



OCTOBER 18, 2021

IMMUNIZATION COVERAGE DISPARITIES REPORT

GET VACCINATED OHIO—DELIVERABLE OBJECTIVE 2A

CHAMPAIGN COUNTY
CHAMPAIGN HEALTH DISTRICT
1512 US Hwy 68, Urbana, Ohio, 43078

Overview

Purpose

The Get Vaccinated Ohio Public Health Initiative (GV) works to improve components of the immunization delivery in Ohio; more fully immunize infants, children, and adolescents; improve immunization on-time rates in the private and public sector; and limit vaccine-preventable diseases.

The purpose of this report is to evaluate available data to determine where there may be immunization disparities in Champaign County. This evaluation will be used to educate parents of children in under-immunized schools about the importance of timely immunizations, educate immunization providers in the county about why parents defer or postpone immunizations, and conduct specialty immunization clinics in identified areas of under-immunization (if needed).

Responsible Parties

This Disparities Findings Report was created by the CHD Epidemiologist. Details of this report will be used by CHD's GV Coordinator to update and implement plans to educate parents of under-immunized children in Champaign County.

This report will contain a discussion section for each of the 7 required elements.

Seven Required Elements for D2a

Health Insurance Coverage

Parents of uninsured or underinsured children are more likely to defer immunizations because of cost. Of Champaign County residents under age 65 years, 6.8% were uninsured, compared to 7.8% statewide (U.S. Census Bureau, QuickFacts, 2019).

Of Champaign County residents aged 18 to 64, 7.4% were uninsured, compared to 9.1% uninsured statewide (U.S. Census Bureau, Small Area Health Insurance Estimates (SAHIE) Program, 2018). Of those at 138% of the poverty level in Champaign County, 12.7% were uninsured (U.S. Census Bureau, Small Area Health Insurance Estimates (SAHIE) Program, 2018). 5.1% of children (under 19 years of age) are uninsured in Champaign County, compared to 4.9% in Ohio (U.S. Census Bureau, SAHIE Program, 2018).

Poverty Rates

Parents and children living in poverty are more likely to defer immunizations because of cost and access. In Champaign County, 7.7% of the population was living in poverty in 2019, a decrease from 11.1% in 2016 (U.S. Census Bureau, Small Area Income and Poverty Estimates, 2019). High-risk children with higher levels of poverty may attend school in the Urbana City School District, where 13.8% of children ages 5-17 belong to families in poverty (Table 1).

Table 1: Percent of population ages 5-17 in families in poverty, US Census Bureau, Small Area Income and Poverty Estimates, 2019.

Geography	Percent of Ages 5-17 in Families in Poverty
Ohio	16.6%
Champaign County	10.6%
Urbana City School District	13.8%
Mechanicsburg Exempted Village School District	8.8%
Triad Local School District	10.4%
West Liberty-Salem Local School District	6.3%
Graham Local School District	7.6%

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Free and Reduced-Price Meal Eligibility Data

Children who qualify for meal eligibility can be challenged with health care access because their parents are more likely to defer immunizations because of cost and access. In Champaign County, 36.4% of schools have above the average number of students (38.98%) approved for Free and Reduced-Price meal benefits (Table 2) (Ohio Department of Education, 2020). All three schools in the Urbana City School District have over 50% of students approved for Free and Reduced-Price meal benefits (Table 2) (ODE, 2020).

Table 2: Free and Reduced-Price Meal Eligibility, Champaign County, FY-2020, Ohio Department of Education

Sponsor	Site Name	Percent Free and Reduced-Price Lunch
Urbana City School District	East Elementary School	66.48%
Urbana City School District	Urbana High School	55.64%
Urbana City School District	Urbana Junior High	56.80%
Mechanicsburg Ex Vill SD	Mechanicsburg High School	31.74%
Graham Local SD	Graham Elementary School	32.86%
Graham Local SD	Graham High School	20.32%
Graham Local SD	Graham Middle School	35.79%
Triad Local School District	Triad Elementary School	38.94%
Triad Local School District	Triad Middle School	33.55%
Triad Local School District	Triad High School	41.61%
West Liberty-Salem Local School District	West Liberty-Salem Elementary School	15.03%

School Immunization Coverage

Schools with lower immunization rates indicate that children at these schools are either behind on their immunization series or that a greater number of parents have philosophical objections to immunizations. During the 2020-2021 school year, the percent of Kindergarteners and 7th Graders in Champaign County with all required immunizations decreased (Figure 2). Related, the percent of Kindergarteners who have a reason of conscience of religion objection has increased over the last five school years (Figure 3). In the 2020-2021 school year, the percent of 7th graders with a reason of conscience or religious objection drastically increased (Figure 3). This is largely due to the increase in one school, Graham Middle School, which increased from 2.0% in 2019-2020 to 8.7% in 2020-2021.

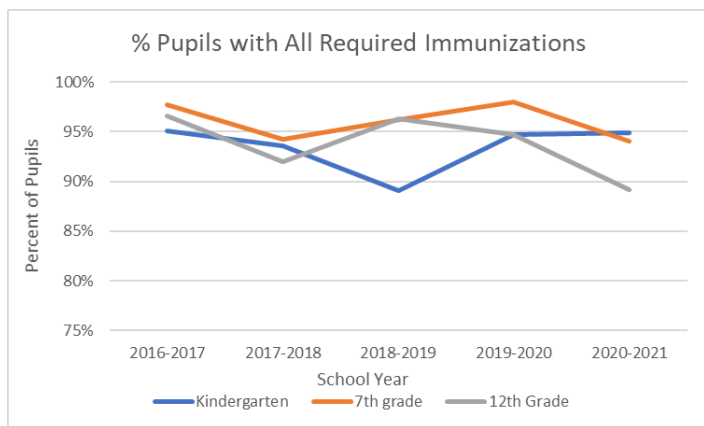


Figure 1: Percent of pupils with all required immunizations for kindergarten, 7th grade, and 12th grade, Champaign County, Ohio, 2016-2021, ODH School Immunization Level Assessment

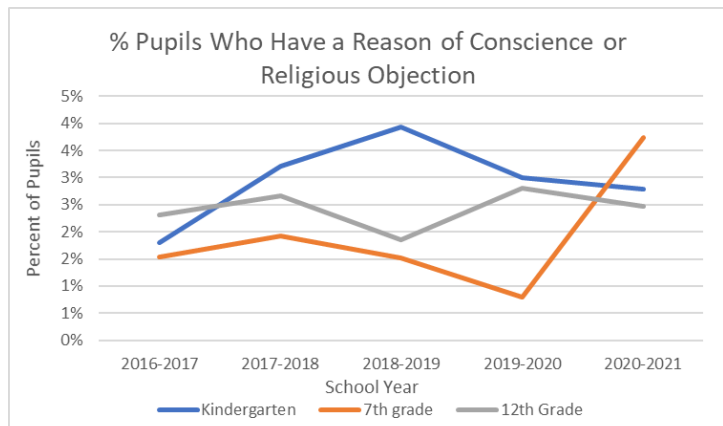


Figure 2: Percent of pupils who have a reason of conscience or religious objection for kindergarten, 7th grade, and 12th grade, Champaign County, Ohio, 2016-2021, ODH School Immunization Level Assessment

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Three out of the 5 school districts in Champaign County have above the average percent (94.7%) of pupils with all required immunizations (Table 3). The two school districts below average are Graham Local and West Liberty-Salem Local. Four out of the five schools in these districts have below average percent of pupils with all required immunizations (Table 4).

Table 3: Average Percent of Pupils with All Required Immunizations and Reason of Conscience or Religious Objection by District, All Grade Levels, Champaign County, 2016-2021, ODH School Immunization Level Assessment

District Name	Average of Percent of Pupils with All Required Immunizations	Average of Percent of Pupils who have a Reason of Conscience or Religious Objection
Graham Local	90.1%	2.5%
Mechanicsburg Exempted Village	97.0%	2.6%
Triad Local	96.2%	2.1%
Urbana City	96.5%	1.9%
West Liberty-Salem Local	93.6%	2.8%

Table 4: Average Percent of Pupils with All Required Immunizations for School Districts Below Average, All Grade Levels, Champaign County, 2016-2021, ODH School Immunization Level Assessment

District Name	School Name	Average of Percent of Pupils with All Required Immunizations
Graham Local	Graham Elementary School	93.3%
	Graham High School	84.7%
	Graham Middle School	92.3%
West Liberty-Salem Local	West Liberty-Salem Elementary School	90.8%
	West Liberty-Salem Middle/High School	95.0%

Number of Immunization Providers

If there are inadequate numbers of immunization providers in Champaign County, parents may be more likely to defer immunizations because of availability or geographic location. In Champaign County, there are 5 pharmacies and 3 family practices that provide immunizations. One of these family practices also provides immunizations for pediatrics. These providers are centralized in the city of Urbana, which may have an impact on vaccine availability to rural communities. The majority of providers are pharmacies that do not offer all types of vaccines, which creates access to care issue in areas where there are no other provider options.

Vaccine Equity – COVID-19

There are two areas in Champaign County that have been identified as COVID-19 vaccine deserts, where people have little or no convenient access to vaccination (Figure 3). A vaccine desert is defined as more than a 15-minute drive to the closest active COVID-19 vaccination site. In Champaign County, vaccine deserts have been identified in rural areas in the western side of the county and on the northeastern side, just east of North Lewisburg.

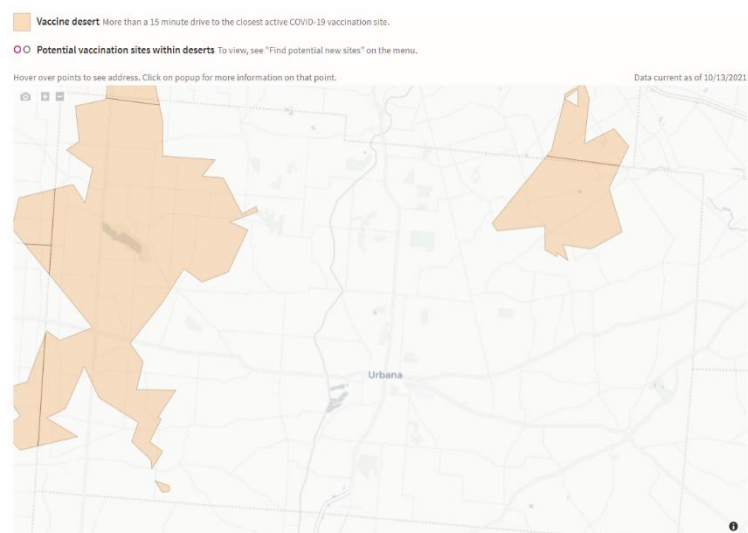


Figure 3: Vaccine deserts in Champaign County, Vaccine equity Planner, 2021.

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Groups with Religious or Philosophical Objections

Groups with philosophical or religious objections tend to delay or defer immunizations for children and adolescents. Two out of the 6 school districts have above average percent (2.4%) of pupils who have a reason of conscience or religious objection (Table 3). These school districts are Mechanicsburg Exempted Village and West Liberty-Salem Local (Table 3). Four of the five schools in these districts have above average percent of pupils who have a reason of conscience or religious objection (Table 5).

Table 5: Average Percent of Pupils Who Have a Reason of Conscience or Religious Objection for School Districts Above Average, All Grade Levels, Champaign County, 2016-2021, ODH School Immunization Level Assessment.

District Name	School Name	Average of Percent of Pupils who have a Reason of Conscience or Religious Objection
Mechanicsburg Exempted Village	Dohron Wilson Elementary School	3.5%
	Mechanicsburg High School	1.8%
	Mechanicsburg Middle School	2.5%
West Liberty-Salem Local	West Liberty-Salem Elementary School	3.1%
	West Liberty-Salem Middle/High School	2.6%

ImpactSIIS Data

While data from ImpactSIIS does not constitute the complete cohort of children who could be vaccinated in Champaign County, the data does constitute a reasonably sized cohort to study where rates could be lower. ODH has provided the following four rate indicators (Table 6) (An asterisk denotes a zip code that falls mostly outside of Champaign County):

1. The rate of children 19-35 months of age with a 4th dose of DTaP vaccine by zip code
 - a. The average rate of children in Champaign County with a 4th dose of DTaP vaccine is 56.5%. The zip codes 43044 (Mechanicsburg), 43072 (St. Paris), 43078 (Urbana), 43318 (DeGraff*), and 43357 (West Liberty*) have below average on-time immunization percentages (Table 6).
2. The rate of school-aged children 6 years or age with 2 doses of MMR vaccine by zip code
 - a. The average rate of children in Champaign County with 2 doses of MMR vaccine is 71.0%. The zip codes 43009 (Cable), 43060 (North Lewisburg), and 43072 (St. Paris) have below average on-time immunization percentages (Table 6).
3. The rate of adolescents 13 years of age who have 2 doses of HPV vaccine by zip code
 - a. The average rate of children in Champaign County with 2 doses of HPV vaccine is 27.0%. The zip codes 43009 (Cable), 43072 (St. Paris), 43078 (Urbana), 43537 (West Liberty*), and 45317 (Adams Township*) have below average on-time immunization percentages (Table 6).
4. The rate of adolescents 13 years of age who have 1 dose of MCV4 vaccine by zip code
 - a. The average rate of children in Champaign County with 1 dose of MCV4 vaccine is 50.0%. The zip codes 43044 (Mechanicsburg), 43070 (Rosewood), 43072 (St. Paris), 43078 (Urbana), and 45317 (Adams Township*) have below average on-time immunization percentages (Table 6).

The zip code 43072 (St. Paris) is below average in all four categories. The zip code 43078 (Urbana) is below average in three out of four categories. Children with low immunization levels may reside in the aforementioned zip codes.

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Table 6: On-Time Immunization Percentages for Select Antigens by Zip Code, Champaign County, Ohio, 2021. Source: ImpactSIIS. NOTE: ImpactSIIS does not constitute the complete cohort of children who could be vaccinated in Champaign County. *Indicates zip codes that are only partly in Champaign County. †Indicates data not reliable; Use data with caution: percentages are calculated from small case counts (<10). Grey cells indicate lower than average percentages.

Location	Zip Code	Percent w 4+ DTaP	Percent w 2+MMR	Percent w 2+ HPV	Percent w 1+ MCV4
Cable	43009	70.59	67.86	24.51	56.42
Mechanicsburg	43044	56.25	74.58	28.37	49.07
North Lewisburg	43060	58.97	66.67	34.72	56.20
Rosewood	43070	NA	NA	33.33 [†]	36.84 [†]
St. Paris	43072	51.11	66.67	23.90	48.13
Urbana	43078	54.49	72.84	25.11	45.03
Woodstock	43084	63.64 [†]	73.33	28.21	52.05
DeGraff	43318*	46.67 [†]	NA	28.57	53.73
Quincy	43343*	NA	75.00 [†]	NA	NA
West Liberty	43357*	50.00 [†]	NA	15.63	59.00
Adams Township	45317*	NA	NA	25.00 [†]	39.29
Christiansburg	45389*	NA	NA	28.57 [†]	54.72

Summary

Although the highest poverty rates in Champaign County are in the city of Urbana and Urbana City Schools have the greatest number of students eligible for Free and Reduced-Price Meals, the Urbana City School District has above average percent of pupils will all required immunizations. Additionally, most immunization providers are located in the City of Urbana. Data from ImpactSIIS, however, shows that 43078 (Urbana) is below average in three out of four categories.

Over all grade levels, the percent of pupils with all required immunizations has been decreasing over time. The percent of pupils with all required immunizations for 7th and 12th grades decreased at a faster rate over the last school year. This could be related to the COVID-19 pandemic in a number of ways, such as vaccine hesitancy, the desire to limit exposures by deferring doctors' visits, or the school nurses' competing priorities in regards to COVID-19 contact tracing and routine vaccine education and outreach.

There are very few providers in the under-immunized school districts, Graham Local and West Liberty-Salem Local, and under-immunized zip codes 43072 (St. Paris). These areas are potential locations of immunization disparities among children and adolescents in Champaign County.

References

Ohio Department of Education, 2020. <http://education.ohio.gov/Topics/Student-Supports/Food-and-Nutrition/Resources-and-Tools-for-Food-and-Nutrition/MR81-Data-for-Free-and-Reduced-Price-Meal-Eligibil>

U.S. Census Bureau, Small Area Health Insurance Estimates, 2019
<https://www.census.gov/content/dam/Census/library/visualizations/2016/demo/sahie-2016/web-map1-2016.pdf>

U.S. Census Bureau, Small Area Income and Poverty Estimates, 2019.
https://www.cdc.gov/dhdsp/maps/sd_poverty.htm

U.S. Census Bureau, Quick Facts, 2019. <https://www.census.gov/quickfacts/fact/table/OH,US/HEA775219>