Follow-up for Positive COVID-19 Cases and their Close Contacts

Tools for LBOHs

October 27, 2020

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Topics Today

- MAVEN Status Map
- CTC – Epidemic Intelligence Unit Presentation
- CTC twice data extract from MAVEN – more details to come with a date
- Key Documents
- Last Week’s Recap
  - Tips for local status map calculations.
- Quick Friday Office Hours Summary
- CDC Updates Close Contact Definition
- Labs 101
  - Testing Types
    - Molecular (PCR) * gold standard
    - Antigen
    - Serology
  - Lab Tab in MAVEN
  - Case Classification
  - Testing Scenarios
- Your Questions

Key Documents Expected Today

- COVID-19 Testing Scenario Questions – Ver 1.0
- School Notification Template Letters

Anyone else feel like Halloween is unnecessary this year? I’ve been wearing a mask and eating candy for 7 months now, I don’t think I need a day dedicated to it anymore....
Tuesday Webinars for COVID-19 Case Investigation and Follow-up

Tuesdays @ 11am


MAVEN Help has Guidance Documents and Previous Webinars:

NEW! MAVEN Office Hours w/Hillary & Scott:
Fridays 11:00-12:00

- Open Q&A. Not a formal presentation.
- Send us your questions or ask us live.
- No requirement to attend. Pop in, pop out.
- You’ll need to register via Scott’s email.

MDPH Epi Program: 617-983-6800
MDPH MAVEN Help Desk: isishelp@mass.gov
MDPH ISIS Help Desk: 617-983-6801
MDPH ISIS Fax: 617-983-6813
MDPH Food Protection Program: 617-983-6712
CTC Help Desk: 857-305-2828
Email: COVID19CommunityTracingCollaborativeQuestions@mass.gov
CTC Supervisor Contact List
Higher Ed Contact List
MAVEN Updates

As of 10/27/2020

Scott Troppy, MPH, PMP, CIC, Surveillance Epidemiologist
Bureau of Infectious Disease and Laboratory Sciences
MA Department of Public Health
Updates for today, Tuesday, 10/27

- **CTC - Epidemic Intelligence Unit Presentation**
  - Taylor Brock-Fisher, Unit Manager

- **MAVEN Status Map** – three towns offline
  - Plympton, New Ashford and Warwick

- **LBOH Immediate Workflow** – COVID-19 event only – please check your workflow and clear out the workflow

- **CTC Data Pull** – moving to two times a day
MAVEN Status Map as of 10/27/2020

- Plympton
- New Ashford
- Warwick
Immediate Notification workflow (COVID-19 Only)

- **UPDATE: COVID-19 Immediate Notification Workflow** - 1,300 events in this workflow today
  - This will allow proper notification of all new COVID-19 events for your jurisdiction. *(Confirmed and Probable Cases)*
  - Please review all events/cases in this workflow and complete your **Step 1- LBOH Notification to “Yes”** to clear out this workflow.
  - If you are retaining ownership then complete Steps 2 (Investigation Started) & 3 (LBOH Investigator (name, lboh, phone number))
  - When you are done then complete Steps 4 (CRF Complete) & 5 (Final Review)
CTC Data Pull to Twice a Day

- We will be moving to sending **two files daily** to the CTC for follow-up.
- The first file will still be generated at 10 am, and the second file will be generated at 2 pm.
- None of the filter rules regarding COVID assistance are changing – no new cases for which COVID assistance has not been indicated will be sent at the 2 pm file, **only** cases for which “COVID Assistance Requested” was marked to “**Yes**” between 10 am and 2 pm will go in the second daily send.
- **Estimated Date:** ~~~Two Weeks
- **Questions/Concerns:** Email [isishelp@state.ma.us](mailto:isishelp@state.ma.us)
MAVEN Cases
Sent to CTC at 10 am and 2 pm
Summary of Key Guidance & Tools

- **10/13/2020 - Calculating Your Community Threshold red/yellow/green Status Tool:**
  - October 13 - Red-Yellow-Green Community Thresholds Spreadsheet

- **9/2/2020 Updated COVID-19 Case Classification Manual**
  - Serology positive labs are now classified as “suspect” cases.

- **Date: 8/22/2020: - COVID-19 PCR and Antibody Testing Public Health Response Recommendations**
  - Table describes different Public Health Actions based upon different testing results.
  - Big take home: PCR & Antigen positive patients should be treated like cases.
  - Serology + cases no longer require public health follow-up.

- **Date 8/10/2020: Follow-up for Positive Antigen Test Results**
  - [http://www.maventrainingsite.com/maven-help/pdf/Antigen%20Results%20Follow-up%20Guidance_ver1.0_August_10.pdf](http://www.maventrainingsite.com/maven-help/pdf/Antigen%20Results%20Follow-up%20Guidance_ver1.0_August_10.pdf)

- **Date: 8/9/2020: Updated Isolation & Quarantine Guidelines Documents**
  - Translations Pending

- **Date: 8/7/2020: Updated MA Testing Guidance**
  - Update says to get a PCR with ANY Antigen test
  - Also says no need to test again in 90 days after initial diagnosis.
Summary of Key Guidance & Tools

Date: 7/24/2020 - Gov. Baker issued **COVID-19 Order No. 45** which issues a mandatory 14 day quarantine period for travelers to MA (including MA residents who traveled outside of MA and are returning).

- If travelers (including returning MA residents) don’t fit into one of the 3 Exemption Categories, must quarantine.
- There is a form to fill out online. [https://www.mass.gov/forms/massachusetts-travel-form](https://www.mass.gov/forms/massachusetts-travel-form)
- A negative PCR test within 72 hours of travel can excuse you from quarantine.

Date: Aug 16, 2020 – Updated CDC Guidance on Duration of Isolation & Precautions for Adults with COVID-19

- 10 Day Isolation Period now has more data supporting it.
- Ignore most additional PCR tests up to 3 months after initial illness onset.
- No need to quarantine up to 3 months after initial illness onset.

Date: May 7, 2020 – Occupational Exposure & Return to Work Guidance


We do not yet have an updated State Doc reflecting this. But you should use this CDC updated guidance for follow-up.

A bit outdated after the new CDC guidance.

More Updated FAQs. Check them out!
Updates – A quick recap for 10/27.

• 10/20 – last week we discussed the following:

• MAVEN Updates
• Electronic Lab Reporting - Guest Sita Smith
• Reviewed Tips for local status map calculations.
  • Quick Friday Office Hours Summary


Slides: Check out last week's slides on October 20 - Electronic Lab Overview
Friday Office Hours: Questions About Symptoms in Kids

K-12 DESE:
Below is the full list of symptoms for which caregivers should monitor their children, and staff should monitor themselves:

- Fever (100.0°F Fahrenheit or higher), chills, or shaking chills (CDC has lowered the temperature from 100.4 to 100.0)
- Cough (not due to other known cause, such as chronic cough)
- Difficulty breathing or shortness of breath
- New loss of taste or smell
- Sore throat
- Headache when in combination with other symptoms
- Muscle aches or body aches
- Nausea, vomiting, or diarrhea
- Fatigue, when in combination with other symptoms
- Nasal congestion or runny nose (not due to other known causes, such as allergies) when in combination with other symptoms

If staff or students have any of these symptoms, they should be tested and must follow the protocols in this doc.

Every school should have a list of available test sites. A list of test sites is available here, and Massachusetts also has an interactive testing map. A list of test sites is available here; this is Massachusetts’s interactive testing map.

Daycares & Early Childhood Care Facilities EEC:
The following symptoms, if observed in a child or staff member are cause for immediate isolation and exclusion from child care:

- a. Fever (100.0°F and higher), feverish, had chills
- b. Cough
- c. Sore throat
- d. Difficulty breathing
- e. Gastrointestinal distress (Nausea, vomiting, or diarrhea)
- f. New loss of taste or smell
- g. New muscle aches

The following symptoms, if observed in combination with symptoms from above, are cause for immediate isolation and exclusion from child care:

- a. Fatigue
- b. Headache
- c. Runny nose or congestion
- d. Any other signs of illness

https://www.doe.mass.edu/covid19/ondesktop/protocols/

https://eeclead.force.com/resource/1598635047000/ChildCarePlaybook
Friday Office Hours:
Essential Workers Who Test Positive

Q. Can Essential Workers continue to work after testing positive? Does it matter if they have symptoms?

A. Definitely not. Once ANYONE tests positive for COVID-19, they are a case, and they must isolate accordingly based upon date of symptom onset (if they had symptoms) or date of positive test collected (if they did not have symptoms).

The essential worker exemption only applies to people who have had an exposure and are in quarantine as contacts. In this scenario, if an essential worker (like a healthcare worker) remains asymptomatic and does not test positive, they may continue to work their essential job during their 14 day quarantine.

However, if the worksite can provide coverage and it would not affect the essential service if the worker stayed out on quarantine (for example, staffing is sufficient to cover their missed shifts), then there is NO REQUIREMENT that the essential worker continue to work during quarantine. This would be determined by the facility.

They may not want their worker to continue working during quarantine due to the potential risks of additional worksite exposures.

There is no Essential Worker Exemption to continue working if someone tests positive (regardless of symptoms).
Defining Close Contact: 15 min Cumulative

• Last week on October 21, CDC updated their definition of “close contact” to clarify:
  • **CLOSE CONTACT:** Someone who was within 6 feet of an infected person for a **cumulative total of 15 minutes or more over a 24-hour period.**
  • Exposure may be cumulative: Individual exposures added together over a 24-hour period (e.g., three 5-minute exposures for a total of 15 minutes).
    • The exposure does NOT need to be 15 consecutive minutes (e.g., 15 minutes all in one chunk)

• **What’s Not New:** MDPH had been using ‘cumulative’ exposure within a calendar day prior to this clarification from CDC.

• **What’s New:** The 24 hour timeframe. The 15 minutes can possibly accumulate over 2 school days within a 24 hour period (e.g., if a contact was exposed for 10 minutes at 2pm, and again for ≥5 minutes the next morning at 8am, this would be within 24 hours.)
Testing for SARS-CoV-2

• Nasopharyngeal Swab (NP swab) began as the only specimen option.

• But now:
  • Oropharyngeal Swabs are also being utilized.
  • Nasal Swabs are also being utilized.
  • Some saliva tests are available.
  • Self collected anterior nasal swabs are also now utilized.
Testing for SARS-CoV-2: Respiratory Specimens

• Swabs can be for PCR or Antigen Testing
• PCR Testing – swab is utilized to detect virus RNA * Gold Standard
• Antigen Testing – swab is utilized to detect a surface protein on virus (not actual virus RNA).

When seeking a diagnostic test for SARS-CoV-2, it’s not really about the type of specimen collected, it is about the type of test that is run.
Some Testing Background Resources:

Good intro video & summary table describing Molecular, Antigen, and Antibody tests:
• https://www.fda.gov/consumers/consumer-updates/coronavirus-testing-basics

FDA Emergency Use Authorizations (look up a specific test here):

Summary Article:
• https://time.com/5880255/covid-19-tests-types/
SO Many Tests are Available

• We receive questions on different tests all the time. Every time a new company puts out a new test, it is in the news. It becomes difficult to generalize or provide specific performance data on a test type when there are so many brands available and being utilized across the country and world.

• The U.S. Food and Drug Administration (FDA) has so far granted emergency-use authorization to more than 200 different tests meant to detect a current or past infection from SARS-CoV-2, the virus that causes COVID-19.

• Every test is going to have different individual performance criteria.

• For our purposes, COVID-19 tests fall into three main categories:
  • Molecular (PCR)
  • Antigen
  • Antibody.
1. Molecular (PCR) Testing

• The majority of COVID-19 testing happening in the U.S. right now uses polymerase chain reaction (PCR) technology.

• These tests detect disease by looking for traces of the virus’ genetic material on a sample most often collected via a nose or throat swab.

• The U.S. Centers for Disease Control and Prevention (CDC) considers PCR tests the “gold standard” of COVID-19 testing.
PCR Tests: Largely Accurately Results

**Falsely Positive:** not typical for PCR testing.

- The false positive rate — how often the test says you have the virus when you actually do not — should be close to zero.

- Most false-positive results are thought to be due to lab contamination or other problems with how the lab has performed the test, not limitations of the test itself.

**Falsely Negative:** Can happen if we miss the virus.

- False negatives — a test that says you don’t have the virus when you actually do have the virus. The reported rate of false negatives is as low as 2% and as high as 37%.

- False negatives can happen if health professionals do not go deep enough into the nose or throat to collect a good sample.

- The timing of the test matters, too. Infections can be missed if testing happens too soon after exposure.

*Source: Harvard Medical School*

PCR Tests: Require more Resources

- Running a PCR test and reading its results requires specific equipment and chemicals (known as reagents) that have been in short supply, which is why there have been testing backlogs at different points.
Molecular Tests in the News

• **Abbott’s ID NOW Test**
  • Rapid Molecular test (may be less sensitive than traditional PCR tests).

• **Saliva tests**
  • Coronavirus saliva tests are a new type of PCR diagnostic for COVID-19.
  • Utilizes standard PCR technology and does require similar manual labor in the lab for processing.
  • Benefit: collecting spit is less invasive than a nose or throat swab and easier to do at home or without medical training
  • [SalivaDirect](#), the test from Yale, also does not require proprietary chemical reagents or test tubes, which its developers hope will help ease supply and access issues.

• But hundreds are [FDA approved](#) and potentially available.

Molecular Tests (PCRs) = Confirmed Case Classification Status
Rapid Molecular (PCR) – can it be used for return to school? - YES

• **The Abbot ID Now** is a PCR test and though it is somewhat less sensitive than lab-based tests, we consider the results adequate for testing.

• In general a negative result is adequate for return to school and of course a positive is confirmatory. Some clinical discretion is advised and if there is strong clinical suspicion of COVID, IDSA guidelines recommend that a negative test be repeated. This is regardless of what type of PCR is used.

• Will show up in Lab Tab in MAVEN Event:
  • **SARS coronavirus 2 RdRp gene**
Negative Molecular Test Results

Q. What is the recommendation if an appropriately timed PCR test is negative but there is still reason to think the patient is positive (e.g., positive antigen, classic symptoms, clearly identified as a close contact, etc.)

A. Remember no test is perfect. Infectious Diseases Society of America (IDSA) guidance does say that if clinical suspicion for COVID is high, a negative PCR (of any type) should be repeated. This would be an individual clinical decision.
2. Antigen Tests

- Antigen tests can turn around results in minutes—but speed comes with tradeoffs.

- Like PCR tests, antigen tests usually require a nose or throat swab. But unlike PCR tests, which look for genetic material from the SARS-CoV-2 virus, antigen tests look for proteins that live on the virus’ surface.

- This process is a little less labor-intensive than PCR testing, since there isn’t as much chemistry involved, but it’s also less sensitive.
Antigen Tests

• There is now considerable availability of antigen-based, point of care tests. It is anticipated that these tests can expand capacity for COVID diagnosis and screening.

• However, there are a number of challenges. Antigen-based tests have sensitivity limits and may fail to identify a proportion of people with the disease.

• Concerns are now emerging about the specificity of these tests and false positives can be particularly dangerous in certain settings.
Antigen Tests: we pay a price for speed

Falsely Positive: Can happen with Antigen Tests, although more rare.

- Can be false positive if the test picks up on proteins that look similar to those from SARS-CoV-2.

Falsely Negative: Can happen if we miss the virus.

- Can happen if swab misses proteins entirely.
- The reported rate of false negative results is as high as 50%, which is why antigen tests are not favored by the FDA as a single test for active infection.

Thus we ask for antigen results to be confirmed with a PCR test.

Source: Harvard Medical School

https://time.com/5880255/covid-19-tests-types/
Antigen Tests in the News


• Abbott BinaxNOW rapid point-of-care tests
  • MA DPH received a large shipment of these tests – they are antigen tests.
    • Will show up in Lab Tab in MAVEN event as follows: SARS-CoV-2 Ag

Antigen Tests = Probable Case Classification Status
Molecular (PCR) and Antigen Testing

**Molecular Test (PCR)**
- Also Known As:
  - Diagnostic test,
  - viral test,
  - molecular test,
  - nucleic acid amplification test (NAAT),
  - RT-PCR test,
  - LAMP test

(Some molecular tests can be rapid, but most are not)

**Preferred Test**

**Antigen Test - Newer**
- Also Known As:
  - Rapid diagnostic test

(Usually, a rapid test is referring to an antigen test, although ‘could’ be molecular)

Needs PCR follow-up to confirm any result.
# Molecular (PCR) and Antigen Testing

## Molecular Test (PCR)
- Detects genetic material of the virus using a lab technique called polymerase chain reaction (PCR).
- Nasal, Throat, or Nasopharyngeal Swab or from saliva
- Most tests one to two days if sent to an outside lab in MA. Several more days if sent out of state to national commercial labs at this time.
  - Some Molecular Tests can be a Rapid Test (results in minutes on site)
- Some home test kits have also been FDA approved.

## Antigen Test - Newer
- Detects certain proteins that are part of the virus.
- Nasal or Throat swab to get a fluid sample
- Rapid Test - results in minutes on site.
- Less sensitive than PCR
  - May miss some cases (false negative)
- May be less specific than PCR as well
  - May incorrectly detect disease (false positive)
- Guidance from MDPH: PCR following ANY antigen result to confirm results.
- More providers now offering this test.

**Preferred Test**

**Needs PCR follow-up to confirm any result.**
3. Antibody Testing (serology)

• Lots of serology tests are being developed which will look for antibodies. Some are being reported to MDPH and MAVEN. Questions remain:
  • What do the different antibody test results mean?
    • Evidence of old infection?
    • Evidence of immunity?
    • Evidence of acute infection?

• MDPH Does NOT recommend serology testing at this time to diagnose acute illness.
  • Questions about quality of individual test types remain
  • Unknown timing of COVID antibody development and duration

• PCR Testing (swabs) should be used for diagnostic purposes.
  • PCR tests are still the gold standard and trump serology results
Antibody Testing (serology)

Antibody Testing 101: Some Basics

- Different types of Antibodies can be measured.
  - **Immunoglobulin M (IgM):** This is the first antibody the body makes when it fights a new infection.
  - **Immunoglobulin G (IgG):** This is the most common antibody. IgG can take time to form after an infection or immunization.
  - **Total immunoglobulin (Total Ig):** looking at a total number (not type-specific).

- Exact timing and duration of these antibodies is unclear for COVID-19.
  - Questions we still want to know for COVID-19:
    - What levels of IgG could indicate immunity and how long would that last?

- Antibody testing is a developing field of research for COVID-19, and we can use our knowledge of other infections to help drive our interpretations, but ultimately, we feel best about PCR testing.
2. Antigen Tests vs. 3. Antibody Tests

- **Antigen Tests** are rapid point of care tests that utilize *swabs* to detect proteins on the surface of the virus.

- **Antibody Tests** are *serology (blood)* tests that look for antibodies that have been produced in the body following exposure to the virus.
  - Antibody tests do not detect current infection. They are not a diagnostic test.
# Molecular (PCR), Antigen, and Antibody (Serology) Testing

<table>
<thead>
<tr>
<th>Molecular Test</th>
<th>Antigen Test - Newer</th>
<th>Antibody (Serology Test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(PCR)</td>
<td>(always rapid)</td>
<td></td>
</tr>
<tr>
<td>Listed in Lab Tab as follows:</td>
<td>Listed in Lab Tab as follows:</td>
<td>Listed in Lab Tab as follows:</td>
</tr>
<tr>
<td>• 2019-nCoV Real-time RT-PCR (PCR)</td>
<td>• SARS-CoV-2 Ag (Antigen Test)</td>
<td>• SARS-CoV-2 IgM (Serology IgM specific)</td>
</tr>
<tr>
<td>• SARS coronavirus 2 RdRp gene (PCR RAPID)</td>
<td></td>
<td>• SARS-CoV-2 IgG (Serology IgG specific)</td>
</tr>
</tbody>
</table>

**Positive Molecular Test:**
Case Classification = CONFIRMED

**Positive Antigen Test:**
Case Classification = PROBABLE

**Positive Antibody Test:**
Case Classification = SUSPECT

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What’s linked? Go here to see/link to contacts or a cluster event.

Confirmed/Probable/Suspect/Contact

Lab Tab to see lab tests

Patient Person Details (address, phone)

Electronic Trail for this event. Who has entered data? Where did this case come from?

6 Question Packages

View Wizard
Antibody Testing (serology)

- Where can we tell what kind of test a patient had?
  - A. Check the Lab Tab.

Test Types You May See:
- PCR Test: 2019-nCoV Real-time RT-PCR
- Rapid PCR Test: SARS coronavirus 2 RdRp gene
- SARS-CoV-2 Ag: Antigen Test
- Serology IgM specific: SARS-CoV-2 IgM
- Serology IgG specific: SARS-CoV-2 IgG
- Serology IgA specific: SARS-CoV-2 IgA
- Serology Antibody Type Unspecified: SARS-CoV-2 IgG + IgM

Details fill in here for different labs highlighted in each of the rows above.

Your Questions:

- **Q.** Does the SARS-CoV-2 PCR test cross react with other common coronaviruses (like the common cold)?

- **A.** The PCR test is very specific for SARS-CoV-2. The CDC evaluated their assay for cross reactivity to all 4 seasonal coronaviruses and SARS and MERS. The data is at the end of the Instructions for use on the FDA website. If you want details. [https://www.fda.gov/media/134922/download](https://www.fda.gov/media/134922/download)

- Basically the CDC chose regions of the genome that are different from other seasonal coronaviruses so that it would be specific. Since PCR can only tolerate a few mid-matches in the genetic code before it stops detecting the target, they were able to ensure that we are actually detecting COVID.
Q. Is the PCR test cross-reactive with other coronaviruses?

- These are all of the viruses they tested this assay against to show that it does not cross-react.
- This doesn’t mean it is impossible that this assay would detect a seasonal coronavirus, but it is very unlikely that both PCR targets would be positive and cross-reactive.
Your Questions:

• Q. When should someone get a test after travel or a possible exposure and how accurate a negative test is if it was taken on Day 2 or 4, etc. following exposure?

• A. MDPH doesn’t have a specific recommendation for the perfect test date following an exposure to SARS-CoV-2.

• On average, symptoms of the virus develop five to six days post exposure, but the incubation period can be as long as 14 days. And, of course some people never develop noticeable or debilitating symptoms — hence the recommendation to self-quarantine and self-monitor for a full two weeks after any likely exposure.
Your Questions:

• Q. What is the accuracy of different kinds of tests (antigen vs. standard molecular vs. rapid molecular, vs. antibody as well as swabs vs. saliva, etc.)?

• A. It is difficult to come up with a single answer to this question due to the >200 different diagnostic tests available and their different individual specifications, as well as the different populations these tests are recommended for. But here is the summary:

  • Molecular (PCR) Tests are the gold standard for diagnosing (or ruling out) SARS-CoV-2 infection.
    • Within those, Rapid PCR tests may be less sensitive than the standard lab test.
    • Saliva tests sound promising, but are very new and more data on performance is needed.
    • Home collection, patient collection vs. trained clinician or clinician observed, etc. adds more variables to a the equation.

  • Antigen Tests may have their place (they are faster and less resource intensive), but should be confirmed by PCR. We know they are less sensitive (may miss some infections), and can also be less specific (may produce false positives). These are best in places where frequent testing is utilized.

  • Antibody (serology) testing can tell us some things about previous exposure, but it cannot tell us if someone is currently infectious and cannot tell us yet if someone is immune.
Your Questions: Testing

• Q. How is replication-competent virus tested?

• A. The only way to know if a person is actually still infectious — shedding or emitting what’s known as “replication-competent virus” — is to try to grow virus from a specimen from that person. That process, called culturing, is time-consuming and in the case of SARS-CoV-2, not so easy to do. The virus can only be worked on in laboratories that have a high level of biosecurity — BSL 3. Not every hospital would have that capacity. So yes, a test exists. Alas, it is not available in most settings.
Case Classification Manual for COVID-19

• The Case Classification Manual gives us nationally recognized definitions for classifying cases and ensures confirmed cases in Massachusetts are comparable to confirmed cases in Mississippi.


• Case Classification Manual Folder will have the updated Case Definitions and also a list of different lab and how they will look in MAVEN.

• This is an Excellent Resource.
Case Definition – What does this mean?

- **CONFIRMED and PROBABLE COVID-19 MAVEN Events should be interviewed.**
  - Data Collection, Isolation & Contact Notification as applicable

- **CONFIRMED cases (PCR+)**
  - Symptomatic & Asymptomatic Cases should be isolated & interviewed.
  - Town Dashboard Data & EMS reports come from Confirmed Cases.

- **Antigen Positive Cases (Probable)**
  - Symptomatic & Asymptomatic Cases should be isolated & interviewed.
  - MDPH recommends that an Antigen result be confirmed with a PCR test. We have guidance on what to do with discordant results. But if you don’t get a PCR test as well, we treat these like active cases and isolate & contact trace accordingly.

- **Serology (Antibody) Positive Cases (Suspect)**
  - Local jurisdiction may choose to follow-up, but it is not required by MDPH.
Case Classification Manual for COVID-19

## Case Classification Manual

- Pages 3&4
  - Table on different Lab Reports
    - Test Type
    - Specimen Source
    - Result possibilities
  - What informatics terms to use for each lab (what you see in the Lab Tab & what the technical IT jargon means)

### Table on different Lab Reports

<table>
<thead>
<tr>
<th>Report Type</th>
<th>Test Type</th>
<th>Source</th>
<th>Result</th>
<th>New event or beyond report period?</th>
<th>Data Entry</th>
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<tbody>
<tr>
<td>Laboratory Report</td>
<td>PCR</td>
<td>Clinical specimen</td>
<td>Positive</td>
<td>Yes</td>
<td>New event Confirmed</td>
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<tr>
<td>Select: 2019-nCoV Real-time RT-PCR</td>
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<td>No</td>
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<td>PCR</td>
<td>Clinical specimen</td>
<td>Negative</td>
<td>Yes</td>
<td>New event Unclassified</td>
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<tr>
<td>Select: 2019-nCoV Real-time RT-PCR</td>
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<td></td>
<td></td>
<td>No</td>
<td>Same event</td>
</tr>
<tr>
<td>Laboratory Report</td>
<td>PCR</td>
<td>Clinical specimen</td>
<td>Unsatisfactory, Inconclusive, Invalid</td>
<td>Yes</td>
<td>New event Unclassified</td>
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<tr>
<td>Select: 2019-nCoV Real-time RT-PCR</td>
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<td></td>
<td></td>
<td>No</td>
<td>Same event</td>
</tr>
<tr>
<td>Laboratory Report</td>
<td>Rapid molecular or molecular point-of-care tests</td>
<td>Clinical specimen</td>
<td>Positive</td>
<td>Yes</td>
<td>New event Confirmed</td>
</tr>
<tr>
<td>Select: SARS coronavirus 2 RdRp gene</td>
<td></td>
<td></td>
<td></td>
<td>No</td>
<td>Same event</td>
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<td>Clinical specimen</td>
<td>Negative</td>
<td>Yes</td>
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<td>Select: SARS coronavirus 2 RdRp gene</td>
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<tr>
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<td>Clinical specimen</td>
<td>Inconclusive, Invalid</td>
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<td>New event Unclassified</td>
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<td>Select: SARS coronavirus 2 RdRp gene</td>
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<td>No</td>
<td>Same event</td>
</tr>
<tr>
<td>Laboratory Report</td>
<td>Antibody tests</td>
<td>Clinical specimen</td>
<td>Positive</td>
<td>Yes</td>
<td>New event Suspect</td>
</tr>
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<td>IgM specific: SARS-CoV-2 IgM</td>
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<td>No</td>
<td>Same event</td>
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<td>IgG specific: SARS-CoV-2 IgG</td>
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<td>IgA specific: SARS-CoV-2 IgA</td>
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<tr>
<td>Laboratory Report</td>
<td>Antibody tests</td>
<td>Clinical specimen</td>
<td>Negative</td>
<td>Yes</td>
<td>New event Unclassified</td>
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All this covid-19 talk is annoying. Here are some better lab results.