

# Ambulatory Negative Covid Test Algorithm—Symptomatic Pediatric Patient (< 18 years old)

Estimates of the sensitivity of covid 19 PCR testing vary widely but may be in the 70-90% range in ambulatory patients. Sensitivity highest within 3-5d after symptoms onset due to high viral loads.

**Factors that may increase false negatives:**

**Assay used:**

- Lab-based PCR (e.g. YNHH, Mayo, Quest) estimated at 85-90% sensitive
- POC tests (e.g. Abbott ID now and others) predicted to be 10% lower (currently not being done in < 18 years old)

**Other factors:**

- Poor sample quality or sampling technique
- Advanced disease stage—viral loads are highest EARLY in disease
- Variable viral shedding, including patient-specific factors
- Disease severity

**NEGATIVE** test result in a **SYMPTOMATIC** patient



Mod-HIGH  
Advise self isolate;  
Consider PUI

Worsening symptoms or failure to improve

High risk patient\* with persistent symptoms OR high risk household\*\*

Known covid + patient in the household

Improving symptoms

- **Retest for covid in 2-3d**
- Ensure high quality sample
- Consider additional diagnostic testing (e.g. labs, CXR) if can be done safely
- Consider home O2 sat monitoring if available
- **Refer to ED if clinically warranted**

**Labs to consider:** CBC, CRP, ferritin, procalcitonin, complete metabolic panel, D-Dimer, PT/PTT, fibrinogen, troponin, BNP  
*(Lymphopenia, elevated inflammatory markers, hepatitis, elevated D-dimer, PT/PTT examples of labs consistent with COVID-19)*

- **Presume COVID positive** and self isolate for at least 14d from symptom onset with resolving symptoms and 72h fever free off antipyretics
- Repeat testing not needed unless progressive symptoms

Low, or alternative diagnosis likely  
Self isolate until 3d after resolution of symptoms

- \*Pediatric patients with the following conditions/characteristics may be at increased risk for severe disease:**
- BMI > 95% for age
  - Diabetes
  - Congenital or chronic heart, kidney, liver or lung disease
  - Asthma that requires daily medications
  - Malignancy and undergoing treatment
  - Immunosuppressive illness or medication
  - Smoker (tobacco products, e-cigarettes vaping, marijuana)

- \*\*High risk household member with high risk condition**
- Age > 60
  - BMI > 30
  - Diabetes
  - Chronic heart, kidney, liver or lung disease
  - Asthma that requires daily medications
  - Malignancy and undergoing treatment
  - Immunosuppressive illness or medication
  - Smoker