# Michigan's County Quarterly Immunization Report Card
## Definitions, Data Sources and FAQs,

**DEFINITIONS**

**Census:** The Census Population estimate is the calculated number of people living in an area as of a specified point in time, usually July 1st. The estimated population is calculated using a component of change model that incorporates information on natural increase (births, deaths) and net migration (net domestic migration, net international migration) that has occurred in an area since the latest decennial census. Datasets are available here.

**Local Health Department (LHD):** In Michigan, 83 counties and the city of Detroit are grouped into 45 Local Health Departments based on geography that address the public health needs of the community.

**Michigan Care Improvement Registry (MCIR):** The MCIR was created in 1998 to collect reliable immunization information and make it accessible to authorized users online. In 2006, MCIR was expanded to a lifespan registry to include adults

**HP 2020 Goal:** The Healthy People 2020 Goals provided a set of science-based, 10-year national objectives for improving the health of all Americans. HP 2030 Goals have been released, but several immunization related objectives have been dropped, as a result we are still reporting HP 2020 Goals.

**VFC Providers:** The Vaccines for Children (VFC) program provides free immunization services for children from birth through 18 years of age who would otherwise be unable to pay for the vaccine and/or the administration costs.

**Influenza Sentinel Sites:** Providers in Michigan's component of the Centers for Disease Control and Preventions (CDC's) Outpatient Influenza-like Illness Surveillance Network (ILINet) have two roles: 1) report the total number of patient visits to their facilities each week, as well as the number of patient visits for influenza-like illness (ILI) within five age categories (0-4 years, 5-24 years, 25-49 years, 50-64 years, and 65 + years); 2) collect respiratory specimens from a sample of patients with ILI for virus culture at no charge by the MDHHS Laboratory. The goal is to have one regular reporter for every 250,000 residents.

**Waivers:** An overall percentage of waivers for Kindergarten, 7th grade and new entrants into the county are provided for each county and LHD. There is also a breakdown of the percentage of kindergarten children who had a waiver and the percentage of 7th graders who had a waiver by county. For this county ranking measure, the lower the percentage the higher the ranking.

**School Completion:** This measure reports the percentage of school children in the county that are complete for a defined series based on the student's age. This does not include kids that receive waivers or provisional data.

**Child Care Completion:** This measure reports the percent of children in child care that are complete for a defined series based on their age.

**DATA SOURCES**

**Childhood Vaccination Coverage: US National Immunization Survey (NIS) Coverage Rates.** The NIS was established to provide on-going, consistent data for analyzing vaccination levels among young

children (19-35 months) in the United States. The NIS provides national, regional, state, and selected local area estimates of vaccination coverage for vaccines recommended by the Advisory Committee on Immunization Practices (ACIP).

**Adolescent Vaccination Coverage: NIS-Teen Coverage Rates.** The NIS-Teen was established to provide an ongoing, consistent data set for monitoring adolescent (13-17 years) vaccination coverage in the United States. The NIS-Teen provides national, regional, state, and selected local area estimates of vaccination coverage for vaccines recommended by the ACIP.

**Adult Vaccination Coverage**
**US National Health Interview Survey** (NHIS) monitors the nation's health by conducting in-person household interviews on a broad range of health topics, including vaccinations received by adults.
**Behavioral Risk Factor Surveillance System** (BRFSS) monitors major behavioral risks among adults at the state level and includes questions on health factors related to vaccinations, including yearly questions on flu and pneumococcal vaccinations and questions related to flu, tetanus, and shingles vaccines.
**Morbidity and Mortality Weekly Report** (MMWR) is prepared by the CDC to present scientific publications of new and important public health information and recommendations. The MMWR referenced on the Report Card presents a national representation of pneumococcal vaccination coverage in adults 65 and older based on Medicare claims data.

**US Flu Coverage rates:** FluVaxView. The CDC estimates annual influenza vaccination coverage for the US by utilizing data from several nationally representative surveys: BRFSS, NHIS, and NIS-Flu.

**FREQUENTLY ASKED QUESTIONS (This section will be updated periodically.)**
**Question:** Does a number '1' rank mean the county has the best coverage?
**Answer:** A '1' is good in the ranking and an '84' would indicate the counties coverage falls behind all of the other counties. For all measures **except the waiver data**, a '1' indicates the highest coverage.

**Question:** What does the "+" mean in 1+ and 2+?
**Answer:**

| Vaccine | Description |
|---|---|
| 2+ Hep A | 2 or more doses of Hepatitis A vaccine |
| 4+ DTaP | 4 or more doses of DTaP/DTP/DT |
| 1+ Tdap | 1 or more doses of Tdap, administered on or after age 11 (adolescents) or within the last 10 years (adults) |
| 1+ MenACWY | 1 or more doses of meningococcal conjugate vaccine |
| 1+ MenB | 1 or more doses of meningococcal B vaccine |
| 1+ PPSV23 | 1 or more dose of PPSV23 vaccine |
| 1+ Flu | 1 or more doses of influenza in the specified season |

**Question:** What vaccines are included in the child and adolescent vaccine series calculations?
**Answer:**

| Vaccine Series | Description |
|---|---|
| 4313314 | 4 or more doses of DTaP/DTP/DT, 3 or more doses of Polio, 1 or more dose of MMR, 3 or more doses of Hib, 3 ore more doses of HepB, 1 or more dose of Varicella, 4 or more doses of PCV |

| | |
|---|---|
| 43133142 | 4 or more doses of DTaP/DTP/DT, 3 or more doses of Polio, 1 or more dose of MMR, 3 or more doses of Hib, 3 ore more doses of Hep B, 1 or more dose of Varicella, 4 or more doses of PCV, 2 or more doses of HepA |
| 132321 | 1 or more doses of Tdap, 3 or more doses of Polio, 2 or more doses of MMR, 3 or more doses of HepB, 2 ore more doses of varicella vaccine, 1 or more dose of MenACWY |
| 1323213 | 1 or more doses of Tdap, 3 or more doses of Polio, 2 or more doses of MMR, 3 or more doses of HepB, 2 ore more doses of varicella vaccine, 1 or more dose of MenACWY, HPV complete (with 2 or 3 ore doses (Males & Females)) |

**Question:** Why is adult Tdap coverage so much lower than it used to be?
**Answer:** The calculation method was changed in 2023, to better align with national measures like the **NHIS**. Prior to 2023, MDHHS measured the proportion of adults aged 19 through 64 that had received at least 1 Tdap shot on or after their 11th birthday. As of 2023Q1, we now measure the proportion that have received 1 Tdap shot *within the last 10 years*, resulting in a drop from around 70% to around 50% coverage, statewide.

**Question:** How is the adult composite measure calculated?
**Answer:** The adult composite measure assesses adults 19 years of age and older for completion of their age-based recommended vaccines (see chart below). MCIR data are used for the numerator and US Census estimates are used for the denominator.
Example 1: a 26-year-old is assessed for receipt of influenza in the current season, a tetanus containing vaccine in the previous 10 years, completion of the HPV series, and completion of the hepatitis B series.
Example 2: a 70-year-old is assessed for receipt of influenza in the current season, tetanus containing vaccine in the previous 10 years, completion of the herpes zoster series, and receipt of pneumococcal vaccines.

| | Influenza | Tetanus | Herpes Zoster | HPV | Hepatitis B | Pneumo Complete* |
|---|---|---|---|---|---|---|
| 19-26 years | X | X | | X | X | |
| 27-49 years | X | X | | | X | |
| 50-59 years | X | X | X | | X | |
| 60-64 years | X | X | X | | | |
| ≥65 years | X | X | X | | | X |

* CDC Recommendations for pneumococcal vaccination of adults ≥ 65 Years were updated in 2022, current recommendations can be found at: https://www.cdc.gov/vaccines/vpd/pneumo/hcp/who-when-to-vaccinate.html

**Question:** Are there reasons the NIS-Teen coverage levels are so much higher than Michigan's average coverage levels?
**Answer:** The Michigan coverage data uses data reported to the MCIR for the numerator and denominator. We have an oversaturation of adolescent data in the MCIR which results in a higher denominator than the Census data.

**Question:** Why do you use Census denominators for adult coverage?
**Answer:** Due to multiple factors the adult data in the MCIR are not complete. The Census denominator provides a better estimate of Michigan's adult population.

**Question:** Why is the adult patient population typically smaller than expected?
**Answer:** Recording adult vaccinations in the MCIR is strongly recommended but is not mandatory, unlike child vaccinations. Accordingly, vaccine doses may be administered to adults but not included in this report.

**Question:** Do you filter out people that have moved out of a county?
**Answer:** To match the methodology of the standard MCIR profile reports, we included persons whose patient jurisdiction status is either: 1) Active; 2) Inactive – lost to follow-up; or 3) Inactive- unknown. Further information on the patient status designation is available here.

**Question:** How often are the report cards updated?
**Answer:** The county immunization report cards will be distributed quarterly:
1st quarter: data through March 31
2nd quarter: data through June 30
3rd quarter: data through September 30
4th quarter: data through December 31

**Question:** Why did you decide to rank all of the counties?
**Answer:** When NIS Survey data are published by the CDC the state of Michigan is ranked relative to other states, regardless of their size and population. This motivates us to increase our coverage levels and highlights areas for improvement. The county immunization report cards were developed to bring the same motivation to the county level.

**Question:** Why are the hepatitis B birth dose coverage levels in this county immunization report card different than the coverage levels that are distributed to the birthing hospitals through Perinatal Hepatitis B Prevention Program (PHBPP)?
**Answer:** For NIS comparison**,** this methodology analyzes all children 19 through 35 months old that currently live in the *defined county* who received their hepatitis B vaccine within 3 days of life. The report that is distributed by the PHBPP analyzes hepatitis B vaccine administered at the *specific hospital* within 3 days of life.

**Question:** If a Michigan resident receives a vaccine in a bordering state (i.e. someone receives a vaccine in Ohio) is that data included in this report?
**Answer:** MCIR receives immunization data from Wisconsin (direct data sharing), Illinois (IZ Gateway), and the Veterans Health Administration (IZ Gateway). Unfortunately, we do not currently receive immunization from other states. An individual can ask to have their information from other states entered into MCIR. This may impact the coverage in counties that border other states.

**Question:** When does an influenza season start? When does it end?
**Answer:** The influenza season starts July 1 and ends June 30 of the following year.

**Question:** Who should I contact for questions on these reports?
**Answer:** Ryan Malosh at MaloshR@michigan.gov or 517-342-4428