CUYAHOGA COUNTY PUBLIC HEALTH COLLABORATIVE

CUYAHOGA COUNTY BOARD OF HEALTH
YOUR TRUSTED SOURCE FOR PUBLIC HEALTH INFORMATION

Public Health

cdph Cleveland Department of Public Health

April 28 - May 4, 2019 (MMWR Week 18)

Highlights

Flu activity was 'minimal' for 5th consecutive week.

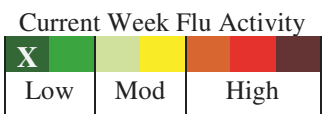
Flu activity rating explanation and weekly flu reports can be found here: **http://www.ccbh.net/flu-weekly-reports/**

2.8% deaths reported were due to pneumonia-related causes. 3 flu related deaths were reported this week.

4 confirmed cases of flu associated hospitalizations were reported this week. 1,329 confirmed cases reported so far this flu season.

2.2% of emergency room visits were due to flu like illness.

Local Flu Activity Dashboard (All data are preliminary and may change as updated data are received.)



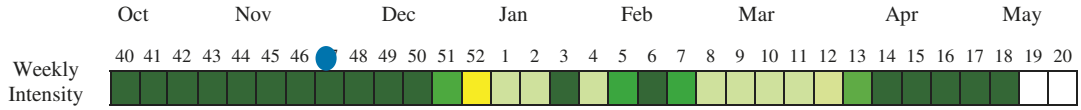


Table 1. Cuyahoga County Influenza Data Dashboard

Influenza (Flu) Indicator	Current Activity Level	Activity Compared to Last Week	#Weeks[1234] ▲ ● ▼	2017-2018 Season Total/Trend
Percent of pneumonia deaths & number of flu related deaths - *[Fig 1]*	Pneumonia: 2.76% Flu: 3 deaths	(36.3%) +2	▼1 ▲1	Pneumonia deaths lower than 5-year median. 21 flu deaths.
Influenza like illness (ILI) doctor visits *[Fig 2]*	Cuyahoga: N/A	N/A	N/A	Low percentage of doctor visits for flu like illness.
Flu associated hospitalizations [*Fig 3]*	4	(7)	▼6	At the 5-yr median. n=1,329
School absenteeism due to **ILLNESS ONLY** – *[Fig 4A]*	2.25%	2.4%	● 1	Data trending up and similar to the 5-year median.
School absenteeism due to **ALL CAUSES** – *[Fig 4B]*	3.63%	(39.0%)	▼1	Data trending up and similar to the 5-year median.
Emergency room visit due to ILI *[Fig 5]*	2.24%	(0.8%)	● 3	Higher than 5-yr median (2.6%)
Sales of over-the-counter medications used to treat ILI. *[Fig 6]*	252	7.7%	▲1	Lower than 5-yr median
Congestion & cough complaints *[Fig 8]*	11.14%	4.1%	● 1	Increased 60% since week 40
Vomiting & nausea complaints *[Fig 9]*	10.68%	(3.1%)	● 1	Steadily increased since week 40
Diarrhea complaints [*Fig 10]*	3.09%	(5.1%)	▼2	Steadily increased since week 40

[1]Due to small percentages, caution should be used while interpreting the 'Activity Compared to Last Week' box.

[2]For figures 2, 4a-4b, ▲ = (Increase ≥ 20%), ▼ = (Decrease ≥ -20%), ● = Stable (-19.9% to +19.9%)

[3]For figures 1, 5-10, ▲ = (Increase ≥ 5%), ▼ = (Decrease ≥ -5%), ● = Stable (-4.9% to +4.9%)

[4]For flu related deaths (Fig 1) & Fig 3, ▲ = (Increase # of deaths/cases), ▼ = (Decrease # of deaths/cases), ● = Stable (Same # of deaths/cases)

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Flu Summary

This report is intended to provide an overview of influenza related activity occurring in Cuyahoga County while providing some information on state activity that is one week behind the current week. It will be published on a weekly basis and can be found at the following website: **http://www.ccbh.net/flu-weekly-reports/**

Note: Data are provisional and subject to change. Updates will be included in future reports.

Pneumonia and Influenza (P&I) Mortality
2.8% of deaths reported were due to pneumonia. 66.7% of pneumonia related deaths occurred to adults 65 years old and older. Three flu related deaths were reported this week; 21 flu related deaths to Cuyahoga County residents were reported so far this flu season (**Figure 1).**

Influenza-Like Illness (ILI) Reports
No sentinel ILI provider reported this week (**Figure 2**). ILI is defined as a fever (≥ 100° F), **and** cough and/or sore throat.

Influenza-Associated Hospitalizations and Influenza-Associated Pediatric Mortality
In Cuyahoga County, 4 confirmed cases of influenza-associated hospitalization were reported this week and 11 cases for week 17 **(Figure 3).** There were 766 statewide confirmed influenza associated hospitalizations reported in week 16. Four pediatric flu deaths reported so far this flu season in Ohio.

School Absenteeism
Participating schools in Cuyahoga County reported the percentage (median = 2.2%) of absenteeism *due to any illness* on Tuesday (**Figure 4A**). **Figure 4B** shows the total absenteeism *due to any reason* (median = 3.6%).

Emergency Department (ED) visits and Over-the-Counter (OTC) Medication Sales
2.2% of all ED visits were for fever + ILI symptoms. Almost 15 fewer patients visited EDs for fever and ILI symptoms this week compared to the previous 5-year weekly median **(Figure 5). Figure 6** shows 25 fewer OTC products per drugstore were purchased this week than the previous 5-year weekly median.

Figure 7 shows, by zip code, the fever + ILI symptoms collected for Figure 5. Three other maps show, by zip code, the frequency of ED visits for three symptoms that are common during the fall and winter seasons and are of interest to the general public: congestion and cough (**Figure 8)**, vomiting and nausea **(Figure 9)**, and diarrhea **(Figure 10)**.

Descriptions of data sources used to complete the weekly influenza write-up can be found on the last page of this report.

Additional Links
- Weekly U.S. Influenza Surveillance Report – **http://www.cdc.gov/flu/weekly**
- Ohio Influenza Surveillance – **https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/ohio-immunization-program/ohio-flu-activity/ohio-flu-activity**
- HealthMap Flu Trends – **http://www.healthmap.org/flutrends/#**
- Vaccine Finder – **https://vaccinefinder.org/**

Figure 1: Percentage of Deaths Due to Pneumonia & Influenza (P&I)
Cleveland, Euclid, Lakewood, & Parma Vital Statistics Departments

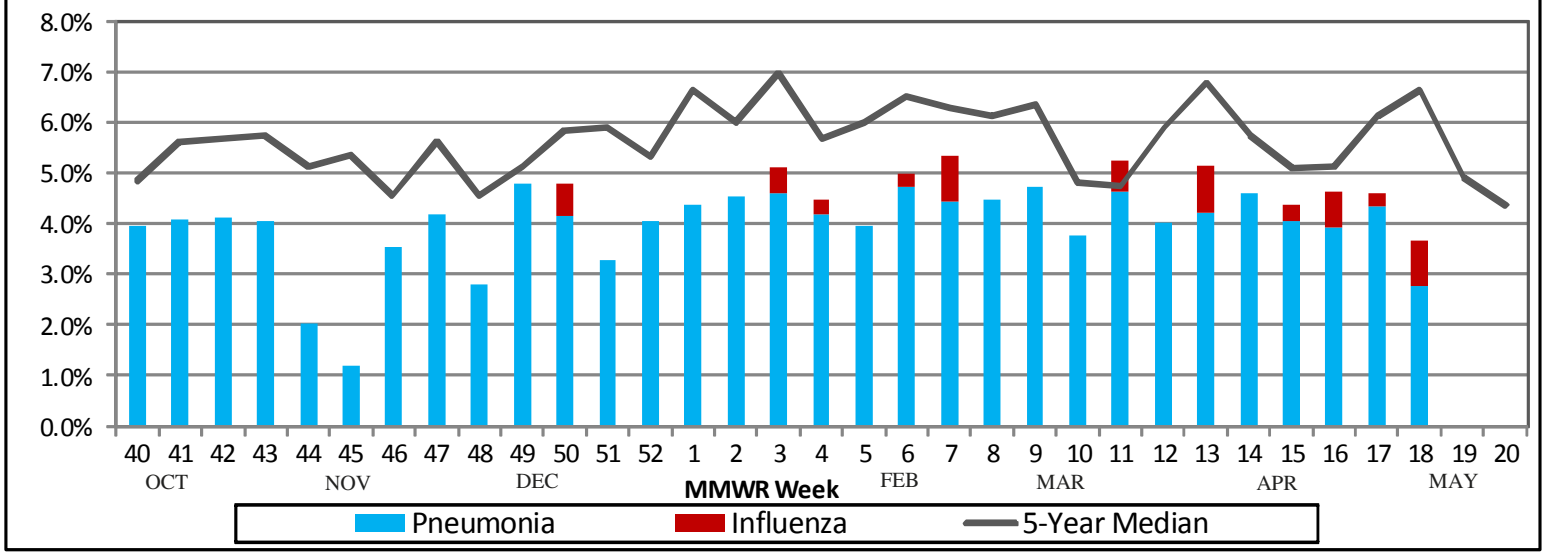

Figure 2: Percent of Influenza-Like Illness (ILI) Visits via athenahealth
and Cuyahoga County ILI Sentinel Providers

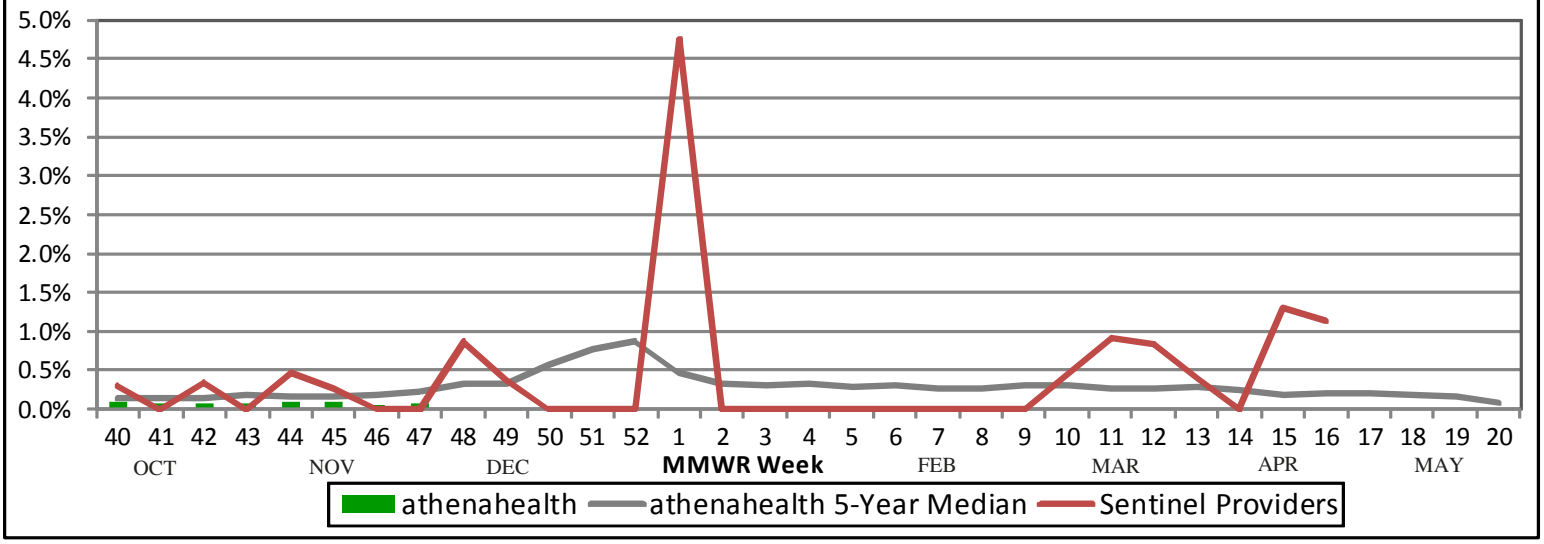

Figure 3: Number of Influenza-Associated Hospitalizations
in Cuyahoga County (using event date)

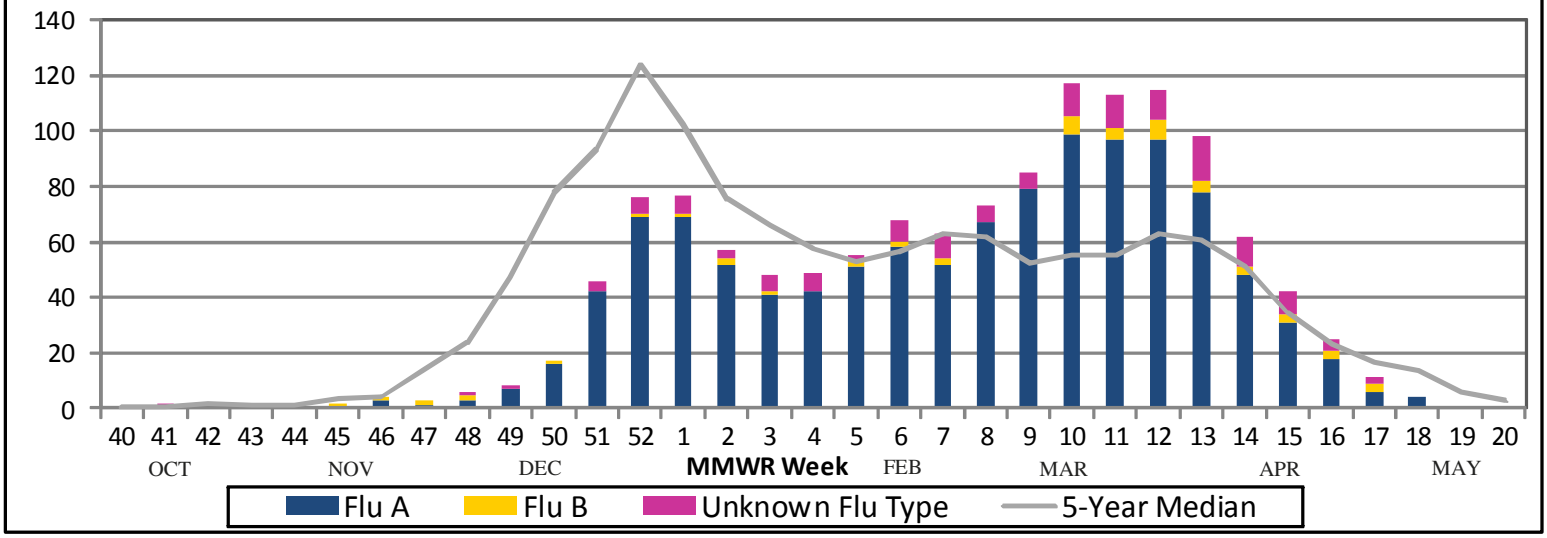

Figure 4A: School Absenteeism (*due to any illness)* in Cuyahoga County

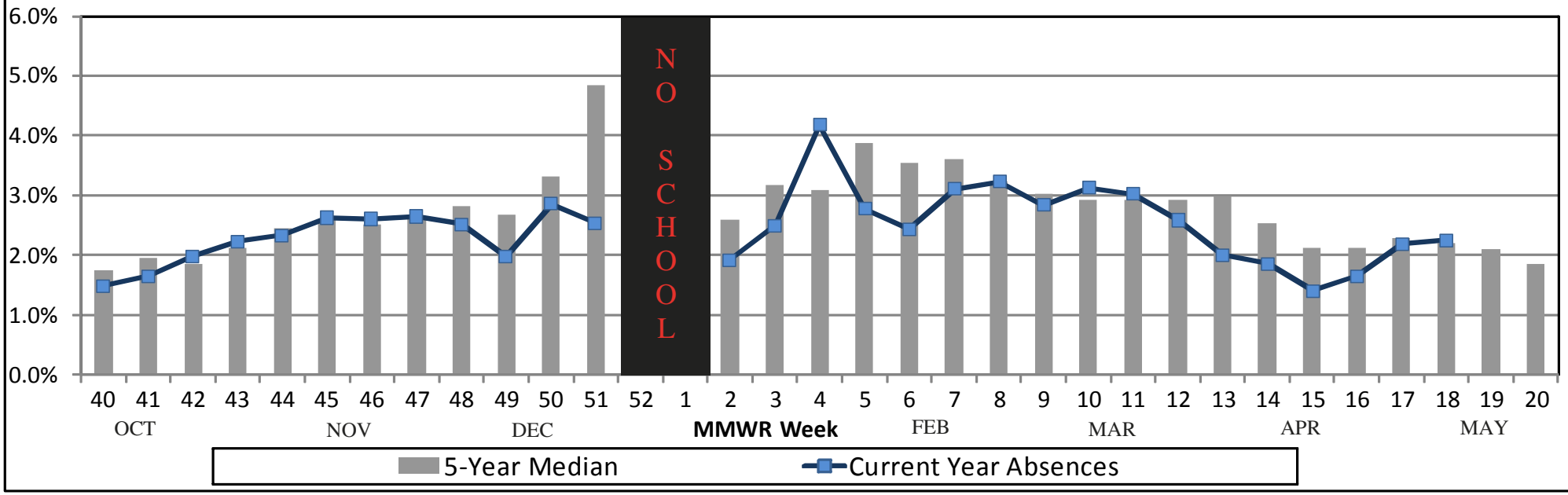

Figure 4B: School Absenteeism (*due to any reason)* in Cuyahoga County

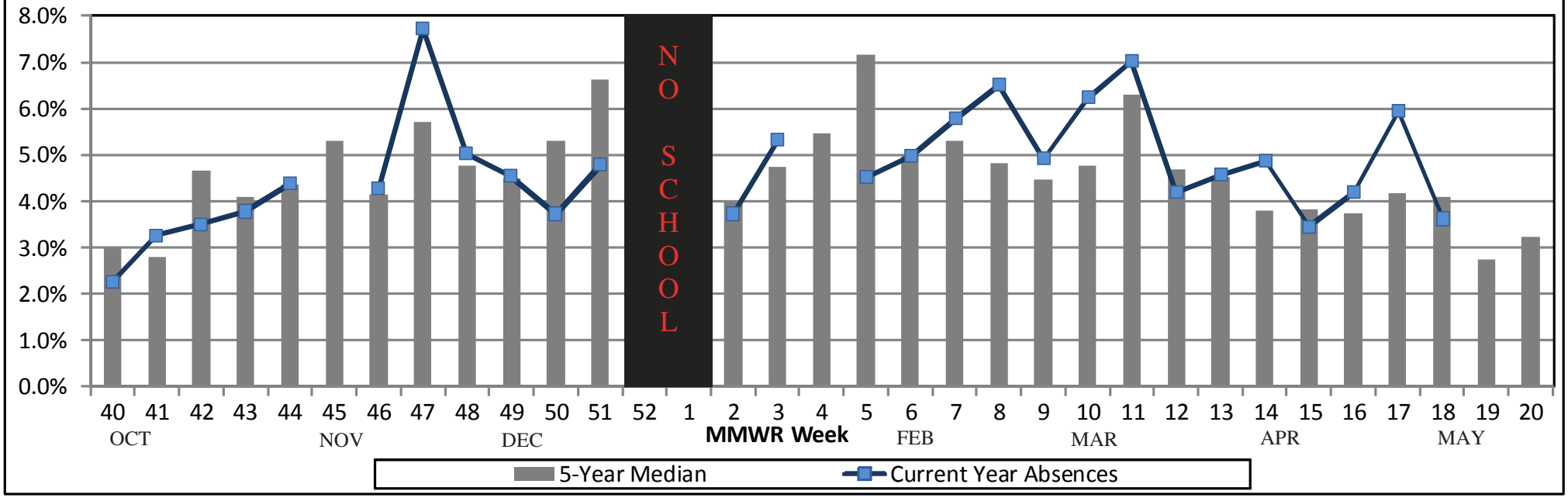

Figure 5: Cuyahoga County Hospital ED Visits for ILI & Fever Symptoms by Age Group

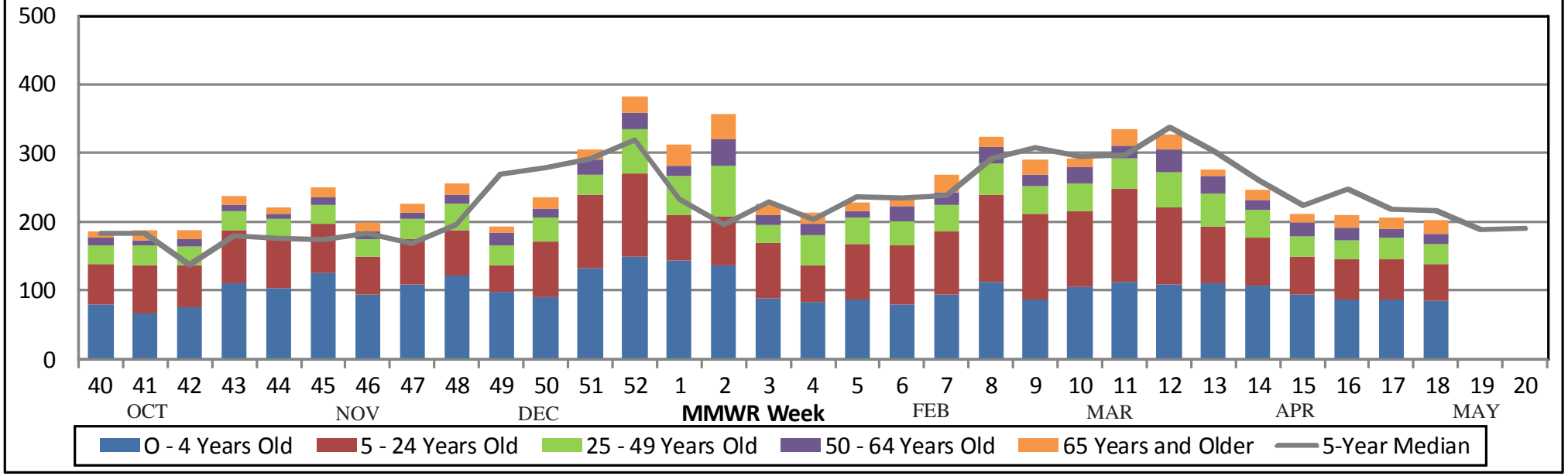

Figure 6: Comparison of Average Weekly OTC Products Sold in Cuyahoga County Drugstores

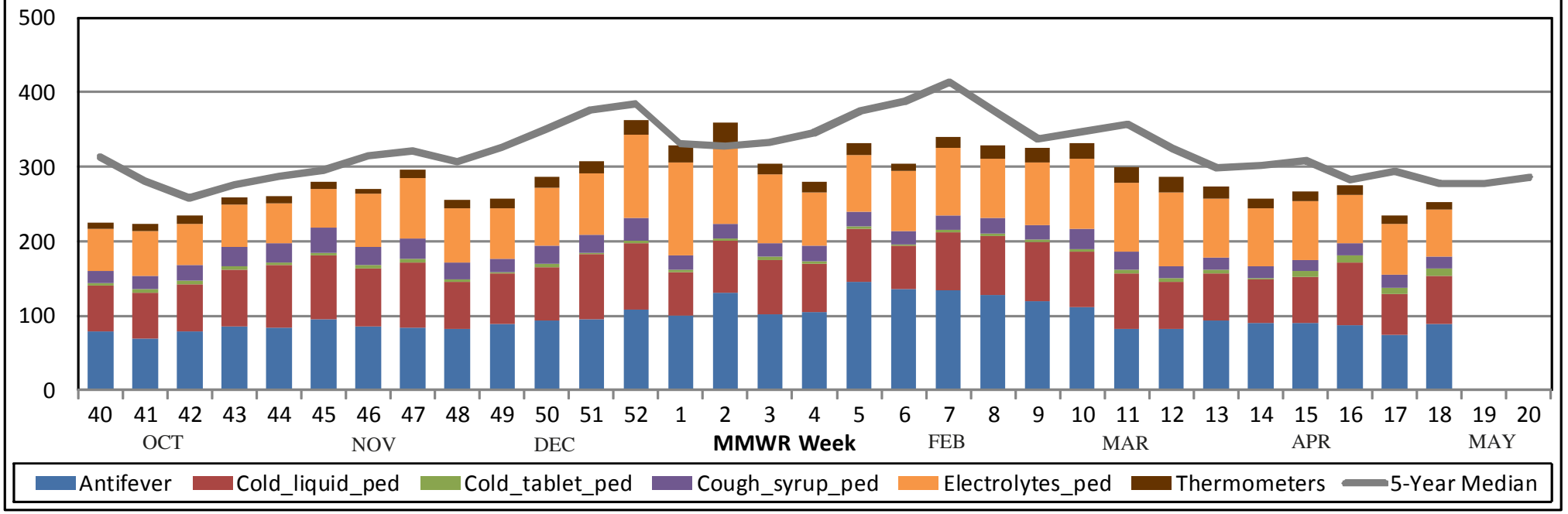

Figure 7 Rate of Fever and Influenza-Like Illness Complaints per 100,000 by Zip Code

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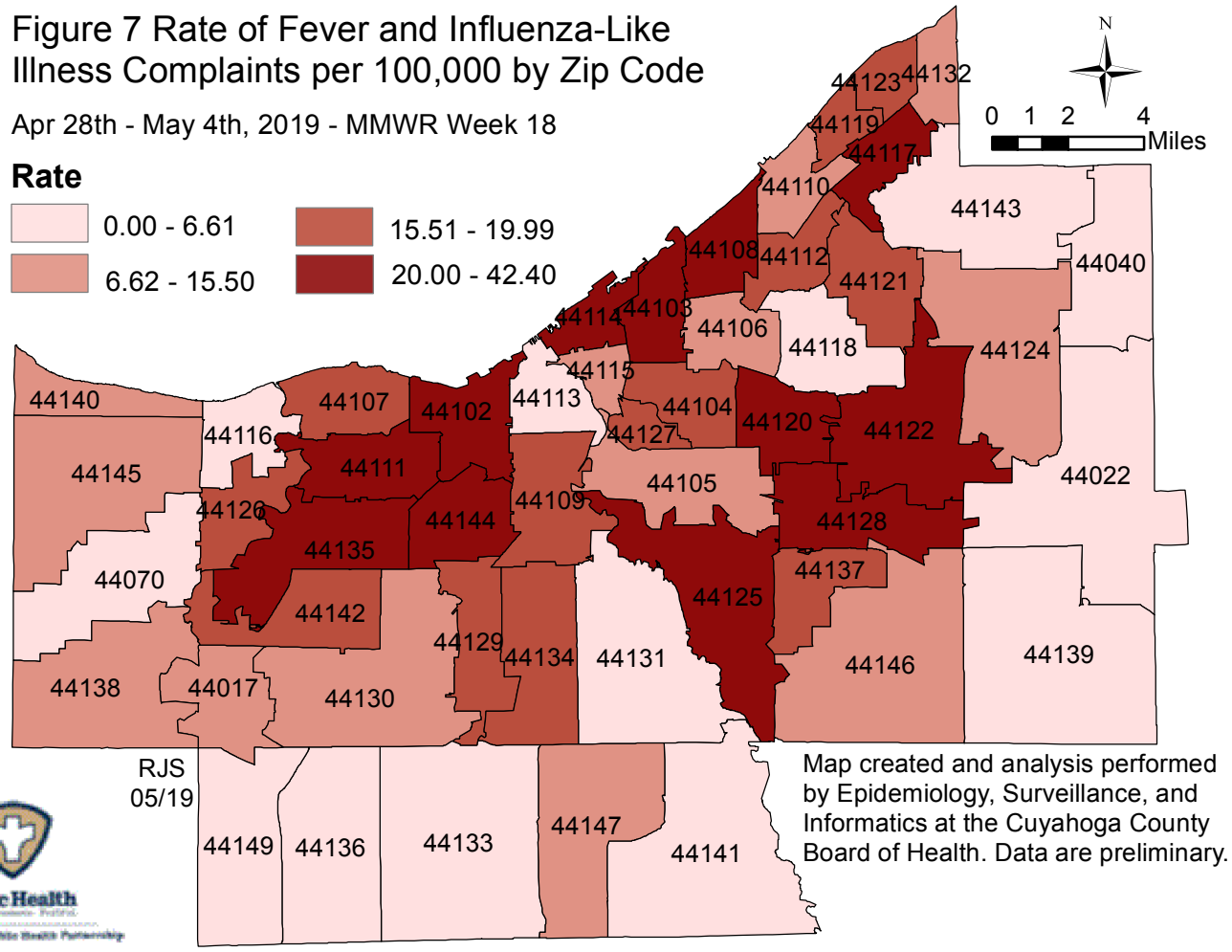

RJS
05/19

Map created and analysis performed by Epidemiology, Surveillance, and Informatics at the Cuyahoga County Board of Health. Data are preliminary.

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Figure 8 Rate of Congestion and Cough Complaints per 100,000 by Zip Code

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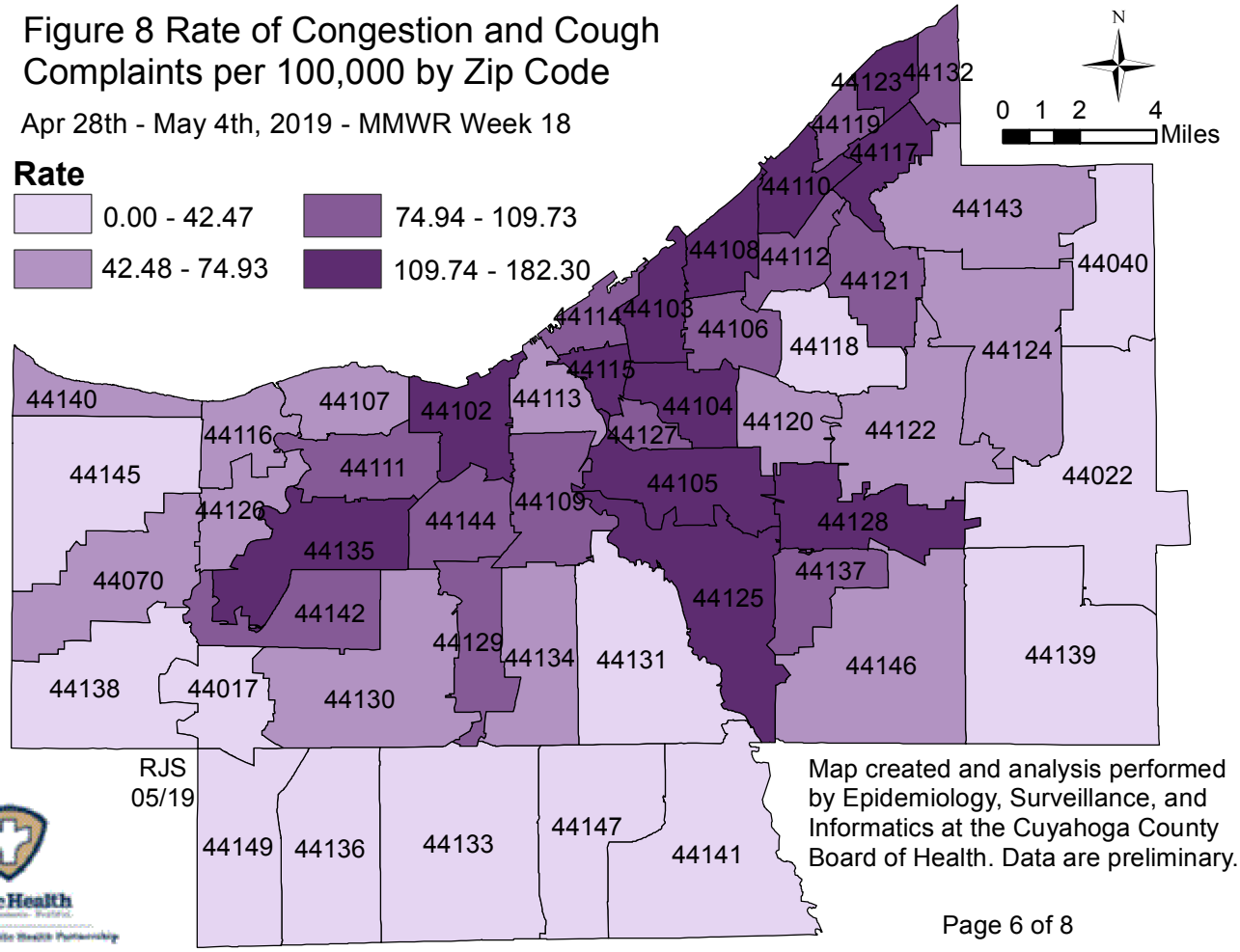

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05/19

Map created and analysis performed by Epidemiology, Surveillance, and Informatics at the Cuyahoga County Board of Health. Data are preliminary.

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Figure 9 Rate of Vomiting and Nausea Complaints per 100,000 by Zip Code

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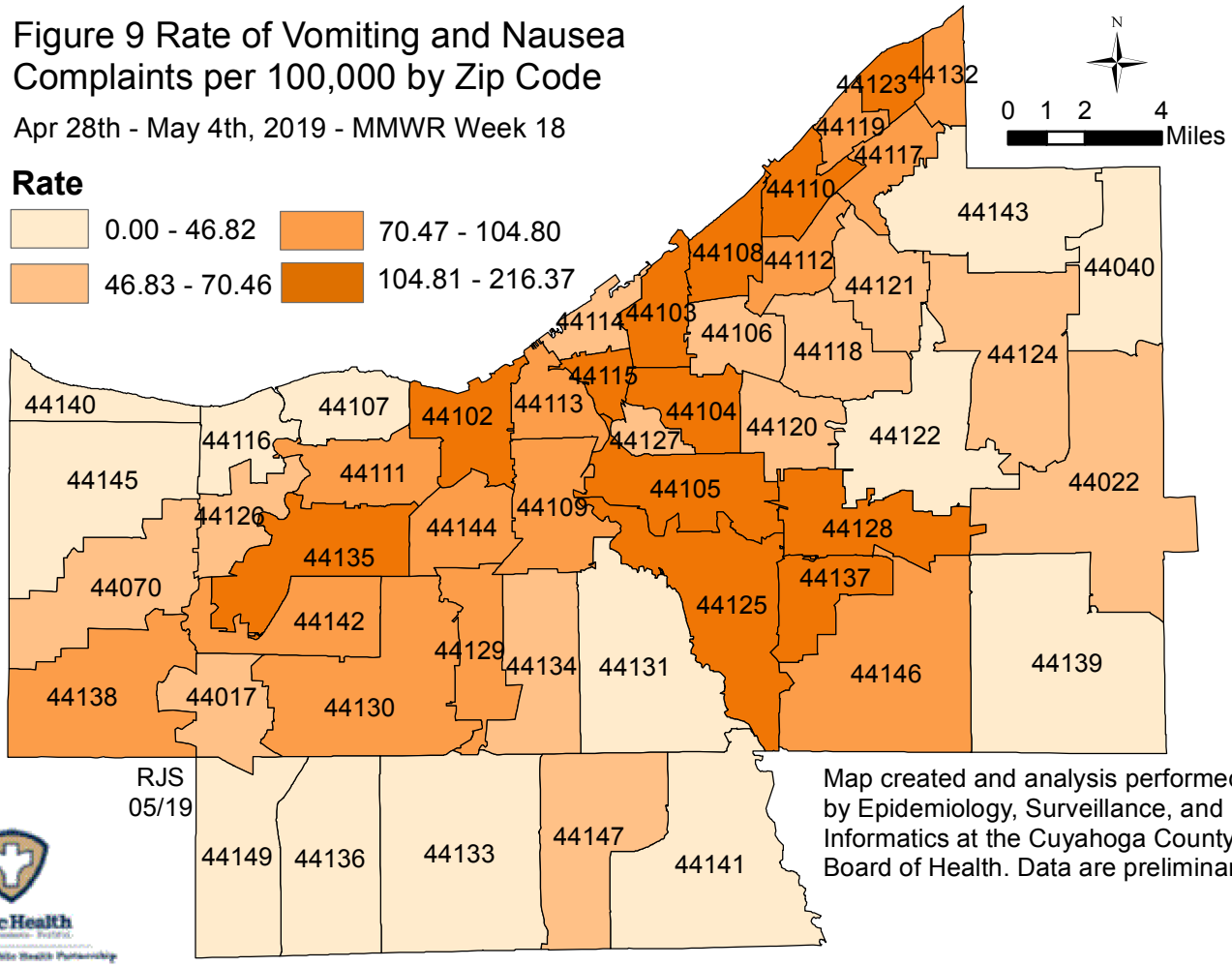

Map created and analysis performed by Epidemiology, Surveillance, and Informatics at the Cuyahoga County Board of Health. Data are preliminary.

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Figure 10 Rate of Diarrhea Complaints per 100,000 by Zip Code

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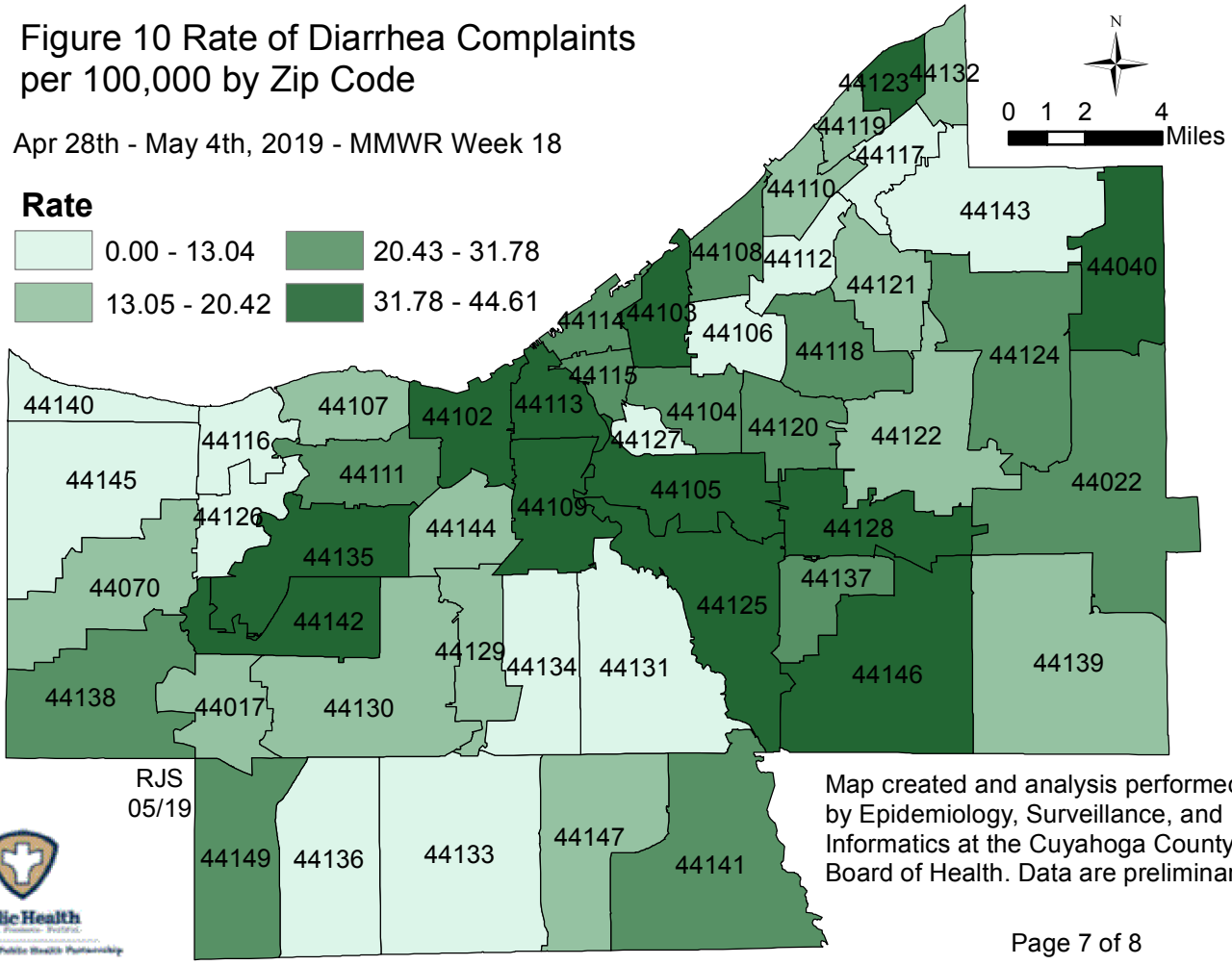

Map created and analysis performed by Epidemiology, Surveillance, and Informatics at the Cuyahoga County Board of Health. Data are preliminary.

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Sources of Influenza Surveillance Data

Six types of data sources are examined on a weekly basis to help determine the influenza activity level for Cuyahoga County:

1) **Ohio Department of Health (ODH) Seasonal Influenza Activity Summary :** The ODH influenza summary provides state-wide data . Data used from this report include: frequency of fever plus influenza-like illness (ILI) associated hospitalizations, number of influenza-associated pediatric mortalities, and number of lab-confirmed influenza cases.

   A) **Influenza-associated Hospitalizations (ODRS):** Influenza-associated hospitalizations are reported by the Cuyahoga County Board of Health (CCBH) and hospitals using the Ohio Disease Reporting System (ODRS). Hospitalizations can be used as an indicator of the severity of illness during a particular influenza season. This condition became reportable in January 2009.

   B) **Influenza-associated Pediatric Mortality (ODRS):** Influenza-associated pediatric mortalities are reported into ODRS by CCBH and hospital staff. Pediatric deaths can be an indicator of the severity of illness during the influenza season. This condition became reportable in 2005.

   C) **Sentinel Providers (ILINet):** Sentinel providers, through the US Influenza-like Illness Surveillance Network (ILINet), collect outpatient influenza-like illness (ILI) data. ILI is defined as a fever (> 100 F), **and** cough *and/or* sore throat without another known cause. Providers report the total number of patients seen, by age group, on a weekly basis. Sentinel providers also submit specimens for influenza testing to the ODH laboratory throughout the influenza season. There are 2 sentinel providers enrolled in Cuyahoga County for the 2015-2016 season.

   D) **ODH Laboratory Surveillance:** The Ohio Department of Health Laboratory reports the number of specimens that test positive for influenza each week. Generally, specimens are submitted by sentinel provider participants. A subset of the positive specimens is sent to CDC for further testing during the season.

2) **Mortality Reporting System (Vital Statistics):** Vital Statistics offices in Cuyahoga County (Cleveland, Euclid, Lakewood, & Parma) reports the percentage of deaths that are due to pneumonia or influenza that occur within their jurisdiction. Cleveland issues death certificates for 56 of the 59 cities in the county.

3) **ILI data (athenahealth)** "ILI estimates are based on insurance claims diagnoses, documented in athenahealth's database. Athenahealth is a healthcare technology and services company for electronic health records, medical billing, patient engagement, and care coordination."

4) **School Absenteeism data (due to illness and due to any reason):** More than 50 Cuyahoga County schools provide absenteeism data for each Tuesday on the number children absent due to any illness or due to any reason as well as sentinel schools that report week absenteeism data.

5) **National Retail Data Monitor (NRDM)-OTC Drug Purchases:** The NRDM collects over-the-counter (OTC) drug sales information from Cuyahoga County chain drug stores and grocery stores. Pediatric cold products, anti-fever products, and thermometer sales are monitored on a weekly basis.

6) **Emergency Department Visits (EpiCenter):** EpiCenter collects emergency department chief complaint data from hospitals and urgent care facilities across Cuyahoga County and classifies them into symptom and syndrome categories. Rates for chief complaints regarding fever + ILI and other symptoms commonly detected during the winter are analyzed.