44	40.71	43.63	**45.90**
8-2 Southwest (Alban	M	2618	0.00	0.00	0.00	0.00	0.27	0.92	10.92	22.08	31.51	35.83	39.95	**43.20**

9-1 Coastal (Savanna		7920	0.00	0.00	0.00	0.00	0.19	0.83	15.69	32.23	43.70	50.76	56.07	**60.35**
9-1 Coastal (Savanna	F	3923	0.00	0.00	0.00	0.00	0.36	1.27	18.74	35.15	46.85	53.96	59.01	**63.57**
9-1 Coastal (Savanna	M	3997	0.00	0.00	0.00	0.00	0.03	0.40	12.71	29.37	40.61	47.61	53.19	**57.19**
9-2 Southeast (Waycr		4879	0.00	0.00	0.00	0.00	0.12	0.57	11.58	23.82	31.67	35.17	37.92	**40.23**
9-2 Southeast (Waycr	F	2347	0.00	0.00	0.00	0.00	0.21	0.77	13.46	25.86	34.09	37.58	40.69	**43.08**
9-2 Southeast (Waycr	M	2532	0.00	0.00	0.00	0.00	0.04	0.39	9.83	21.92	29.42	32.94	35.35	**37.60**

Table A30b. Percent of the Birth Cohort of 2001 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2012, indicated in red text, indicates when the birth cohort of 2001 was age 11. Highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		139923	0.00	0.00	0.00	0.00	0.02	0.27	1.58	7.94	17.03	26.40	35.61	**40.97**
	F	68435	0.00	0.00	0.00	0.00	0.03	0.40	2.13	9.55	19.52	29.40	38.62	**43.87**
	M	71488	0.00	0.00	0.00	0.00	0.01	0.15	1.05	6.40	14.64	23.54	32.72	**38.19**
1-1 Northwest (Rome)		9553	0.00	0.00	0.00	0.00	0.00	0.13	0.95	6.39	13.71	20.87	27.26	**30.53**
1-1 Northwest (Rome)	F	4599	0.00	0.00	0.00	0.00	0.00	0.26	1.46	8.31	16.57	24.20	30.57	**33.51**
1-1 Northwest (Rome)	M	4954	0.00	0.00	0.00	0.00	0.00	0.00	0.48	4.60	11.06	17.78	24.18	**27.78**
1-2 North Georgia (D		6256	0.00	0.00	0.00	0.00	0.00	0.06	1.29	8.39	19.90	29.81	38.19	**43.16**
1-2 North Georgia (D	F	3037	0.00	0.00	0.00	0.00	0.00	0.10	1.75	9.88	22.00	32.83	40.99	**46.00**
1-2 North Georgia (D	M	3219	0.00	0.00	0.00	0.00	0.00	0.03	0.87	6.99	17.92	26.96	35.54	**40.48**
10 Northeast (Athens		6143	0.00	0.00	0.00	0.00	0.13	0.96	2.00	7.39	14.60	22.07	29.19	**33.75**
10 Northeast (Athens	F	3055	0.00	0.00	0.00	0.00	0.16	1.01	2.23	8.54	16.53	24.16	31.39	**36.33**

10 Northeast (Athens	M	3088	0.00	0.00	0.00	0.00	0.10	0.91	1.78	6.25	12.69	20.01	27.01	**31.19**
2 North (Gainesville		8544	0.00	0.00	0.00	0.00	0.00	0.15	1.37	6.23	13.35	20.62	28.96	**34.33**
2 North (Gainesville	F	4058	0.00	0.00	0.00	0.00	0.00	0.25	1.95	7.76	16.14	24.15	33.14	**38.59**
2 North (Gainesville	M	4486	0.00	0.00	0.00	0.00	0.00	0.07	0.85	4.84	10.83	17.43	25.17	**30.47**
3-1 Cobb-Douglas		12281	0.00	0.00	0.00	0.00	0.01	0.31	1.76	8.12	18.03	29.24	40.37	**47.11**
3-1 Cobb-Douglas	F	6021	0.00	0.00	0.00	0.00	0.02	0.55	2.54	9.97	20.91	32.52	43.30	**49.41**
3-1 Cobb-Douglas	M	6260	0.00	0.00	0.00	0.00	0.00	0.08	1.01	6.34	15.26	26.09	37.56	**44.89**
3-2 Fulton		11964	0.00	0.00	0.00	0.00	0.03	0.33	2.19	9.65	21.39	35.87	50.33	**59.02**
3-2 Fulton	F	5980	0.00	0.00	0.00	0.00	0.05	0.47	2.96	11.47	23.95	38.58	52.81	**60.74**
3-2 Fulton	M	5984	0.00	0.00	0.00	0.00	0.02	0.18	1.42	7.84	18.83	33.17	47.86	**57.30**
3-3 Clayton (Jonesbo		4122	0.00	0.00	0.00	0.00	0.00	0.44	1.80	7.96	16.86	27.12	36.75	**41.92**
3-3 Clayton (Jonesbo	F	2045	0.00	0.00	0.00	0.00	0.00	0.73	2.35	8.75	18.97	29.24	38.73	**43.08**
3-3 Clayton (Jonesbo	M	2077	0.00	0.00	0.00	0.00	0.00	0.14	1.25	7.17	14.78	25.04	34.81	**40.78**
3-4 GNR (Lawrencevil		16191	0.00	0.00	0.00	0.00	0.02	0.31	1.90	9.41	19.47	29.32	40.44	**46.76**
3-4 GNR (Lawrencevil	F	7952	0.00	0.00	0.00	0.00	0.04	0.38	2.43	11.27	22.22	32.56	43.59	**50.00**
3-4 GNR (Lawrencevil	M	8239	0.00	0.00	0.00	0.00	0.00	0.24	1.40	7.61	16.82	26.20	37.40	**43.63**
3-5 Dekalb		8799	0.00	0.00	0.00	0.00	0.03	0.30	1.76	9.74	22.48	36.31	50.72	**58.04**
3-5 Dekalb	F	4312	0.00	0.00	0.00	0.00	0.07	0.49	2.60	11.55	25.88	40.49	53.80	**60.95**
3-5 Dekalb	M	4487	0.00	0.00	0.00	0.00	0.00	0.11	0.96	8.00	19.21	32.29	47.76	**55.25**
4 District 4		13118	0.00	0.00	0.00	0.00	0.02	0.12	1.15	5.63	12.11	18.10	24.23	**28.10**
4 District 4	F	6509	0.00	0.00	0.00	0.00	0.03	0.22	1.61	6.61	13.60	19.53	25.66	**30.05**
4 District 4	M	6609	0.00	0.00	0.00	0.00	0.00	0.03	0.70	4.68	10.64	16.70	22.83	**26.18**
5-1 South Central (D		2134	0.00	0.00	0.00	0.00	0.00	0.05	0.66	4.50	10.73	19.31	25.21	**29.29**
5-1 South Central (D	F	986	0.00	0.00	0.00	0.00	0.00	0.10	1.12	6.49	13.39	24.04	31.03	**35.40**
5-1 South Central (D	M	1148	0.00	0.00	0.00	0.00	0.00	0.00	0.26	2.79	8.45	15.24	20.21	**24.04**
5-2 North Central (M		7420	0.00	0.00	0.00	0.00	0.03	0.34	1.93	8.11	17.24	25.78	33.65	**38.26**

5-2 North Central (M	F	3526	0.00	0.00	0.00	0.00	0.06	0.43	2.41	10.38	20.19	29.24	38.37	**43.17**
5-2 North Central (M	M	3894	0.00	0.00	0.00	0.00	0.00	0.26	1.49	6.06	14.56	22.65	29.38	**33.82**
6 East Central		6873	0.00	0.00	0.00	0.00	0.06	0.42	2.14	9.60	18.41	26.87	35.04	**39.76**
6 East Central	F	3374	0.00	0.00	0.00	0.00	0.09	0.65	2.67	10.97	21.34	30.79	39.36	**43.75**
6 East Central	M	3499	0.00	0.00	0.00	0.00	0.03	0.20	1.63	8.29	15.58	23.09	30.87	**35.92**
7 West Central (Colu		5218	0.00	0.00	0.00	0.00	0.00	0.23	1.76	8.87	17.08	24.99	32.02	**36.28**
7 West Central (Colu	F	2580	0.00	0.00	0.00	0.00	0.00	0.35	2.17	10.19	19.11	28.02	34.65	**38.49**
7 West Central (Colu	M	2638	0.00	0.00	0.00	0.00	0.00	0.11	1.36	7.58	15.09	22.02	29.45	**34.12**
8-1 South (Valdosta)		3387	0.00	0.00	0.00	0.00	0.00	0.15	1.71	10.04	20.11	27.49	34.43	**38.62**
8-1 South (Valdosta)	F	1628	0.00	0.00	0.00	0.00	0.00	0.18	2.15	12.04	23.16	30.71	37.53	**41.77**
8-1 South (Valdosta)	M	1759	0.00	0.00	0.00	0.00	0.00	0.11	1.31	8.19	17.28	24.50	31.55	**35.70**
8-2 Southwest (Alban		5121	0.00	0.00	0.00	0.00	0.02	0.25	1.03	5.76	13.01	20.21	27.65	**31.48**
8-2 Southwest (Alban	F	2503	0.00	0.00	0.00	0.00	0.04	0.40	1.48	7.07	14.18	21.93	29.44	**33.24**
8-2 Southwest (Alban	M	2618	0.00	0.00	0.00	0.00	0.00	0.11	0.61	4.51	11.88	18.56	25.94	**29.79**
9-1 Coastal (Savanna		7920	0.00	0.00	0.00	0.00	0.00	0.15	1.19	7.95	17.53	28.40	37.74	**42.84**
9-1 Coastal (Savanna	F	3923	0.00	0.00	0.00	0.00	0.00	0.28	1.71	9.58	19.98	31.61	40.86	**45.81**
9-1 Coastal (Savanna	M	3997	0.00	0.00	0.00	0.00	0.00	0.03	0.68	6.35	15.11	25.24	34.68	**39.93**
9-2 Southeast (Waycr		4879	0.00	0.00	0.00	0.00	0.00	0.10	0.68	6.21	13.18	19.66	24.51	**27.79**
9-2 Southeast (Waycr	F	2347	0.00	0.00	0.00	0.00	0.00	0.21	1.02	7.58	14.74	21.52	26.89	**30.21**
9-2 Southeast (Waycr	M	2532	0.00	0.00	0.00	0.00	0.00	0.00	0.36	4.94	11.73	17.93	22.31	**25.55**

Table A31a. Percent of the Birth Cohort of 2002 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2013, indicated in red text, indicates when the birth cohort of 2002 was age 11. Highlighted in 2017 are the highest and lowest

proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		137828	0.00	0.00	0.00	0.00	0.00	0.56	1.38	16.37	34.30	44.67	51.30	**55.97**
	F	67150	0.00	0.00	0.00	0.00	0.00	0.71	1.81	18.49	37.58	48.07	54.44	**58.93**
	M	70678	0.00	0.00	0.00	0.00	0.00	0.42	0.98	14.35	31.19	41.45	48.32	**53.16**
1-1 Northwest (Rome)		9219	0.00	0.00	0.00	0.00	0.00	0.25	0.79	15.20	30.13	37.66	42.08	**45.23**
1-1 Northwest (Rome)	F	4505	0.00	0.00	0.00	0.00	0.00	0.40	1.11	17.27	32.65	39.91	44.15	**47.39**
1-1 Northwest (Rome)	M	4714	0.00	0.00	0.00	0.00	0.00	0.11	0.49	13.22	27.73	35.51	40.09	**43.17**
1-2 North Georgia (D		6294	0.00	0.00	0.00	0.00	0.00	0.30	0.65	19.37	37.54	46.79	53.00	**56.86**
1-2 North Georgia (D	F	3100	0.00	0.00	0.00	0.00	0.00	0.45	1.00	21.74	41.29	50.65	56.74	**60.42**
1-2 North Georgia (D	M	3194	0.00	0.00	0.00	0.00	0.00	0.16	0.31	17.06	33.91	43.05	49.37	**53.41**
10 Northeast (Athens		6014	0.00	0.00	0.00	0.00	0.00	1.35	2.44	14.77	29.81	38.43	43.88	**47.99**
10 Northeast (Athens	F	2934	0.00	0.00	0.00	0.00	0.00	1.77	3.14	17.11	32.41	41.04	46.22	**50.68**
10 Northeast (Athens	M	3080	0.00	0.00	0.00	0.00	0.00	0.94	1.79	12.53	27.34	35.94	41.66	**45.42**
2 North (Gainesville		8682	0.00	0.00	0.00	0.00	0.00	0.26	0.66	12.42	26.09	34.37	40.70	**45.66**
2 North (Gainesville	F	4157	0.00	0.00	0.00	0.00	0.00	0.36	0.96	14.51	29.16	37.82	44.46	**49.24**
2 North (Gainesville	M	4525	0.00	0.00	0.00	0.00	0.00	0.18	0.38	10.50	23.27	31.20	37.26	**42.36**
3-1 Cobb-Douglas		12132	0.00	0.00	0.00	0.00	0.00	0.83	2.13	18.09	37.32	49.42	57.58	**64.04**
3-1 Cobb-Douglas	F	5923	0.00	0.00	0.00	0.00	0.00	1.13	2.80	20.97	41.35	52.88	60.76	**66.81**
3-1 Cobb-Douglas	M	6209	0.00	0.00	0.00	0.00	0.00	0.55	1.50	15.35	33.48	46.13	54.53	**61.39**
3-2 Fulton		11669	0.00	0.00	0.00	0.00	0.00	0.87	2.10	19.81	43.08	59.17	70.48	**77.75**
3-2 Fulton	F	5746	0.00	0.00	0.00	0.00	0.00	1.06	2.98	22.45	46.94	63.04	73.69	**80.49**
3-2 Fulton	M	5923	0.00	0.00	0.00	0.00	0.00	0.69	1.25	17.25	39.34	55.41	67.36	**75.10**
3-3 Clayton (Jonesbo		3923	0.00	0.00	0.00	0.00	0.00	0.64	1.63	18.02	37.22	48.94	55.06	**59.78**
3-3 Clayton (Jonesbo	F	1894	0.00	0.00	0.00	0.00	0.00	0.74	2.16	21.12	41.92	53.75	59.19	**63.25**

3-3 Clayton (Jonesbo	M	2029	0.00	0.00	0.00	0.00	0.00	0.54	1.13	15.13	32.82	44.46	51.21	**56.53**
3-4 GNR (Lawrencevil		16381	0.00	0.00	0.00	0.00	0.00	0.73	1.64	16.20	35.58	47.89	56.19	**62.33**
3-4 GNR (Lawrencevil	F	7972	0.00	0.00	0.00	0.00	0.00	0.90	2.13	18.65	39.24	51.27	59.63	**65.67**
3-4 GNR (Lawrencevil	M	8409	0.00	0.00	0.00	0.00	0.00	0.57	1.17	13.87	32.12	44.69	52.92	**59.16**
3-5 Dekalb		8778	0.00	0.00	0.00	0.00	0.00	0.63	1.47	21.67	46.23	59.88	68.77	**75.12**
3-5 Dekalb	F	4281	0.00	0.00	0.00	0.00	0.00	0.86	1.80	23.69	48.70	62.30	70.19	**76.10**
3-5 Dekalb	M	4497	0.00	0.00	0.00	0.00	0.00	0.40	1.16	19.75	43.87	57.57	67.42	**74.18**
4 District 4		12598	0.00	0.00	0.00	0.00	0.00	0.34	0.94	11.64	25.28	32.59	37.21	**40.38**
4 District 4	F	6157	0.00	0.00	0.00	0.00	0.00	0.42	1.22	13.27	27.71	35.10	39.40	**42.57**
4 District 4	M	6441	0.00	0.00	0.00	0.00	0.00	0.26	0.68	10.09	22.96	30.20	35.12	**38.29**
5-1 South Central (D		1979	0.00	0.00	0.00	0.00	0.00	0.15	0.40	11.87	27.54	35.27	39.67	**43.71**
5-1 South Central (D	F	959	0.00	0.00	0.00	0.00	0.00	0.21	0.42	14.29	31.07	39.94	44.63	**48.38**
5-1 South Central (D	M	1020	0.00	0.00	0.00	0.00	0.00	0.10	0.39	9.61	24.22	30.88	35.00	**39.31**
5-2 North Central (M		7553	0.00	0.00	0.00	0.00	0.00	0.68	1.84	15.85	31.97	42.12	48.23	**51.77**
5-2 North Central (M	F	3559	0.00	0.00	0.00	0.00	0.00	0.76	2.19	17.98	36.95	47.74	53.53	**57.15**
5-2 North Central (M	M	3994	0.00	0.00	0.00	0.00	0.00	0.60	1.53	13.95	27.54	37.11	43.52	**46.97**
6 East Central		6684	0.00	0.00	0.00	0.00	0.00	0.69	1.59	18.16	37.82	47.79	53.19	**56.79**
6 East Central	F	3244	0.00	0.00	0.00	0.00	0.00	0.74	1.91	20.01	41.74	52.28	57.71	**61.19**
6 East Central	M	3440	0.00	0.00	0.00	0.00	0.00	0.64	1.28	16.42	34.13	43.55	48.92	**52.65**
7 West Central (Colu		5159	0.00	0.00	0.00	0.00	0.00	0.64	1.53	17.00	34.75	42.37	46.97	**50.24**
7 West Central (Colu	F	2577	0.00	0.00	0.00	0.00	0.00	0.78	1.75	17.62	35.31	43.46	47.23	**50.14**
7 West Central (Colu	M	2582	0.00	0.00	0.00	0.00	0.00	0.50	1.32	16.38	34.20	41.29	46.71	**50.35**
8-1 South (Valdosta)		3485	0.00	0.00	0.00	0.00	0.00	0.23	0.86	17.33	33.60	42.27	47.32	**51.13**
8-1 South (Valdosta)	F	1696	0.00	0.00	0.00	0.00	0.00	0.41	1.30	19.81	38.50	47.88	53.18	**56.84**
8-1 South (Valdosta)	M	1789	0.00	0.00	0.00	0.00	0.00	0.06	0.45	14.98	28.95	36.95	41.76	**45.72**

8-2 Southwest (Alban		4899	0.00	0.00	0.00	0.00	0.00	0.27	0.90	12.96	27.80	35.58	40.31	**43.31**
8-2 Southwest (Alban	F	2360	0.00	0.00	0.00	0.00	0.00	0.34	1.14	14.49	29.92	38.22	42.80	**45.38**
8-2 Southwest (Alban	M	2539	0.00	0.00	0.00	0.00	0.00	0.20	0.67	11.54	25.84	33.12	38.01	**41.39**
9-1 Coastal (Savanna		7663	0.00	0.00	0.00	0.00	0.00	0.18	0.68	18.11	38.86	49.98	56.05	**60.16**
9-1 Coastal (Savanna	F	3820	0.00	0.00	0.00	0.00	0.00	0.16	0.89	19.01	41.26	52.91	58.66	**62.46**
9-1 Coastal (Savanna	M	3843	0.00	0.00	0.00	0.00	0.00	0.21	0.47	17.23	36.48	47.07	53.45	**57.87**
9-2 Southeast (Waycr		4716	0.00	0.00	0.00	0.00	0.00	0.21	0.98	12.51	25.49	32.40	36.03	**38.02**
9-2 Southeast (Waycr	F	2266	0.00	0.00	0.00	0.00	0.00	0.26	1.37	14.43	28.60	35.97	39.23	**41.48**
9-2 Southeast (Waycr	M	2450	0.00	0.00	0.00	0.00	0.00	0.16	0.61	10.73	22.61	29.10	33.06	**34.82**

Table A31b. Percent of the Birth Cohort of 2002 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2013, indicated in red text, indicates when the birth cohort of 2002 was age 11. Highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		137828	0.00	0.00	0.00	0.00	0.00	0.04	0.31	1.69	9.78	20.73	32.36	**38.99**
	F	67150	0.00	0.00	0.00	0.00	0.00	0.06	0.42	2.19	11.48	23.27	35.35	**41.86**
	M	70678	0.00	0.00	0.00	0.00	0.00	0.03	0.21	1.23	8.16	18.32	29.52	**36.27**
1-1 Northwest (Rome)		9219	0.00	0.00	0.00	0.00	0.00	0.02	0.22	1.27	7.76	17.24	25.52	**30.44**
1-1 Northwest (Rome)	F	4505	0.00	0.00	0.00	0.00	0.00	0.04	0.36	1.75	9.19	18.82	27.13	**32.23**
1-1 Northwest (Rome)	M	4714	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.81	6.39	15.72	23.99	**28.72**
1-2 North Georgia (D		6294	0.00	0.00	0.00	0.00	0.00	0.00	0.13	1.13	9.90	23.31	36.34	**42.90**

1-2 North Georgia (D	F	3100	0.00	0.00	0.00	0.00	0.00	0.00	0.19	1.42	11.74	25.55	39.19	**45.77**
1-2 North Georgia (D	M	3194	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.85	8.11	21.13	33.56	**40.11**
10 Northeast (Athens		6014	0.00	0.00	0.00	0.00	0.00	0.20	0.75	2.46	9.48	18.02	27.19	**32.87**
10 Northeast (Athens	F	2934	0.00	0.00	0.00	0.00	0.00	0.20	0.92	3.00	11.25	20.62	30.23	**35.96**
10 Northeast (Athens	M	3080	0.00	0.00	0.00	0.00	0.00	0.19	0.58	1.95	7.79	15.55	24.29	**29.94**
2 North (Gainesville		8682	0.00	0.00	0.00	0.00	0.00	0.00	0.16	1.27	7.01	16.03	25.26	**31.46**
2 North (Gainesville	F	4157	0.00	0.00	0.00	0.00	0.00	0.00	0.19	1.85	8.59	18.21	27.90	**34.45**
2 North (Gainesville	M	4525	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.73	5.57	14.03	22.83	**28.71**
3-1 Cobb-Douglas		12132	0.00	0.00	0.00	0.00	0.00	0.03	0.32	1.77	10.58	22.76	36.77	**44.59**
3-1 Cobb-Douglas	F	5923	0.00	0.00	0.00	0.00	0.00	0.07	0.39	2.28	13.10	25.75	40.10	**47.80**
3-1 Cobb-Douglas	M	6209	0.00	0.00	0.00	0.00	0.00	0.00	0.26	1.29	8.17	19.91	33.60	**41.54**
3-2 Fulton		11669	0.00	0.00	0.00	0.00	0.00	0.06	0.50	1.98	11.05	26.07	43.63	**54.66**
3-2 Fulton	F	5746	0.00	0.00	0.00	0.00	0.00	0.10	0.70	2.75	13.16	29.46	47.30	**58.18**
3-2 Fulton	M	5923	0.00	0.00	0.00	0.00	0.00	0.02	0.30	1.23	9.02	22.78	40.06	**51.24**
3-3 Clayton (Jonesbo		3923	0.00	0.00	0.00	0.00	0.00	0.03	0.23	1.84	10.73	22.10	34.41	**40.61**
3-3 Clayton (Jonesbo	F	1894	0.00	0.00	0.00	0.00	0.00	0.05	0.26	2.59	12.99	25.40	37.96	**44.03**
3-3 Clayton (Jonesbo	M	2029	0.00	0.00	0.00	0.00	0.00	0.00	0.20	1.13	8.62	19.02	31.10	**37.41**
3-4 GNR (Lawrencevil		16381	0.00	0.00	0.00	0.00	0.00	0.09	0.42	1.98	10.44	21.96	35.69	**43.64**
3-4 GNR (Lawrencevil	F	7972	0.00	0.00	0.00	0.00	0.00	0.11	0.55	2.45	12.31	25.19	38.82	**46.63**
3-4 GNR (Lawrencevil	M	8409	0.00	0.00	0.00	0.00	0.00	0.07	0.29	1.55	8.67	18.91	32.71	**40.80**
3-5 Dekalb		8778	0.00	0.00	0.00	0.00	0.00	0.06	0.32	2.07	12.42	27.99	45.08	**54.34**
3-5 Dekalb	F	4281	0.00	0.00	0.00	0.00	0.00	0.02	0.40	2.48	13.92	30.23	47.61	**55.92**
3-5 Dekalb	M	4497	0.00	0.00	0.00	0.00	0.00	0.09	0.24	1.69	10.99	25.86	42.67	**52.84**
4 District 4		12598	0.00	0.00	0.00	0.00	0.00	0.02	0.17	1.33	7.28	14.71	22.33	**26.75**
4 District 4	F	6157	0.00	0.00	0.00	0.00	0.00	0.03	0.29	1.66	8.56	16.58	24.67	**28.65**
4 District 4	M	6441	0.00	0.00	0.00	0.00	0.00	0.00	0.05	1.02	6.05	12.92	20.09	**24.93**

5-1 South Central (D		1979	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.86	6.82	15.41	23.60	**28.45**
5-1 South Central (D	F	959	0.00	0.00	0.00	0.00	0.00	0.00	0.10	1.15	8.45	18.87	27.01	**32.74**
5-1 South Central (D	M	1020	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.59	5.29	12.16	20.39	**24.41**
5-2 North Central (M		7553	0.00	0.00	0.00	0.00	0.00	0.04	0.40	1.93	10.51	20.10	29.74	**35.42**
5-2 North Central (M	F	3559	0.00	0.00	0.00	0.00	0.00	0.03	0.48	2.33	12.45	23.86	34.64	**40.35**
5-2 North Central (M	M	3994	0.00	0.00	0.00	0.00	0.00	0.05	0.33	1.58	8.79	16.75	25.36	**31.02**
6 East Central		6684	0.00	0.00	0.00	0.00	0.00	0.06	0.45	2.12	11.21	22.38	33.21	**39.18**
6 East Central	F	3244	0.00	0.00	0.00	0.00	0.00	0.06	0.59	2.50	12.52	24.72	36.99	**42.79**
6 East Central	M	3440	0.00	0.00	0.00	0.00	0.00	0.06	0.32	1.77	9.97	20.17	29.65	**35.78**
7 West Central (Colu		5159	0.00	0.00	0.00	0.00	0.00	0.04	0.31	2.00	11.79	21.54	30.26	**34.95**
7 West Central (Colu	F	2577	0.00	0.00	0.00	0.00	0.00	0.08	0.47	2.79	12.57	21.96	30.31	**34.61**
7 West Central (Colu	M	2582	0.00	0.00	0.00	0.00	0.00	0.00	0.15	1.20	11.00	21.11	30.21	**35.28**
8-1 South (Valdosta)		3485	0.00	0.00	0.00	0.00	0.00	0.03	0.23	1.58	11.65	21.98	31.13	**36.33**
8-1 South (Valdosta)	F	1696	0.00	0.00	0.00	0.00	0.00	0.06	0.41	2.18	12.74	25.12	35.50	**41.45**
8-1 South (Valdosta)	M	1789	0.00	0.00	0.00	0.00	0.00	0.00	0.06	1.01	10.62	19.01	27.00	**31.47**
8-2 Southwest (Alban		4899	0.00	0.00	0.00	0.00	0.00	0.00	0.14	1.20	8.10	15.60	25.03	**29.82**
8-2 Southwest (Alban	F	2360	0.00	0.00	0.00	0.00	0.00	0.00	0.17	1.57	10.17	18.18	27.92	**32.75**
8-2 Southwest (Alban	M	2539	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.87	6.18	13.19	22.33	**27.10**
9-1 Coastal (Savanna		7663	0.00	0.00	0.00	0.00	0.00	0.00	0.17	1.49	10.52	23.58	36.16	**42.59**
9-1 Coastal (Savanna	F	3820	0.00	0.00	0.00	0.00	0.00	0.00	0.21	2.09	11.60	25.10	39.01	**44.97**
9-1 Coastal (Savanna	M	3843	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.88	9.45	22.07	33.33	**40.23**
9-2 Southeast (Waycr		4716	0.00	0.00	0.00	0.00	0.00	0.02	0.21	1.27	7.49	14.78	22.01	**25.61**
9-2 Southeast (Waycr	F	2266	0.00	0.00	0.00	0.00	0.00	0.04	0.35	1.50	9.27	17.30	24.93	**28.38**
9-2 Southeast (Waycr	M	2450	0.00	0.00	0.00	0.00	0.00	0.00	0.08	1.06	5.84	12.45	19.31	**23.06**

Table A32a. Percent of the Birth Cohort of 2003 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2014, indicated in red text, indicates when the birth cohort of 2003 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		135597	0.00	0.00	0.00	0.00	0.00	0.00	0.51	1.33	19.18	39.03	51.39	**58.25**
	F	66340	0.00	0.00	0.00	0.00	0.00	0.00	0.60	1.66	20.90	41.72	54.00	**60.47**
	M	69257	0.00	0.00	0.00	0.00	0.00	0.00	0.41	1.01	17.54	36.46	48.90	**56.13**
1-1 Northwest (Rome)		9436	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.68	14.87	30.33	39.40	**43.23**
1-1 Northwest (Rome)	F	4582	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.87	15.89	31.62	39.98	**43.45**
1-1 Northwest (Rome)	M	4854	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.49	13.91	29.11	38.85	**43.02**
1-2 North Georgia (D		6244	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.45	19.49	37.88	47.71	**52.90**
1-2 North Georgia (D	F	2997	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.60	21.29	39.91	50.18	**54.99**
1-2 North Georgia (D	M	3247	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	17.83	36.00	45.43	**50.97**
10 Northeast (Athens		6011	0.00	0.00	0.00	0.00	0.00	0.00	1.10	2.41	16.32	31.56	42.14	**48.43**
10 Northeast (Athens	F	2985	0.00	0.00	0.00	0.00	0.00	0.00	1.24	2.88	18.32	33.67	44.49	**51.06**
10 Northeast (Athens	M	3026	0.00	0.00	0.00	0.00	0.00	0.00	0.96	1.95	14.34	29.48	39.82	**45.84**
2 North (Gainesville		8766	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.79	13.63	28.59	38.26	**45.12**
2 North (Gainesville	F	4288	0.00	0.00	0.00	0.00	0.00	0.00	0.54	1.19	14.93	31.34	40.79	**47.50**
2 North (Gainesville	M	4478	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.40	12.39	25.95	35.84	**42.83**
3-1 Cobb-Douglas		11939	0.00	0.00	0.00	0.00	0.00	0.00	0.57	1.58	21.45	42.74	57.00	**65.52**
3-1 Cobb-Douglas	F	5910	0.00	0.00	0.00	0.00	0.00	0.00	0.64	1.88	22.57	44.04	58.61	**66.48**
3-1 Cobb-Douglas	M	6029	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.29	20.35	41.47	55.42	**64.57**
3-2 Fulton		11573	0.00	0.00	0.00	0.00	0.00	0.00	0.52	1.68	22.78	49.91	68.71	**80.09**

3-2 Fulton	F	5770	0.00	0.00	0.00	0.00	0.00	0.00	0.59	2.05	23.93	52.44	71.09	**81.44**
3-2 Fulton	M	5803	0.00	0.00	0.00	0.00	0.00	0.00	0.45	1.31	21.63	47.39	66.34	**78.75**
3-3 Clayton (Jonesbo		3824	0.00	0.00	0.00	0.00	0.00	0.00	0.55	1.28	23.22	48.51	62.74	**69.09**
3-3 Clayton (Jonesbo	F	1874	0.00	0.00	0.00	0.00	0.00	0.00	0.64	1.76	26.09	53.20	66.33	**71.45**
3-3 Clayton (Jonesbo	M	1950	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.82	20.46	44.00	59.28	**66.82**
3-4 GNR (Lawrencevil		16322	0.00	0.00	0.00	0.00	0.00	0.00	0.58	1.57	18.44	39.81	54.32	**63.15**
3-4 GNR (Lawrencevil	F	7991	0.00	0.00	0.00	0.00	0.00	0.00	0.63	1.94	19.90	41.48	55.63	**63.88**
3-4 GNR (Lawrencevil	M	8331	0.00	0.00	0.00	0.00	0.00	0.00	0.53	1.22	17.04	38.21	53.07	**62.44**
3-5 Dekalb		8366	0.00	0.00	0.00	0.00	0.00	0.00	0.94	2.34	28.40	54.69	70.44	**79.68**
3-5 Dekalb	F	4095	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.76	31.92	59.83	75.56	**84.47**
3-5 Dekalb	M	4271	0.00	0.00	0.00	0.00	0.00	0.00	0.89	1.94	25.03	49.75	65.54	**75.09**
4 District 4		12566	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.95	15.87	32.60	42.13	**47.16**
4 District 4	F	6105	0.00	0.00	0.00	0.00	0.00	0.00	0.39	1.15	17.35	34.95	44.10	**48.94**
4 District 4	M	6461	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.77	14.47	30.37	40.27	**45.47**
5-1 South Central (D		1929	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.21	13.17	28.51	37.79	**43.18**
5-1 South Central (D	F	955	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.21	15.18	31.41	39.90	**44.92**
5-1 South Central (D	M	974	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	11.19	25.67	35.73	**41.48**
5-2 North Central (M		7150	0.00	0.00	0.00	0.00	0.00	0.00	0.83	1.65	17.23	34.34	45.99	**52.29**
5-2 North Central (M	F	3524	0.00	0.00	0.00	0.00	0.00	0.00	0.79	1.79	19.38	37.57	48.92	**54.46**
5-2 North Central (M	M	3626	0.00	0.00	0.00	0.00	0.00	0.00	0.85	1.52	15.14	31.19	43.13	**50.19**
6 East Central		6239	0.00	0.00	0.00	0.00	0.00	0.00	0.74	1.72	20.95	40.74	51.79	**57.99**
6 East Central	F	3011	0.00	0.00	0.00	0.00	0.00	0.00	0.83	2.26	24.34	45.83	57.56	**63.37**
6 East Central	M	3228	0.00	0.00	0.00	0.00	0.00	0.00	0.65	1.21	17.78	36.00	46.41	**52.97**
7 West Central (Colu		4973	0.00	0.00	0.00	0.00	0.00	0.00	0.62	1.67	22.20	41.14	51.94	**56.89**
7 West Central (Colu	F	2376	0.00	0.00	0.00	0.00	0.00	0.00	0.72	2.10	24.33	44.91	56.02	**61.15**
7 West Central (Colu	M	2597	0.00	0.00	0.00	0.00	0.00	0.00	0.54	1.27	20.25	37.70	48.21	**52.98**

8-1 South (Valdosta)		3281	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.58	17.71	35.96	47.55	**53.22**
8-1 South (Valdosta)	F	1672	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.96	17.82	38.16	50.30	**55.92**
8-1 South (Valdosta)	M	1609	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.19	17.59	33.69	44.69	**50.40**
8-2 Southwest (Alban		4924	0.00	0.00	0.00	0.00	0.00	0.00	0.32	1.18	17.71	33.65	43.32	**47.16**
8-2 Southwest (Alban	F	2406	0.00	0.00	0.00	0.00	0.00	0.00	0.58	1.70	18.91	36.08	45.64	**49.09**
8-2 Southwest (Alban	M	2518	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.68	16.56	31.33	41.10	**45.31**
9-1 Coastal (Savanna		7362	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.64	21.18	43.70	55.68	**61.74**
9-1 Coastal (Savanna	F	3505	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.91	23.31	47.22	59.37	**65.11**
9-1 Coastal (Savanna	M	3857	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.39	19.24	40.50	52.32	**58.67**
9-2 Southeast (Waycr		4692	0.00	0.00	0.00	0.00	0.00	0.00	0.51	1.13	17.97	37.17	48.44	**52.81**
9-2 Southeast (Waycr	F	2294	0.00	0.00	0.00	0.00	0.00	0.00	0.57	1.39	19.40	40.28	51.48	**56.23**
9-2 Southeast (Waycr	M	2398	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.88	16.60	34.20	45.54	**49.54**

Table A32b. Percent of the Birth Cohort of 2003 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2014, indicated in red text, indicates when the birth cohort of 2003 was age 11. Highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		135597	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.31	2.03	12.04	27.73	**37.56**
	F	66340	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.37	2.41	13.46	29.91	**39.70**
	M	69257	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.25	1.66	10.69	25.65	**35.52**
1-1 Northwest (Rome)		9436	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	1.23	8.91	20.20	**26.67**

1-1 Northwest (Rome)	F	4582	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	1.42	9.84	21.72	**27.76**
1-1 Northwest (Rome)	M	4854	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	1.05	8.03	18.77	**25.65**
1-2 North Georgia (D		6244	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.10	1.30	11.52	28.67	**36.60**
1-2 North Georgia (D	F	2997	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.13	1.43	12.68	30.63	**38.54**
1-2 North Georgia (D	M	3247	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	1.17	10.44	26.86	**34.80**
10 Northeast (Athens		6011	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.73	2.53	10.00	22.13	**30.00**
10 Northeast (Athens	F	2985	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.80	2.85	11.12	23.82	**31.42**
10 Northeast (Athens	M	3026	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.66	2.21	8.89	20.46	**28.59**
2 North (Gainesville		8766	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	1.17	8.02	20.84	**29.19**
2 North (Gainesville	F	4288	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.26	1.61	9.10	22.76	**31.51**
2 North (Gainesville	M	4478	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.11	0.76	6.99	19.00	**26.98**
3-1 Cobb-Douglas		11939	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.29	2.06	13.51	31.69	**42.43**
3-1 Cobb-Douglas	F	5910	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.30	2.37	14.20	32.37	**43.01**
3-1 Cobb-Douglas	M	6029	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.28	1.76	12.84	31.03	**41.86**
3-2 Fulton		11573	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.39	2.49	13.74	36.06	**51.82**
3-2 Fulton	F	5770	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.36	2.77	15.18	38.35	**54.12**
3-2 Fulton	M	5803	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.41	2.21	12.30	33.78	**49.53**
3-3 Clayton (Jonesbo		3824	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.29	1.99	13.70	32.45	**44.40**
3-3 Clayton (Jonesbo	F	1874	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	2.67	15.15	35.01	**46.26**
3-3 Clayton (Jonesbo	M	1950	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.21	1.33	12.31	30.00	**42.62**
3-4 GNR (Lawrencevil		16322	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.40	2.37	12.46	29.33	**40.99**
3-4 GNR (Lawrencevil	F	7991	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.55	2.93	13.83	31.07	**42.11**
3-4 GNR (Lawrencevil	M	8331	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.26	1.84	11.14	27.67	**39.92**
3-5 Dekalb		8366	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.51	3.14	17.85	40.46	**54.15**
3-5 Dekalb	F	4095	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.56	3.71	20.95	45.27	**59.07**

3-5 Dekalb	M	4271	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.47	2.60	14.87	35.85	**49.43**
4 District 4		12566	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.18	1.57	9.56	21.57	**29.30**
4 District 4	F	6105	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.26	1.88	11.04	23.88	**31.43**
4 District 4	M	6461	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	1.27	8.16	19.39	**27.29**
5-1 South Central (D		1929	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	8.55	19.70	**26.02**
5-1 South Central (D	F	955	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	10.58	21.78	**27.85**
5-1 South Central (D	M	974	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	6.57	17.66	**24.23**
5-2 North Central (M		7150	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.32	2.39	11.96	23.58	**32.38**
5-2 North Central (M	F	3524	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.40	2.89	14.05	25.99	**35.07**
5-2 North Central (M	M	3626	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.25	1.90	9.93	21.24	**29.76**
6 East Central		6239	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.48	2.36	12.98	27.62	**36.19**
6 East Central	F	3011	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.53	3.09	15.41	31.85	**41.05**
6 East Central	M	3228	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.43	1.67	10.72	23.67	**31.66**
7 West Central (Colu		4973	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.44	3.24	15.24	29.98	**38.05**
7 West Central (Colu	F	2376	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.42	3.70	16.88	32.91	**41.41**
7 West Central (Colu	M	2597	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.46	2.81	13.75	27.30	**34.96**
8-1 South (Valdosta)		3281	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	1.43	12.65	27.46	**36.09**
8-1 South (Valdosta)	F	1672	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	1.67	12.98	28.47	**37.50**
8-1 South (Valdosta)	M	1609	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	1.18	12.31	26.41	**34.62**
8-2 Southwest (Alban		4924	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	1.60	10.24	23.38	**31.17**
8-2 Southwest (Alban	F	2406	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	1.83	10.85	24.73	**32.63**
8-2 Southwest (Alban	M	2518	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	1.39	9.65	22.08	**29.79**
9-1 Coastal (Savanna		7362	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	1.62	13.71	29.95	**39.61**
9-1 Coastal (Savanna	F	3505	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	2.00	14.95	32.21	**41.71**
9-1 Coastal (Savanna	M	3857	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	1.27	12.57	27.90	**37.70**

9-2 Southeast (Waycr		4692	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.30	2.17	10.59	24.10	**32.12**
9-2 Southeast (Waycr	F	2294	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.44	2.40	11.99	26.16	**34.44**
9-2 Southeast (Waycr	M	2398	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	1.96	9.26	22.14	**29.90**

Table A33a. Percent of the Birth Cohort of 2004 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2015, indicated in red text, indicates when the birth cohort of 2004 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		135941	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.46	1.22	20.21	42.18	**53.93**
	F	66468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	1.50	21.49	44.48	**56.01**
	M	69473	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.95	19.00	39.98	**51.94**
1-1 Northwest (Rome)		9317	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.54	15.84	33.45	**41.89**
1-1 Northwest (Rome)	F	4600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.65	16.57	34.30	**42.50**
1-1 Northwest (Rome)	M	4717	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.42	15.14	32.63	**41.30**
1-2 North Georgia (D		6304	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.36	22.21	41.75	**50.78**
1-2 North Georgia (D	F	3088	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.45	21.47	41.97	**50.65**
1-2 North Georgia (D	M	3216	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.28	22.92	41.54	**50.90**
10 Northeast (Athens		5936	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.26	2.36	16.88	36.86	**48.37**
10 Northeast (Athens	F	2824	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31	2.51	17.85	39.87	**51.10**
10 Northeast (Athens	M	3112	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	2.22	16.00	34.13	**45.89**
2 North (Gainesville		9068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.61	14.46	30.51	**41.27**
2 North (Gainesville	F	4423	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.77	15.56	32.99	**43.97**

2 North (Gainesville	M	4645	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.45	13.41	28.16	**38.69**
3-1 Cobb-Douglas		11639	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	1.45	22.16	46.28	**59.90**
3-1 Cobb-Douglas	F	5763	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	1.80	23.48	47.84	**61.44**
3-1 Cobb-Douglas	M	5876	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	1.11	20.86	44.74	**58.39**
3-2 Fulton		11704	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	1.72	24.59	52.89	**69.74**
3-2 Fulton	F	5729	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	1.89	26.39	55.89	**71.79**
3-2 Fulton	M	5975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	1.56	22.86	50.01	**67.77**
3-3 Clayton (Jonesbo		4023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.54	23.76	50.81	**63.48**
3-3 Clayton (Jonesbo	F	1929	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83	2.33	26.59	56.45	**70.04**
3-3 Clayton (Jonesbo	M	2094	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.81	21.16	45.61	**57.45**
3-4 GNR (Lawrencevil		16071	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	1.47	21.64	46.11	**59.63**
3-4 GNR (Lawrencevil	F	7783	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	1.79	22.78	47.94	**61.33**
3-4 GNR (Lawrencevil	M	8288	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	1.18	20.57	44.39	**58.04**
3-5 Dekalb		8402	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	2.36	29.30	57.96	**72.35**
3-5 Dekalb	F	4065	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	2.80	31.24	61.40	**75.01**
3-5 Dekalb	M	4337	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	1.94	27.48	54.74	**69.86**
4 District 4		12780	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.76	15.75	33.04	**42.10**
4 District 4	F	6313	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	1.05	16.93	33.82	**42.90**
4 District 4	M	6467	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.48	14.60	32.27	**41.32**
5-1 South Central (D		1966	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.51	14.39	31.38	**40.54**
5-1 South Central (D	F	959	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.52	16.16	35.25	**43.69**
5-1 South Central (D	M	1007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.50	12.71	27.71	**37.54**
5-2 North Central (M		6893	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	1.62	18.00	39.94	**53.24**
5-2 North Central (M	F	3425	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	2.28	19.88	44.18	**57.02**
5-2 North Central (M	M	3468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.98	16.15	35.76	**49.51**
6 East Central		6429	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	1.24	19.18	39.66	**50.12**

6 East Central	F	3116	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	1.60	21.21	44.16	**55.01**
6 East Central	M	3313	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.91	17.27	35.44	**45.52**
7 West Central (Colu		4935	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.77	1.60	22.63	45.61	**54.87**
7 West Central (Colu	F	2444	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	1.72	23.49	47.59	**55.56**
7 West Central (Colu	M	2491	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.72	1.49	21.80	43.68	**54.20**
8-1 South (Valdosta)		3522	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.31	18.29	39.01	**48.44**
8-1 South (Valdosta)	F	1745	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.40	19.77	42.06	**51.58**
8-1 South (Valdosta)	M	1777	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.23	16.83	36.02	**45.36**
8-2 Southwest (Alban		5059	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.97	16.60	33.07	**42.46**
8-2 Southwest (Alban	F	2487	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	1.33	17.85	33.82	**43.31**
8-2 Southwest (Alban	M	2572	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.62	15.40	32.35	**41.64**
9-1 Coastal (Savanna		7302	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.75	23.68	47.37	**58.67**
9-1 Coastal (Savanna	F	3558	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	1.07	24.31	49.30	**60.82**
9-1 Coastal (Savanna	M	3744	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.45	23.08	45.54	**56.62**
9-2 Southeast (Waycr		4591	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.61	18.25	40.01	**50.71**
9-2 Southeast (Waycr	F	2217	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.86	20.30	44.07	**54.13**
9-2 Southeast (Waycr	M	2374	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.38	16.34	36.23	**47.51**

Table A33b. Percent of the Birth Cohort of 2004 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2015, indicated in red text, indicates when the birth cohort of 2004 was age 11. Highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17

		135941	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.28	2.11	16.24	**29.93**
	F	66468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.34	2.43	17.39	**31.71**
	M	69473	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.21	1.81	15.15	**28.23**
1-1 Northwest (Rome)		9317	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.10	1.33	12.27	**22.59**
1-1 Northwest (Rome)	F	4600	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.15	1.46	12.65	**22.80**
1-1 Northwest (Rome)	M	4717	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	1.21	11.89	**22.39**
1-2 North Georgia (D		6304	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	1.94	18.48	**31.17**
1-2 North Georgia (D	F	3088	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.13	1.94	18.43	**31.22**
1-2 North Georgia (D	M	3216	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	1.93	18.53	**31.13**
10 Northeast (Athens		5936	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.81	2.61	13.60	**26.21**
10 Northeast (Athens	F	2824	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.78	2.83	14.84	**28.68**
10 Northeast (Athens	M	3112	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.84	2.41	12.47	**23.97**
2 North (Gainesville		9068	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	1.20	11.92	**22.73**
2 North (Gainesville	F	4423	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	1.42	12.82	**24.87**
2 North (Gainesville	M	4645	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.99	11.07	**20.69**
3-1 Cobb-Douglas		11639	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.23	2.53	17.81	**33.22**
3-1 Cobb-Douglas	F	5763	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.33	3.04	19.28	**34.81**
3-1 Cobb-Douglas	M	5876	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.14	2.03	16.37	**31.65**
3-2 Fulton		11704	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.33	2.20	19.10	**38.30**
3-2 Fulton	F	5729	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.35	2.46	20.65	**40.34**
3-2 Fulton	M	5975	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	1.94	17.61	**36.35**
3-3 Clayton (Jonesbo		4023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	2.44	18.49	**35.47**
3-3 Clayton (Jonesbo	F	1929	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	3.21	20.06	**39.40**
3-3 Clayton (Jonesbo	M	2094	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	1.72	17.05	**31.85**
3-4 GNR (Lawrencevil		16071	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.37	2.46	18.19	**33.98**

3-4 GNR (Lawrencevil	F	7783	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.44	2.80	19.26	35.60
3-4 GNR (Lawrencevil	M	8288	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.30	2.15	17.18	32.46
3-5 Dekalb		8402	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.65	3.46	23.78	42.56
3-5 Dekalb	F	4065	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.74	3.99	24.77	44.67
3-5 Dekalb	M	4337	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.58	2.97	22.85	40.58
4 District 4		12780	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.13	1.59	11.99	22.07
4 District 4	F	6313	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.19	1.87	12.74	22.87
4 District 4	M	6467	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	1.31	11.26	21.28
5-1 South Central (D		1966	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.97	9.56	19.13
5-1 South Central (D	F	959	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.83	10.74	22.84
5-1 South Central (D	M	1007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	1.09	8.44	15.59
5-2 North Central (M		6893	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.38	2.26	14.04	27.13
5-2 North Central (M	F	3425	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.53	2.86	16.44	31.01
5-2 North Central (M	M	3468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.23	1.67	11.68	23.30
6 East Central		6429	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.23	1.73	15.01	26.74
6 East Central	F	3116	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.29	1.73	16.17	28.98
6 East Central	M	3313	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.18	1.72	13.91	24.63
7 West Central (Colu		4935	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.49	2.53	19.80	32.48
7 West Central (Colu	F	2444	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.57	2.95	21.19	34.00
7 West Central (Colu	M	2491	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.40	2.13	18.43	30.99
8-1 South (Valdosta)		3522	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.11	1.82	15.93	28.22
8-1 South (Valdosta)	F	1745	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.17	2.18	17.42	31.06
8-1 South (Valdosta)	M	1777	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	1.46	14.46	25.44
8-2 Southwest (Alban		5059	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.18	1.88	13.34	23.11
8-2 Southwest (Alban	F	2487	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.28	2.13	14.35	24.65

8-2 Southwest (Alban	M	2572	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	1.63	12.36	**21.62**
9-1 Coastal (Savanna		7302	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.12	2.18	18.71	**33.36**
9-1 Coastal (Savanna	F	3558	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	2.59	19.84	**34.63**
9-1 Coastal (Savanna	M	3744	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.08	1.79	17.63	**32.16**
9-2 Southeast (Waycr		4591	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.17	2.00	14.81	**26.09**
9-2 Southeast (Waycr	F	2217	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.18	2.35	16.82	**28.96**
9-2 Southeast (Waycr	M	2374	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	1.68	12.93	**23.42**

Table A34a. Percent of the Birth Cohort of 2005 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2016, indicated in red text, indicates when the birth cohort of 2005 was age 11. Highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		136863	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	1.33	22.34	**44.43**
	F	66974	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	1.57	23.39	**46.02**
	M	69889	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	1.09	21.33	**42.90**
1-1 Northwest (Rome)		9596	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.40	16.97	**32.88**
1-1 Northwest (Rome)	F	4721	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.55	17.28	**32.64**
1-1 Northwest (Rome)	M	4875	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.25	16.66	**33.11**
1-2 North Georgia (D		6513	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.48	22.20	**39.92**
1-2 North Georgia (D	F	3204	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.59	23.13	**41.89**
1-2 North Georgia (D	M	3309	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.36	21.31	**38.02**

10 Northeast (Athens		6139	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	1.74	17.87	**37.91**
10 Northeast (Athens	F	2956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.39	2.03	19.49	**39.45**
10 Northeast (Athens	M	3183	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.88	1.48	16.37	**36.48**
2 North (Gainesville		9019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.59	16.15	**33.03**
2 North (Gainesville	F	4422	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.72	16.42	**33.72**
2 North (Gainesville	M	4597	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.46	15.90	**32.37**
3-1 Cobb-Douglas		11840	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	1.42	23.55	**46.89**
3-1 Cobb-Douglas	F	5716	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.82	24.13	**48.85**
3-1 Cobb-Douglas	M	6124	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	1.05	23.01	**45.07**
3-2 Fulton		11898	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	2.77	28.06	**56.95**
3-2 Fulton	F	5879	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	3.28	29.97	**59.72**
3-2 Fulton	M	6019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	2.26	26.18	**54.24**
3-3 Clayton (Jonesbo		3992	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	2.81	28.76	**55.89**
3-3 Clayton (Jonesbo	F	1901	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	3.31	30.25	**57.18**
3-3 Clayton (Jonesbo	M	2091	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	2.34	27.40	**54.71**
3-4 GNR (Lawrencevil		15928	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	1.70	24.05	**48.62**
3-4 GNR (Lawrencevil	F	7766	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	1.97	24.81	**50.23**
3-4 GNR (Lawrencevil	M	8162	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	1.43	23.32	**47.08**
3-5 Dekalb		8435	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01	2.62	31.74	**62.79**
3-5 Dekalb	F	4153	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18	2.75	33.16	**64.39**
3-5 Dekalb	M	4282	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.84	2.50	30.36	**61.23**
4 District 4		12516	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.99	18.19	**36.19**
4 District 4	F	6126	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26	1.21	19.13	**37.27**
4 District 4	M	6390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.78	17.29	**35.16**
5-1 South Central (D		1919	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.52	14.75	**31.84**
5-1 South Central (D	F	915	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.66	14.75	**33.77**

5-1 South Central (D	M	1004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	14.74	**30.08**
5-2 North Central (M		6961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	1.55	19.90	**43.28**
5-2 North Central (M	F	3416	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	1.58	21.72	**45.90**
5-2 North Central (M	M	3545	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65	1.52	18.14	**40.76**
6 East Central		6393	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	1.58	21.18	**41.84**
6 East Central	F	3106	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.71	2.19	23.18	**44.20**
6 East Central	M	3287	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	1.00	19.29	**39.61**
7 West Central (Colu		4961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.77	27.19	**46.26**
7 West Central (Colu	F	2436	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.82	28.49	**47.54**
7 West Central (Colu	M	2525	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.71	25.94	**45.03**
8-1 South (Valdosta)		3289	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.40	24.26	**45.48**
8-1 South (Valdosta)	F	1601	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.62	26.73	**48.59**
8-1 South (Valdosta)	M	1688	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.18	21.92	**42.54**
8-2 Southwest (Alban		5053	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.89	18.88	**35.50**
8-2 Southwest (Alban	F	2564	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	1.13	20.12	**37.60**
8-2 Southwest (Alban	M	2489	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.64	17.60	**33.35**
9-1 Coastal (Savanna		7478	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.43	24.06	**50.27**
9-1 Coastal (Savanna	F	3661	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.49	24.23	**51.43**
9-1 Coastal (Savanna	M	3817	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.37	23.89	**49.15**
9-2 Southeast (Waycr		4933	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.34	19.54	**40.00**
9-2 Southeast (Waycr	F	2431	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.41	20.16	**41.26**
9-2 Southeast (Waycr	M	2502	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.28	18.94	**38.77**

Table A34b. Percent of the Birth Cohort of 2005 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2016, indicated in red text, indicates when the birth cohort of 2005 was age 11. Highlighted in 2017 are the highest and lowest

proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		136863	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.31	2.70	**17.36**
	F	66974	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.38	3.05	**18.46**
	M	69889	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.24	2.36	**16.31**
1-1 Northwest (Rome)		9596	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	1.56	**12.65**
1-1 Northwest (Rome)	F	4721	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	1.82	**13.07**
1-1 Northwest (Rome)	M	4875	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	1.31	**12.25**
1-2 North Georgia (D		6513	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.12	2.16	**18.47**
1-2 North Georgia (D	F	3204	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	2.56	**19.57**
1-2 North Georgia (D	M	3309	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	1.78	**17.41**
10 Northeast (Athens		6139	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.65	2.74	**13.75**
10 Northeast (Athens	F	2956	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.78	3.32	**14.99**
10 Northeast (Athens	M	3183	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.53	2.20	**12.60**
2 North (Gainesville		9019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.13	1.35	**13.32**
2 North (Gainesville	F	4422	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.20	1.33	**13.75**
2 North (Gainesville	M	4597	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	1.37	**12.90**
3-1 Cobb-Douglas		11840	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.40	3.00	**18.65**
3-1 Cobb-Douglas	F	5716	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.49	3.46	**19.52**
3-1 Cobb-Douglas	M	6124	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.31	2.56	**17.83**
3-2 Fulton		11898	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.47	3.75	**21.89**
3-2 Fulton	F	5879	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.63	4.34	**23.73**
3-2 Fulton	M	6019	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.32	3.17	**20.10**
3-3 Clayton (Jonesbo		3992	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	3.38	**20.87**
3-3 Clayton (Jonesbo	F	1901	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	3.84	**22.25**

3-3 Clayton (Jonesbo	M	2091	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	2.97	19.61
3-4 GNR (Lawrencevil		15928	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.42	3.05	18.70
3-4 GNR (Lawrencevil	F	7766	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.48	3.37	19.82
3-4 GNR (Lawrencevil	M	8162	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.37	2.74	17.63
3-5 Dekalb		8435	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.78	4.47	25.30
3-5 Dekalb	F	4153	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.89	5.06	26.41
3-5 Dekalb	M	4282	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.68	3.90	24.22
4 District 4		12516	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.17	2.15	13.39
4 District 4	F	6126	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.21	2.37	14.23
4 District 4	M	6390	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.13	1.94	12.58
5-1 South Central (D		1919	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.10	1.41	10.06
5-1 South Central (D	F	915	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.22	1.75	10.38
5-1 South Central (D	M	1004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	9.76
5-2 North Central (M		6961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.45	2.59	15.20
5-2 North Central (M	F	3416	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.47	3.02	17.10
5-2 North Central (M	M	3545	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.42	2.17	13.37
6 East Central		6393	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.41	2.86	16.28
6 East Central	F	3106	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	3.67	18.22
6 East Central	M	3287	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.18	2.10	14.45
7 West Central (Colu		4961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.16	3.53	21.67
7 West Central (Colu	F	2436	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.25	3.82	22.58
7 West Central (Colu	M	2525	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.08	3.25	20.79
8-1 South (Valdosta)		3289	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.09	2.98	20.28
8-1 South (Valdosta)	F	1601	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.12	3.25	22.30
8-1 South (Valdosta)	M	1688	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	2.73	18.36

8-2 Southwest (Alban		5053	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	2.24	**13.97**
8-2 Southwest (Alban	F	2564	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	2.50	**15.25**
8-2 Southwest (Alban	M	2489	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.97	**12.66**
9-1 Coastal (Savanna		7478	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	2.33	**18.82**
9-1 Coastal (Savanna	F	3661	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	2.29	**19.23**
9-1 Coastal (Savanna	M	3817	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	2.36	**18.42**
9-2 Southeast (Waycr		4933	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.14	1.99	**14.49**
9-2 Southeast (Waycr	F	2431	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.25	2.10	**15.55**
9-2 Southeast (Waycr	M	2502	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	1.88	**13.47**

Table A35a. Percent of the Birth Cohort of 2006 initiating the vaccine series by each year (pct_i[YEAR]) per health district. The year 2017, indicated in red text, indicates when the birth cohort of 2006 was age 11. Further highlighted in 2017 are the highest and lowest proportions of initiation among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_i06	pct_i07	pct_i08	pct_i09	pct_i10	pct_i11	pct_i12	pct_i13	pct_i14	pct_i15	pct_i16	pct_i17
		138351	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.53	1.36	**23.59**
	F	67717	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.59	1.49	**24.28**
	M	70634	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.48	1.22	**22.94**
1-1 Northwest (Rome)		9518	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.37	**17.39**
1-1 Northwest (Rome)	F	4721	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.42	**17.48**
1-1 Northwest (Rome)	M	4797	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.31	**17.30**

1-2 North Georgia (D		6654	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.27	22.53
1-2 North Georgia (D	F	3224	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.31	23.01
1-2 North Georgia (D	M	3430	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.23	22.07
10 Northeast (Athens		6159	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83	1.45	19.47
10 Northeast (Athens	F	2989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.97	1.74	20.24
10 Northeast (Athens	M	3170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	1.17	18.74
2 North (Gainesville		9184	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.48	16.86
2 North (Gainesville	F	4379	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.66	17.45
2 North (Gainesville	M	4805	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.31	16.32
3-1 Cobb-Douglas		11886	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	1.61	25.43
3-1 Cobb-Douglas	F	5687	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	1.78	26.67
3-1 Cobb-Douglas	M	6199	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	1.45	24.29
3-2 Fulton		12037	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.46	3.16	28.77
3-2 Fulton	F	5966	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	3.62	29.42
3-2 Fulton	M	6071	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32	2.70	28.13
3-3 Clayton (Jonesbo		4034	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.19	3.00	31.01
3-3 Clayton (Jonesbo	F	1976	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16	2.83	31.73
3-3 Clayton (Jonesbo	M	2058	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.21	3.16	30.32
3-4 GNR (Lawrencevil		16289	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	1.76	25.51
3-4 GNR (Lawrencevil	F	7943	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.73	1.84	26.46
3-4 GNR (Lawrencevil	M	8346	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54	1.68	24.60
3-5 Dekalb		8689	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.38	3.03	34.42
3-5 Dekalb	F	4314	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44	3.31	33.68
3-5 Dekalb	M	4375	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.33	2.74	35.15
4 District 4		12507	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.94	18.45
4 District 4	F	6046	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.99	19.25

4 District 4	M	6461	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.90	17.69
5-1 South Central (D		1893	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	18.49
5-1 South Central (D	F	970	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41	18.14
5-1 South Central (D	M	923	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.43	18.85
5-2 North Central (M		6997	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	1.89	23.28
5-2 North Central (M	F	3404	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.91	2.03	25.65
5-2 North Central (M	M	3593	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.81	1.75	21.04
6 East Central		6442	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	1.06	21.47
6 East Central	F	3192	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.44	1.19	21.99
6 East Central	M	3250	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.92	20.95
7 West Central (Colu		4994	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.44	26.51
7 West Central (Colu	F	2431	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.53	29.21
7 West Central (Colu	M	2563	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.35	23.96
8-1 South (Valdosta)		3434	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.38	24.78
8-1 South (Valdosta)	F	1709	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.35	25.04
8-1 South (Valdosta)	M	1725	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.41	24.52
8-2 Southwest (Alban		5165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.66	18.03
8-2 Southwest (Alban	F	2614	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.73	18.25
8-2 Southwest (Alban	M	2551	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.59	17.80
9-1 Coastal (Savanna		7589	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.41	26.47
9-1 Coastal (Savanna	F	3740	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.51	26.50
9-1 Coastal (Savanna	M	3849	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.31	26.45
9-2 Southeast (Waycr		4880	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.49	22.03
9-2 Southeast (Waycr	F	2412	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.46	22.01

9-2 Southeast (Waycr	M	2468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.53	22.04

Table A35b. Percent of the Birth Cohort of 2006 completing the vaccine series by each year (pct_c[YEAR]) per health district. The year 2017, indicated in red text, indicates when the birth cohort of 2006 was age 11. Further highlighted in 2017 are the highest and lowest proportions of completion among all health districts. These data are also stratified on sex (male/female) for each health district for each year.

Health District	Sex	Population	pct_c06	pct_c07	pct_c08	pct_c09	pct_c10	pct_c11	pct_c12	pct_c13	pct_c14	pct_c15	pct_c16	pct_c17
		138351	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.42	2.71
	F	67717	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.47	2.97
	M	70634	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.37	2.47
1-1 Northwest (Rome)		9518	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	1.52
1-1 Northwest (Rome)	F	4721	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.82
1-1 Northwest (Rome)	M	4797	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	1.23
1-2 North Georgia (D		6654	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	2.10
1-2 North Georgia (D	F	3224	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	2.33
1-2 North Georgia (D	M	3430	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	1.90
10 Northeast (Athens		6159	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.76	2.34
10 Northeast (Athens	F	2989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.80	2.48
10 Northeast (Athens	M	3170	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.73	2.21
2 North (Gainesville		9184	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	1.61
2 North (Gainesville	F	4379	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	1.71
2 North (Gainesville	M	4805	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	1.52
3-1 Cobb-Douglas		11886	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.46	2.88
3-1 Cobb-Douglas	F	5687	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.53	3.17

3-1 Cobb-Douglas	M	6199	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	2.61
3-2 Fulton		12037	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.88	4.06
3-2 Fulton	F	5966	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	1.07	4.73
3-2 Fulton	M	6071	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.69	3.41
3-3 Clayton (Jonesbo		4034	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.67	3.62
3-3 Clayton (Jonesbo	F	1976	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.66	3.64
3-3 Clayton (Jonesbo	M	2058	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	3.60
3-4 GNR (Lawrencevil		16289	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.59	3.02
3-4 GNR (Lawrencevil	F	7943	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.68	3.30
3-4 GNR (Lawrencevil	M	8346	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.50	2.76
3-5 Dekalb		8689	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	1.19	4.49
3-5 Dekalb	F	4314	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	1.21	4.29
3-5 Dekalb	M	4375	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	1.17	4.69
4 District 4		12507	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.30	2.02
4 District 4	F	6046	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.35	2.32
4 District 4	M	6461	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.25	1.75
5-1 South Central (D		1893	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.48
5-1 South Central (D	F	970	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.44
5-1 South Central (D	M	923	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.52
5-2 North Central (M		6997	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.59	3.19
5-2 North Central (M	F	3404	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.71	3.58
5-2 North Central (M	M	3593	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.47	2.81
6 East Central		6442	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.22	2.44
6 East Central	F	3192	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31	2.79
6 East Central	M	3250	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	2.09
7 West Central (Colu		4994	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	3.18

7 West Central (Colu	F	2431	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	**3.99**
7 West Central (Colu	M	2563	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	**2.42**
8-1 South (Valdosta)		3434	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	**3.09**
8-1 South (Valdosta)	F	1709	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	**3.04**
8-1 South (Valdosta)	M	1725	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	**3.13**
8-2 Southwest (Alban		5165	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.31	**1.99**
8-2 Southwest (Alban	F	2614	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27	**2.26**
8-2 Southwest (Alban	M	2551	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.35	**1.72**
9-1 Coastal (Savanna		7589	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	**2.42**
9-1 Coastal (Savanna	F	3740	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	**2.43**
9-1 Coastal (Savanna	M	3849	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05	**2.42**
9-2 Southeast (Waycr		4880	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	**2.19**
9-2 Southeast (Waycr	F	2412	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	**2.20**
9-2 Southeast (Waycr	M	2468	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	**2.19**