



OCTOBER 7, 2021

IMMUNIZATION COVERAGE DISPARITIES REPORT

GET VACCINATED OHIO—DELIVERABLE OBJECTIVE D2A

CLARK COUNTY
CLARK COUNTY COMBINED HEALTH DISTRICT
529 E Home Road, Springfield, Ohio 45503

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 reevaluate available data to determine where there may be immunization disparities in Clark 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 CCCHD Epidemiologist. Details of this report will be used by CCCHD's GV Coordinator to update and implement plans to educate parents of under-immunized children in Clark 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 Clark County residents under age 65 years, 8.5% were uninsured, compared to 7.8% statewide (U.S. Census Bureau, QuickFacts, 2019).

Of Clark County residents aged 18 to 64, 10.0% were uninsured, compared to 9.1% uninsured statewide (U.S. Census Bureau, Small Area Health Insurance Estimates (SAHIE) Program, 2019). Of those under 65 years and living at 138% of the poverty level in Clark County, 10.7% were uninsured (U.S. Census Bureau, Small Area Health Insurance Estimates (SAHIE) Program, 2019). 4.7% of children (under 19 years of age) are uninsured in Clark County, compared to 4.9% in Ohio (U.S. Census Bureau, SAHIE Program, 2019).

Poverty Rates

Parents and children living in poverty are more likely to defer immunizations because of cost and access. In Clark County, 14.6% of the population was living in poverty in 2019, a decrease from 15.7% 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 Springfield City School District, where 27.9% 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%
Clark County	18.5%
Clark-Shawnee Local Schools	12.8%
Greenon Local Schools	9.3%
Northeastern Local Schools	9.6%
Northwestern Local Schools	10.1%
Southeastern Local Schools	11.5%
Springfield City School District	27.9%
Tecumseh Local Schools	13.4%

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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 Clark County, 53% of schools have over 50% of students approved for Free and Reduced-Price meal benefits (Table 2) (Ohio Department of Education (ODE), 2020). Twenty-four percent of schools in Clark County have 100% of students approved for Free and Reduced-Price meal benefits, the majority of which belong in the Springfield City School District (Table 2) (ODE, 2020). These are the same 12 schools that reported 100% eligibility in Fiscal Year 2019.

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

Sponsor	Site Name	Percent Free and Reduced-Price Lunch
Springfield Preparatory and Fitness Academy	Springfield Preparatory and Fitness Academy	100.00%
Springfield City SD	Kenwood Elementary	100.00%
Springfield City SD	Warder Park-Wayne Elementary School	100.00%
Springfield City SD	Lincoln Elementary School	100.00%
Springfield City SD	Lagonda Elementary School	100.00%
Springfield City SD	Perrin Woods Elementary School	100.00%
Springfield City SD	Fulton Elementary School	100.00%
Springfield City SD	Snyder Park Elementary School	100.00%
Springfield City SD	Keifer Community Ctr. Alternative High	100.00%
Springfield City SD	Hayward Middle School	100.00%
Springfield City SD	Schaefer Middle School	100.00%
Clark Co Juv Treatment Center	Clark Co Juvenile Center	100.00%
Springfield City SD	Mann Elementary School	99.83%
Springfield City SD	Clark Center	93.53%
Springfield City SD	Kenton Elementary School	90.93%
Springfield Christian School	Springfield Christian School	85.76%
Springfield City SD	Roosevelt Middle School	85.16%
Springfield City SD	Springfield High School	82.11%
Clark-Shawnee Local SD	Clark Education Center Annex	73.68%
Tecumseh Local SD	Donnelsville Elementary School	65.06%
Tecumseh Local SD	Tecumseh Middle School	64.16%
Springfield City SD	Snowhill Elementary School	61.99%
Tecumseh Local SD	New Carlisle Elementary School	61.94%
Tecumseh Local SD	Tecumseh High School	51.86%
Tecumseh Local SD	Park Layne Elementary School	51.20%
Clark-Shawnee Local SD	Clark Education Center	50.00%

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. Over the last five school years, the percent of pupils in Clark County with all required immunizations has decreased for all grade levels (Figure 1). The percent of pupils who had a reason of conscience or religion objection has also increased over the last five school years for all school years (Figure 2).

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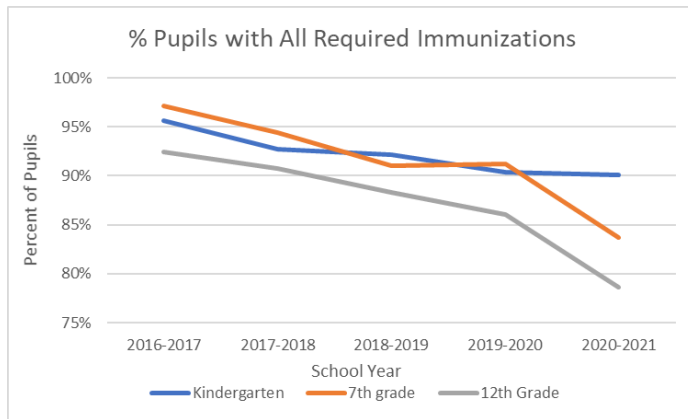


Figure 1: Percent of pupils with all required immunizations for kindergarten, 7th grade, and 12th grade, Clark County, Ohio, 2016-2021, ODH School Immunization Level Assessment

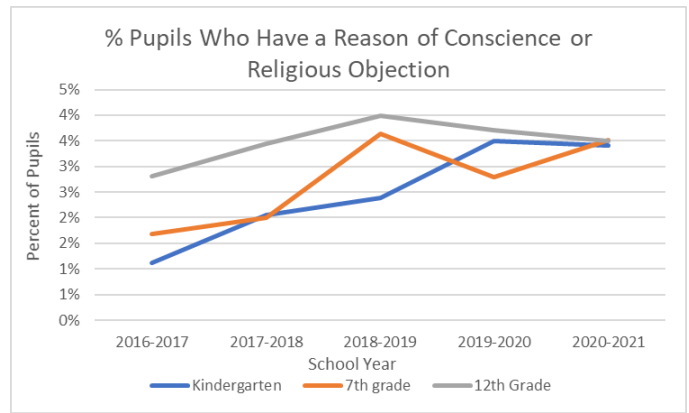


Figure 2: Percent of pupils who have a reason of conscience or religious objection for kindergarten, 7th grade, and 12th grade, Clark County, Ohio, 2016-2021, ODH School Immunization Level Assessment

Eleven out of the 17 school districts in Clark County have above the average percent (89.6%) of pupils with all required immunizations (Table 3). The six school districts below average are Cambridge Education Group LLC, Greenon Local Schools, Lutheran Schools of Ohio, Nightingale Montessori Inc, The Ridgewood School, and Southeastern Local Schools. All 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, Clark 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
Oakmont Education (Formerly Cambridge Education Group LLC)	45.8%	0.0%
Cincinnati Archdiocese	93.0%	0.9%
Clark County ESC	90.9%	9.1%
Clark-Shawnee Local	90.8%	2.2%
Emmanuel Christian Academy	93.9%	5.3%
Global Impact STEM Academy	90.3%	3.4%
Greenon Local Schools	83.2%	4.5%
Lutheran Schools Of Ohio	63.5%	15.6%
Nightingale Montessori Inc	62.2%	0.0%
Northeastern Local	91.7%	2.7%
Northwestern Local	94.5%	2.7%
Performance Academies, LLC	92.7%	3.2%
Ridgewood School, The	87.5%	4.3%
Southeastern Local	69.0%	0.8%
Springfield Christian	97.1%	0.0%
Springfield City School District	92.9%	2.4%
Tecumseh Local	94.6%	2.8%

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

District Name	School Name	Average of Percent of Pupils with All Required Immunizations
Oakmont Education (Formerly Cambridge Education Group LLC)	Cliff Park High School (Formerly Clark Preparatory Academy)	45.8%
Greenon Local Schools	Enon Primary School	84.4%
	Greenon High School	79.1%
	Greenon Jr. High School	86.0%
Lutheran Schools Of Ohio	Risen Christ Lutheran School	63.5%
Nightingale Montessori Inc	Nightingale Montessori Inc	62.2%
Ridgewood School, The	Ridgewood School, The	87.5%
Southeastern Local	Miami View Elementary School	78.8%
	Southeastern Sr. High School	62.5%
	Southeastern Jr. High School	63.1%

Number of Immunization Providers

If there are inadequate numbers of immunization providers in Clark County, parents may be more likely to defer immunizations because of availability or geographic location. In Clark County, there are 23 pharmacies, 12 family practices, 2 pediatric practices, and one retail clinic that provide immunizations. These providers are centralized in the city of Springfield, which may have an impact on vaccine availability to rural communities. A 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. Additionally, the only two pediatric-only providers are located on the northern side of Springfield.

Vaccine Equity – COVID-19

There are three areas in Clark 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 Clark County, vaccine deserts have been identified in rural areas in the northeast and southeast parts of the county near Catawba and South Charleston.

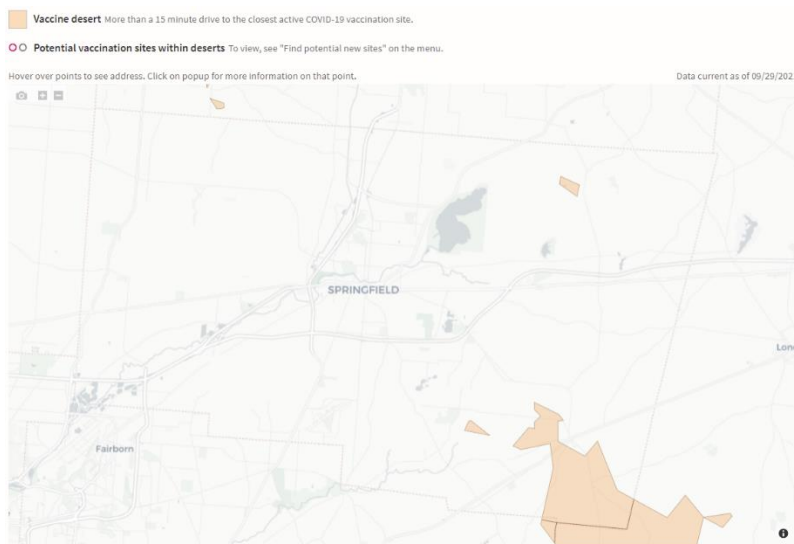


Figure 3: Vaccine deserts in Clark County, Vaccine equity Planner, 2021.

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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. Eight out of the 17 school districts have above average percent (2.7%) of pupils who have a reason of conscience or religious objection (Table 3). These school districts are Clark County ESC, Emmanuel Christian Academy, Global Impact STEM Academy, Greenon Local Schools, Lutheran Schools of Ohio, Performance Academies LLC, the Ridgewood School, and Tecumseh Local (Table 5). All but two of the schools in these districts have above average percent of pupils with a reason of conscience or religious objection (Table 5).

Anecdotally, many of the students at Guiding Shephard Christian School have religious or philosophical objections to immunizations. There is, however, no data available for this school due its size (data has been blinded for confidentiality).

Table 5: Average Percent of Pupils Who Have a Reason of Conscience or Religious Objection for School Districts Above Average, All Grade Levels, Clark 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
Clark County ESC	Clark County ESC	9.1%
Emmanuel Christian Academy	Emmanuel Christian Academy	5.3%
Global Impact STEM Academy	Global Impact STEM Academy	3.4%
Greenon Local School	Enon Primary School	1.2%
	Greenon High School	8.9%
	Greenon Jr. High School	3.2%
Lutheran Schools Of Ohio	Risen Christ Lutheran School	15.6%
Performance Academies, LLC	Springfield Preparatory and Fitness Academy	3.2%
Ridgewood School, The	Ridgewood School, The	4.3%
Tecumseh Local	Park Layne Elementary School	3.0%
	Tecumseh Middle School	2.6%
	Tecumseh High School	2.9%

ImpactSIIS Data

While data from ImpactSIIS does not constitute the complete cohort of children who could be vaccinated in Clark 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 Clark 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 Clark County with a 4th dose of DTaP vaccine is 48.1%. The zip codes 43044 (Mechanicsburg*), 45324 (Fairborn*), 45341 (Medway), 45344 (New Carlisle), 45504 (Springfield), and 45506 (Springfield) 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 Clark County with 2 doses of MMR vaccine is 55.7%. The zip codes 45323 (Enon), 45324 (Fairborn*), 45341 (Medway), and 45344 (New Carlisle) 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 Clark County with 2 doses of HPV vaccine is 29.7%. The zip codes 43044 (Mechanicsburg*), 45319 (Donnelsville), 45323 (Enon), 45324 (Fairborn*), 45341 (Medway), 45344

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(New Carlisle), 45369 (South Vienna), and 45502 (Springfield) 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 Clark County with 1 dose of MCV4 vaccine is 45.9%. The zip codes 45319 (Donnelsville), 45323 (Enon), 45324 (Fairborn*), 45341 (Medway), 45344 (New Carlisle), 45387 (Yellow Springs*), 45501 (Springfield), 45502 (Springfield), 45503 (Springfield), 45504 (Springfield), and 45506 (Springfield) have below average on-time immunization percentages (Table 6).

The zip codes 45324 (Fairborn*), 45341 (Medway), and 45344 (New Carlisle) are below average in all four categories. The 45323 (Enon) zip code is below average in three out of four categories. Children with low immunization levels may reside in the aforementioned zip codes.

Table 6: On-Time Immunization Percentages for Select Antigens by Zip Code, Clark County, Ohio. Source: ImpactSIIS.

NOTE: ImpactSIIS does not constitute the complete cohort of children who could be vaccinated in Clark County.

*Indicates zip codes that are only partly in Clark County. "NA" indicates data not available; Data suppressed by ODH because the number of patients in ImpactSIIS in this zip code is too few to report. †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
Catawba	43010	NA	NA	33.33 [†]	52.38
Mechanicsburg*	43044	46.15 [†]	NA	26.92 [†]	49.06
Urbana*	43078	NA	NA	NA	70 [†]
Cedarville*	45314	NA	NA	NA	57.14 [†]
Donnelsville	45319	NA	NA	20.83 [†]	41.03
Enon	45323	53.62	45.83	21.60	39.19
Fairborn*	45324	16.67 [†]	35.71 [†]	23.44	30.30
Medway	45341	43.86	34.09	20.77	31.44
New Carlisle	45344	43.68	50.93	21.90	35.83
North Hampton	45349	NA	NA	50.00 [†]	62.96
South Charleston	45368	61.33	57.53	31.90	50.12
South Vienna	45369	63.77	69.77	25.88	49.68
Tremont City	45372	NA	NA	36.36 [†]	48.72
Yellow Springs*	45387	NA	NA	33.33 [†]	44.44 [†]
Springfield	45501	NA	NA	NA	30 [†]
Springfield	45502	51.72	58.29	28.86	45.79
Springfield	45503	52.20	66.51	33.58	44.59
Springfield	45504	47.97	60.23	31.07	41.02
Springfield	45505	51.98	69.49	33.93	47.68
Springfield	45506	44.48	64.62	31.20	43.70

Summary

While the highest poverty rates in Clark County are in the city of Springfield and Springfield City Schools have the greatest number of students eligible for Free and Reduced-Price Meals, the Springfield City School District has above average percent of pupils will all required immunizations. This is likely because they are an insured population. Additionally, most immunization providers are located in the City of Springfield. Therefore, there is not an immunization disparity in this area.

Over all grade levels, the percent of pupils with all required immunizations has been decreasing over time. This may be due to lack of training or lack of providers. Some of the below-average schools do not follow through with trainings. Others, like the Southeastern Local School District, have limited vaccine providers in the area. This is a disparate area. 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 few immunization providers in 45323 (Enon), 45341 (Medway) and 45344 (New Carlisle). These three zip codes and the areas surrounding them are possible areas of immunization disparities.

References

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