

Background

The COVID-19 pandemic has had wide ranging and persistent impacts on the incidence of vaccine preventable diseases (VPD), including measles and mumps. Surveillance activities worldwide were negatively impacted. For example, fewer specimens were submitted to the World Health Organization for measles testing in 2020 and 2021 than at any point since 2010.

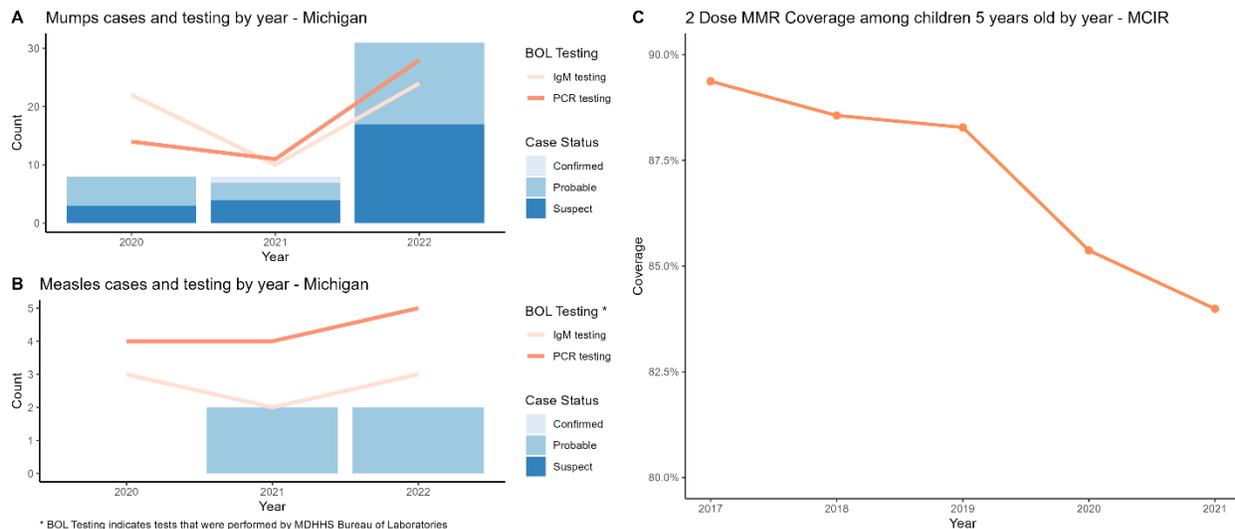
(<https://www.cdc.gov/mmwr/volumes/71/wr/mm7147a1.htm>)

Around the US there have been a number of recent outbreaks of VPD that are concerning. An outbreak of measles was reported this winter in central Ohio

(<https://public.tableau.com/app/profile/columbus/viz/MeaslesPublicReport/MeaslesPublicReport?publsh=yes>), and one case of paralytic polio was linked to ongoing community spread in New York (<https://www.cdc.gov/mmwr/volumes/71/wr/mm7144e2.htm>).

VPD Surveillance in MI

In Michigan, incidence of suspect, probable, or confirmed cases of many VPDs saw an increase in 2022 compared to 2020-21. MDHHS observed more suspect, probable, and confirmed cases of mumps (Figure A) and measles (Figure B) in 2022, than in 2020 and 2021 combined. Similarly, there has been a substantial increase in other reportable VPDs in 2022, up over 33% from 400 cases in 2020 to 532 cases in 2022.



CDC (<https://www.cdc.gov/vaccines/pubs/surv-manual/chapters.html>) and MDHHS

([https://www.michigan.gov/mdhhs/adult-child-](https://www.michigan.gov/mdhhs/adult-child-serv/childrenfamilies/immunization/providerinfo/surveillance/vaccine-preventable-disease-investigation-guidelines)

[serv/childrenfamilies/immunization/providerinfo/surveillance/vaccine-preventable-disease-investigation-guidelines](https://www.michigan.gov/mdhhs/adult-child-serv/childrenfamilies/immunization/providerinfo/surveillance/vaccine-preventable-disease-investigation-guidelines)) guidelines for the control of measles and mumps indicate that PCR is the

preferred testing method for detection of these viruses ideally if collected within the first few days of infection. Serum submission for IgM antibody detection is also important if the window of virus detection has passed, so submission of both sample types is requested

Routine immunization coverage

In Michigan, and nationwide, coverage for routine immunizations has continued to fall in the wake of the COVID-19 pandemic (Figure C). In a recent CDC report, 38 states and the District of Columbia saw an increase in kindergarten required vaccine exemptions during the 2021-2022 school year (https://www.cdc.gov/mmwr/volumes/72/wr/mm7202a2.htm?s_cid=mm7202a2_w). Another report from CDC shows that overall coverage for children 24 months old remains high, but that there are stark disparities with uninsured children eight times more likely to have received no vaccinations (https://www.cdc.gov/mmwr/volumes/72/wr/mm7202a3.htm?s_cid=mm7202a3_w).

These data combined with the resurgence of VPDs leave communities in MI susceptible to outbreaks of vaccine preventable disease.

Appropriate specimen collection

- For suspect or probable cases of measles, it is important to pursue both serologic and virologic testing. It is recommended to collect both a serum for IgM testing and a nasopharyngeal or oropharyngeal in VTM or a nasopharyngeal swab in VTM for a measles virus Nucleic Acid Amplification Test (NAAT) from suspected cases. Specimens should be collected within 7-10 days of the onset of rash.
- For suspect or probable cases of mumps, specimens for both IgM testing (serum) and Mumps NAAT testing (buccal swab), should be collected within 9 days of the onset of symptoms.
- All specimens sent to MDHHS Bureau of Labs for testing must be labeled with the patient's first name, last name, date of birth, date of specimen collection, and specimen source. In addition, they must be sent in on cold packs and received by the laboratory within 48 hours of collection unless frozen.
- Detailed information regarding the collection and submission of specimens for Measles or Mumps testing at the Bureau of Laboratories can be found within the [A-Z Test Listing \(michigan.gov\)](#)
- For other appropriate specimens for other VPDs please refer to MDHHS guidelines (<https://www.michigan.gov/mdhhs/adult-child-serv/childrenfamilies/immunization/providerinfo/surveillance/vaccine-preventable-disease-investigation-guidelines>)

If you have questions, please contact your regional epidemiologist (https://www.michigan.gov/-/media/Project/Websites/mdhhs/Folder1/Folder24/MDSS_Support_Resources.pdf?rev=2da13f95907f42a8a7617fefeb7423a9) or the MDHHS Division of Immunizations at (517) 335-8159.