MAAP: For Medical Providers: Assessing for COVID-19 in children with symptoms and NO KNOWN EXPOSURE to COVID-19 (Updated 8/05/21) (Both Vaccinated and Unvaccinated)

IF EXPOSED to COVID-19, algorithm does NOT apply, patient will follow CDC guidelines.

<table>
<thead>
<tr>
<th>Lower risk</th>
<th>Higher Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Headache</td>
<td>New, uncontrolled cough</td>
</tr>
<tr>
<td>Myalgias</td>
<td>Shortness of breath or difficulty breathing (not exercise induced asthma)</td>
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<tr>
<td>Runny nose/congestion</td>
<td>New loss of taste or smell</td>
</tr>
<tr>
<td>Nausea/vomiting/diarrhea</td>
<td>Fever (100.4 or higher), chills, rigors</td>
</tr>
<tr>
<td>Any of above symptoms present beyond typical symptoms (i.e. allergies)</td>
<td>Sore throat</td>
</tr>
</tbody>
</table>

1 lower risk symptom, Not exposed: Recommend testing using one of following options:

1. Molecular testing done and negative: Return to school/child care when afebrile 24 hours without antipyretics, and symptoms improving.
2. Return to school/child care 24 hours after symptom improving. If child is not improving after 24 hours, caregiver should contact their primary care provider.

> 2 lower risk symptoms OR 1 higher risk symptom, not exposed: Recommend testing using one of following options:

1. Antigen testing done and negative: “Presumptive negative”. School instructs family to f/u with primary care provider.
2. Molecular testing done and negative: “Probable” case. School instructs family to f/u with primary care provider.
3. Antigen testing done and positive: Return to school/child care when afebrile 24 hours without antipyretics, and symptoms improving.
4. Molecular testing done and positive: Return to school/child care when afebrile 24 hours without antipyretics, and symptoms improving.
5. Molecular testing done and positive: Return to school/child care after 10 days AND 24 hours afebrile without antipyretics AND symptoms improving AND ME CDC approval.
6. No testing AND no alternative diagnosis (i.e. family declines, unable to obtain test, etc.). To be determined by PCP evaluation. Ideally PCR and negative test. If unable to obtain PCR return to school/child care after 10 days, 24 hours afebrile without antipyretics AND symptoms improving. CDC notified of these cases.

This guidance was adapted from Washington University in St Louis by the Maine Chapter of the American Academy of Pediatrics, school nurses, school physicians, and Pediatric Infectious Disease Experts. It is subject to change based on the evolving science. [https://www.maineaap.org/news/2020/school-re-entry-resources](https://www.maineaap.org/news/2020/school-re-entry-resources) (8/05/21)
MAAP: For Medical Providers: Management of ASYMPTOMATIC children EXPOSED to COVID-19

Child is exposed to confirmed OR presumptive case of COVID-19

Not Fully Vaccinated:
- Child should quarantine for 10 days from LAST exposure to case

Molecular testing performed 5-7 days after last contact

If MOLECULAR TESTING positive:
- ISOLATE for 10 days from date of test, contact tracing performed for school contacts. If symptoms develop, isolate for 10 days from symptoms starting

If MOLECULAR TESTING negative:
- QUARANTINE for 10 days from last case contact, no contact tracing for school contacts. If symptoms develop, isolate for 10 days from symptoms starting

If child has tested positive for COVID in the last 90 days

Fully Vaccinated:
- Fully vaccinated is defined as 2 weeks after receiving 2nd COVID-19 vaccine if receiving Pfizer or Moderna or 2 weeks after 1 shot of J and J vaccine.

Asymptomatic: Molecular testing performed 3-5 days after last contact and to wear a mask in public indoor settings for 14 days or until they receive a negative test result. Do not need to quarantine if asymptomatic

If child develops symptoms, should be tested with either antigen or molecular testing. If positive, should isolate for 10 days

Do not need to test or quarantine in the 90 days post positive COVID test

This guidance was adapted from the Massachusetts Chapter of the American Academy of Pediatrics by the Maine Chapter of the American Academy of Pediatrics, school nurses, school physicians, and Pediatric Infectious Disease Experts. It is subject to change based on the evolving science. [https://www.maineaap.org/news/2020/school-re-entry-resources](https://www.maineaap.org/news/2020/school-re-entry-resources) (8/05/21)
Pooled PCR Testing Protocol (Updated 08/05/2021)

COVID-19 ToolKit | Department of Education (maine.gov)

Samples collected from Students and Staff Once Per Week
*exclude those from pool who test positive for COVID-19 for 90 days

Pooled Samples Delivered to Lab for Processing Via Overnight FedEx or Courier

Pooled Test Result is **Positive**

- All Members tested individually using Abbott BinaxNOW rapid Ag test
- *BinaxNOW tests do identify positive individual(s) from pool

Repeat BinaxNOW the following day, or within 2 days, whichever is sooner. If NO positive individual is identified, then proceed with next scheduled Pooled PCR Test.

Pooled Test Result is **Negative**

- Pool Members continue learning/instruction without Interruption

*First three positive BinaxNOW tests recommended for PCR confirmation per Federal CDC guidelines to open an outbreak.

Close contacts **not** in Pool Testing:
- Close contacts not in testing program are quarantined except:
  - Those who tested COVID + in last 90 days
  - Fully vaccinated Individuals do not need to quarantine but should be tested 3-5 days after exposure.
How to count the days for isolation for patients who are COVID+

Important dates to know - CASES

- **Last Date of Isolation** – this is the last day that a case must be separated from everyone
  - If no symptoms Last Date of Isolation is 10 days after test collected.
  - If symptoms Last Date of Isolation is 10 days after symptoms started AND no fever for 24 hrs.

If there is a question about the length of isolation or quarantine, the final decision will be made by the Maine CDC case investigator in consultation with the school nurse contact tracing team

*In some cases, isolation and quarantine times may be longer including for those who are severely ill with COVID-19 or immunocompromised

Maine CDC Packet on COVID
How to count the days of quarantine for family members of patients who are COVID+

Children and family members who are not fully vaccinated and are living with a household member who is COVID+, need to self-quarantine and monitor for symptoms while the COVID-19 case is home sick. Once the case is released from isolation, the child/family members would quarantine for 10 additional days, then continue to monitor for symptoms for 4 days.

Links to posters to explain timing:
- What to Do if You Have Had Close Contact With a Person With COVID-19 (maine.gov)
- Ending COVID-19 Isolation in Non-Healthcare Settings (PDF)
- Arabic | Français | Português | Soomaali | Español

1. The page 1 algorithm is for symptomatic patients with no known exposures. Threshold for testing will depend on level of community transmission. The page 2 algorithm is for patients WITH exposures. Page 3 is the Maine DHHS Pooled Testing protocol. Algorithms are not intended to replace clinical judgement. Pages 4 and 5 have an overview of counting isolation/quarantine days.

2. Exposure is defined as within 6 feet for 15 minutes of cumulative exposure to COVID positive individual. Even if tested, an exposed, unvaccinated patient will need to quarantine for 10 days from last exposure. [https://www.cdc.gov/coronavirus/2019-ncov/php/contact-tracing/contact-tracing-plan/contact-tracing.html]

3. Available COVID tests for individuals with symptoms suggestive of COVID-19:
   - **Molecular tests:**
     - PCR is most reliable and remains gold standard for testing; is typically run at laboratories, often with 48-72hr turnaround but sometimes longer
     - Isothermal RNA Amplification Tests – e.g. Abbot ID NOW rapid test: less reliable than PCR testing; should be used within first 7 days of symptoms
   - **Antigen testing:** done as rapid tests with results in 15'; have good sensitivity & specificity, but somewhat lower than PCR testing. Antigen tests should be performed as early in illness as possible and not after 7 days of symptom onset.
     - Antigen platform tests: Quidel Sofia SARS Antigen FIA and BD Veritor System- should be used within first 5 days of symptoms
     - Antigen test cards: BinaxNOW - should be used within first 7 days of symptoms

4. Interpreting rapid antigen test results:
   - **Positive result:** in settings of lower prevalence, the positive predictive value may be low and lead to false positive tests; therefore positives should be confirmed by PCR testing if testing is available. In addition, the first three positive BinaxNOW tests are recommended for PCR confirmation per Federal CDC guidelines to open an outbreak.
   - **Negative result:** suggestive that the individual does not have COVID-19. However, if an individual has a known COVID-19 exposure and/or has symptoms suggestive of COVID-19, they should be further evaluated and have additional testing with a PCR test. Currently, antigen tests should not be used for asymptomatic children unless it is part of a surveillance program with an ongoing, scheduled testing plan done in consultation with the Maine CDC.

All test results should be entered into the Maine CDC Point-of-Care (REDCap) online reporting system. Questions should be directed to the Maine CDC Infectious Disease Line at 1-800-821-5821. The Maine CDC recommends quarantining all close contacts of a probable case in the same way a positive case. Once PCR is complete, if they are later deemed "not a case" the close contacts would then be released. In cases of discordant antigen/PCR test results, the provider should contact the ME CDC. If a PCR test is positive and antigen is negative, treat as a positive case; discuss with the Maine CDC if the antigen test is positive and the PCR is negative.

5. When conducting rapid antigen tests, sites should be prepared to do a confirmatory PCR test for negative results with symptoms concerning for covid-19, and/or exposures, and for positive results if PCR is readily available. PCR testing should be done within 24 hours and no longer than 48 hours; after 48 hours it is considered a new test and can't be matched to the antigen results. If PCR testing is not available at the site, the site should have a relationship with a health care provider who can do PCR testing.

6. Other Dx to consider in addition to COVID-19: Pertussis, Strep Throat, Common Cold, Flu, Asthma, Allergies, GI illness, Ear infection, etc.

7. To return to school/childcare, recommend a note from their medical practice or provider.


11. More information on testing is available at the Maine CDC COVID-19 Health Care Provider page – scroll to “Info for Providers Receiving Abbott BinaxNOW Ag Tests”

Updated 8/05/21
Table 2. Adjusted odds ratios for hospitalization, ICU admission, and death among reported COVID-19 cases.

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Hospitalization</th>
<th>ICU Admission</th>
<th>Death</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
<td>OR (95% CI)</td>
</tr>
<tr>
<td>Probable Delta variant</td>
<td>2.20 (1.93 to 2.53)</td>
<td>3.87 (2.98 to 4.99)</td>
<td>2.37 (1.50 to 3.30)</td>
</tr>
<tr>
<td>N501Y+ variant</td>
<td>1.59 (1.49 to 1.69)</td>
<td>2.05 (1.82 to 2.34)</td>
<td>1.61 (1.40 to 1.87)</td>
</tr>
<tr>
<td>Male sex</td>
<td>1.29 (1.24 to 1.35)</td>
<td>1.60 (1.47 to 1.74)</td>
<td>1.60 (1.46 to 1.77)</td>
</tr>
<tr>
<td>Age (per 10-year increase)</td>
<td>1.95 (1.93 to 1.98)</td>
<td>1.82 (1.78 to 1.87)</td>
<td>3.03 (2.92 to 3.14)</td>
</tr>
<tr>
<td>Comorbidity</td>
<td>2.69 (2.51 to 2.85)</td>
<td>2.52 (2.24 to 2.80)</td>
<td>2.28 (2.00 to 2.59)</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>6.40 (4.37 to 8.62)</td>
<td>6.85 (3.34 to 11.80)</td>
<td>--- ---</td>
</tr>
<tr>
<td>Series week</td>
<td>0.995 (0.989 to 1.00)</td>
<td>0.979 (0.966 to 0.990)</td>
<td>0.949 (0.934 to 0.964)</td>
</tr>
</tbody>
</table>
The Delta Variant

Table 1: Odds ratios of candidate predictors for composite outcome of oxygen requirement, ICU admission or death in cases with sequences available from 1 January 2021 to 22 May 2021 in Singapore (P.1 excluded due to small sample size) (n=967)

<table>
<thead>
<tr>
<th>Variant</th>
<th>Univariable model</th>
<th>Multivariable model^</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Crude OR (95% CI)</td>
<td>p-value</td>
<td>Adjusted OR (95% CI)</td>
<td>p-value</td>
</tr>
<tr>
<td>Others</td>
<td>Ref</td>
<td>-</td>
<td>Ref</td>
<td>-</td>
</tr>
<tr>
<td>B.1.1.7 (Alpha)</td>
<td>1.10 (0.18 – 8.41)</td>
<td>0.920</td>
<td>1.88 (0.30 – 14.76)</td>
<td>0.500</td>
</tr>
<tr>
<td>B.1.351 (Beta)</td>
<td>0.78 (0.09 – 6.58)</td>
<td>0.807</td>
<td>1.69 (0.19 – 14.69)</td>
<td>0.610</td>
</tr>
<tr>
<td>B.1.617.2 (Delta)</td>
<td>5.55 (1.66 – 34.44)</td>
<td>0.020</td>
<td>4.90 (1.43 – 30.78)</td>
<td>0.033</td>
</tr>
<tr>
<td>Age group (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;45</td>
<td>Ref</td>
<td>-</td>
<td>Ref</td>
<td>-</td>
</tr>
<tr>
<td>45-64</td>
<td>7.91 (3.64 – 18.52)</td>
<td>&lt;0.001</td>
<td>6.62 (2.99 – 15.79)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>≥65</td>
<td>19.73 (8.13 – 49.99)</td>
<td>&lt;0.001</td>
<td>13.84 (5.48 – 36.62)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Female gender</td>
<td>1.91 (1.03 – 3.58)</td>
<td>0.041</td>
<td>1.42 (0.74 – 2.75)</td>
<td>0.291</td>
</tr>
</tbody>
</table>

^Adjusted for variant type, age group and gender.

OR: odds ratio; CI: confidence interval; Ref: referent
The Delta Variant and Children

New pediatric hospital admissions

Per 1 million people, 17 years old or younger with confirmed covid-19

The Washington Post, August 10, 2021
Delta Variant and Transmission

FIGURE 1. SARS-CoV-2 infections (N = 469) associated with large public gatherings, by date of specimen collection and vaccination status* — Barnstable County, Massachusetts, July 2021

Multiple events and large public gatherings

Increase in COVID-19 cases reported to MA DPH

Abbreviation: MA DPH = Massachusetts Department of Public Health.
* Fully vaccinated was defined as ≥14 days after completion of state immunization registry–documented COVID-19 vaccination as recommended by the Advisory Committee on Immunization Practices

Delta Variant and Transmission

Quarantine Rules in School

<table>
<thead>
<tr>
<th>Table 2: Summary of Quarantine Exceptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quarantine Status (see 1-4 under “F. Isolation &amp; Quarantine”)</strong></td>
</tr>
<tr>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Exception 1: Vaccination</td>
</tr>
<tr>
<td>Exception 2: 90 days</td>
</tr>
<tr>
<td>Exception 3: Pooled testing</td>
</tr>
<tr>
<td>Exception 4: School with universal masking</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>No exceptions or symptomatic</td>
</tr>
</tbody>
</table>

Antibody Therapy

- Casirivimab and imdevimab-recombinant human IgG1 monoclonal antibodies targeting the receptor domain of the spike protein
- EUA for single IV infusion for age 12 and up/at least 40 kg with positive PCR and who are at high risk for progression
  - Older age (> 65)
  - Obesity/overweight-for age 12-17 that is BMI > 85%
  - Pregnancy
  - Chronic kidney disease
  - Diabetes
  - Immune suppressive disease or treatment
  - Chronic lung disease (asthma moderate to severe)
  - Sickle cell disease
  - Neurodevelopmental disorders
  - Medical related technological dependence
- May be useful for post-exposure prophylaxis for high risk individuals
  - Not fully vaccinated, OR not expected to mount an immune response to vaccine
  - Have been exposed or are at high risk of exposure (ie nursing homes/prisons)
  - Not for pre-exposure prophylaxis
  - Not to replace vaccine
- Not for those who are hospitalized, require oxygen for covid-19, or increase in baseline oxygen due to covid-19
- Can call peds ID (662-5522 #9) to discuss indications-not routinely recommended for pediatric patients