

## DEFINITION

Child has symptoms of COVID-19 (cough, fever, shortness of breath or others) AND:

- **Positive lab test confirms the diagnosis** OR
- **Doctor (or NP/ PA) makes a clinical diagnosis** (suspected diagnosis) OR
- **Triage Nurse makes suspected diagnosis** based on symptoms consistent with COVID-19 and nurse judgment.
- Confirmation of Diagnosis: COVID-19 testing is now widely available. It should be performed on all the above suspected cases.
- **Triage Bypass:** *Asymptomatic patients with a positive COVID-19 lab test* are also covered in this protocol. Triage not needed in these cases. Go directly to Home Care.
- Also Included: Suspected Influenza calls when flu is also widespread in the community.
- **Updated: January 24, 2022** (version 15)

### COVID-19 Main Symptoms (CDC)

COVID-19 should be suspected in people who have 1 or more of the following symptoms (CDC) and have not been vaccinated against COVID-19:

- Cough
- Shortness of breath (difficulty breathing)
- Fever or chills
- Loss of smell or taste
- Muscle or body aches
- Headache
- Sore throat
- Runny nose (not from allergies)
- Fatigue
- The CDC also includes the following less common symptoms: nausea, vomiting and diarrhea. In isolation, these symptoms are not very helpful for recognizing COVID-19. Unless there is associated close contact with a COVID-19 patient, these symptoms can usually be triaged and managed in those specific protocols. So can an isolated headache. For reasons of safety, all respiratory symptoms (such as runny nose and sore throat) are considered COVID-19 until disproven by testing.

### COVID-19 Fully Vaccinated Patients who Develop COVID-19 Compatible Symptoms

- COVID-19 vaccines approved by the FDA are highly effective. Research data has confirmed that protective antibody levels are still high at 6 months in most people after completing the vaccine series.
- However, some may develop a mild breakthrough infection and can transmit the infection to others.

### Vaccine Status Definitions (CDC 1-16-2022)

**Vaccines Up-to-date** ("Fully Vaccinated" is term used in the COVID-19 protocols)

- Completed the Pfizer or Moderna primary vaccine series AND also received a booster shot OR
- Completed the Pfizer or Moderna primary vaccine series within the last 5 months AND is not yet eligible for a booster shot (mainly applies to children) OR
- Received J&J primary vaccine AND also received a booster shot

## Vaccines Not Up-to-date ("Partially" or "Unvaccinated" is term used in the COVID-19 protocols)

- Unvaccinated: Has not received any COVID-19 vaccines.
- Completed the Pfizer or Moderna primary vaccine series AND 5 or more months ago BUT has not received a booster shot OR
- Received only one Pfizer or Moderna vaccine OR
- Received J&J primary vaccine AND 2 or more months ago BUT has not received a booster shot
- **Note:** Also, if less than 14 days since the shot, the person is only "partially vaccinated." *This waiting period does not apply to booster shots.*

## TRIAGE ASSESSMENT QUESTIONS

### Call EMS 911 Now

Severe difficulty breathing (struggling for each breath, unable to speak or cry, making grunting noises with each breath, severe retractions) (Triage tip: Listen to the child's breathing.)

Slow, shallow, weak breathing

*R/O: respiratory depression with impending apnea*

Bluish (or gray) lips or face now

*R/O: cyanosis and need for oxygen*

Difficult to awaken or not alert when awake

*R/O: encephalitis*

Very weak (doesn't move or make eye contact)

*R/O: sepsis or shock*

Sounds like a life-threatening emergency to the triager

### See More Appropriate Protocol

Runny nose from nasal allergies

*Go to Protocol: Nasal Allergies (Hay Fever) (Pediatric)*

[1] Headache is isolated symptom (no fever) AND [2] no known COVID-19 close contact

*Go to Protocol: Headache (Pediatric)*

[1] Vomiting is isolated symptom (no fever) AND [2] no known COVID-19 close contact

*Go to Protocol: Vomiting without Diarrhea (Pediatric)*

[1] Diarrhea is isolated symptom (no fever) AND [2] no known COVID-19 close contact

*Go to Protocol: Diarrhea (Pediatric)*

[1] COVID-19 exposure AND [2] NO symptoms

*Go to Protocol: COVID-19 - Exposure (Pediatric)*

[1] COVID-19 vaccine general reaction (fever, headache, muscle aches, fatigue) AND [2] starts within 48 hours of shot (Note: vaccine does not cause respiratory symptoms. Stay here for those symptoms.)

*Go to Protocol: COVID-19 Vaccine Reactions and Questions (Pediatric)*

COVID-19 vaccines, questions about

[Go to Protocol: COVID-19 Vaccine Reactions and Questions \(Pediatric\)](#)

[1] Diagnosed with influenza within the last 2 weeks by a HCP AND [2] follow-up call

[Go to Protocol: Influenza \(Flu\) Follow-up Call \(Pediatric\)](#)

[1] Household exposure to known influenza (flu test positive) AND [2] child with influenza-like symptoms

[Go to Protocol: Influenza \(Flu\) - Seasonal \(Pediatric\)](#)

## Go to ED Now

Difficulty breathing confirmed by triager BUT not severe (includes tight breathing and hard breathing)

*R/O: pneumonia*

Ribs are pulling in with each breath (retractions)

*R/O: pneumonia*

Age < 12 weeks with fever 100.4 F (38.0 C) or higher rectally

*R/O: sepsis*

SEVERE chest pain (excruciating)

*R/O: pneumonia, pleurisy, pulmonary emboli*

Muscle or body pains AND complication suspected (can't stand, can't walk, can barely walk, can't move arm or hand normally or other serious symptom)

Headache AND complication suspected (stiff neck, incapacitated by pain, worst headache ever, confused, weakness or other serious symptom)

## Go to ED/UCC Now (or to Office with PCP Approval)

Stridor (harsh sound with breathing in) is present now OR has occurred 2 or more times

Rapid breathing (Breaths/min > 60 if < 2 mo; > 50 if 2-12 mo; > 40 if 1-5 years; > 30 if 6-11 years; > 20 if > 12 years)

*R/O: respiratory distress. (Caution: Do not attribute abnormal RR to fever)*

MODERATE chest pain that keeps from taking a deep breath

*R/O: pneumonia, pleurisy*

Lips or face have turned bluish BUT only during coughing fits

*R/O: need for oxygen*

Sore throat AND complication suspected (refuses to drink, can't swallow fluids, new-onset drooling, can't move neck normally or other serious symptom)

Multisystem Inflammatory Syndrome (MIS-C) suspected (Fever AND 2 or more of the following: widespread red rash, red eyes, red lips, red palms/soles, swollen hands/feet, abdominal pain, vomiting, diarrhea)

*Note: rare complication; average onset of symptoms 4 weeks AFTER a COVID-19 infection*

Child sounds very sick or weak to the triager

*Reason: severe acute illness or serious complication suspected*

## Go to Office Now

Wheezing confirmed by triager BUT no trouble breathing (Exception: known asthmatic)

*Note to Triager: Asthmatic children will also need triaging with the Asthma protocol.*

Fever > 105 F (40.6 C)

*R/O: serious bacterial infection*

Shaking chills (shivering) present > 30 minutes

Dehydration suspected (signs: no urine > 8 hours AND very dry mouth, no tears, ill-appearing, etc.)

Age < 3 months with lots of coughing

*R/O: pneumonia*

Crying that cannot be comforted lasts > 2 hours

*R/O: severe otitis*

## Discuss With PCP and Callback by Nurse within 1 Hour

Age less than 12 weeks AND suspected COVID-19 with mild symptoms BUT no fever

*Reason: PCP will decide on needed follow-up care*

SEVERE-RISK patient (e.g., immuno-compromised, serious lung disease, on oxygen, heart disease, bedridden, etc) AND suspected COVID-19 with mild symptoms

*Reason: special chronic diseases at risk for severe pneumonia or sepsis. PCP will decide on needed follow-up care.*

## See in Office Today

Stridor occurred but not present now

Continuous coughing keeps from playing or sleeping AND no improvement using cough treatment per protocol

Fever returns after gone for over 24 hours AND symptoms worse or not improved

*R/O: otitis media or sinusitis*

Fever present > 3 days (72 hours)

*R/O: bacterial superinfection - usually otitis media*

Strep throat infection suspected by triager

*Reason: may need Strep test*

Earache or ear discharge also present

*R/O: otitis media*

Age > 5 years with sinus pain around cheekbone or eye (not just congestion) and fever

*R/O: sinusitis*

## Discuss With PCP and Callback by Nurse Today

[1] Influenza also widespread in the community AND [2] mild flu-like symptoms WITH FEVER AND [3] HIGH-RISK patient for complications with Flu (See that CDC List)

*Reason: may need testing for influenza and COVID-19. If positive for flu, PCP will decide if antiviral meds would be helpful for this patient.*

Age 12 and above with positive COVID-19 lab test and HIGH-RISK patient for complications with COVID-19 (See that CDC List)

*Reason: may be eligible for antiviral meds*

COVID-19 rapid test result was negative and mild symptoms (cough, fever, or others)

*R/O: false negative; PCP will decide if PCR test is indicated.*

[1] COVID-19 infection suspected by triager AND [2] mild symptoms (cough, fever and others) AND [3] no complications or SOB (Exception: positive rapid test. Go to Home Care)

*Reason: RN can arrange COVID-19 testing if needed. Triager will provide advice for treating symptoms.*

## See in Office Within 3 Days

Triager thinks child needs to be seen for non-urgent acute problem

Caller wants child seen for non-urgent problem

## Home Care

[1] COVID-19 infection (or flu) diagnosed by positive lab test or suspected by doctor (or NP/PA) AND [2] mild symptoms (cough, fever, chills, sore throat, muscle pains, headache, loss of smell) OR no symptoms

COVID-19 Home Isolation, questions about

COVID-19 Prevention, questions about

COVID-19 Testing, questions about

COVID-19 Disease, questions about

## HOME CARE ADVICE

### COVID-19 Infection with Mild Symptoms (also applies to Influenza) - Treatment

#### 1. Reassurance and Education - COVID-19 Positive with Mild or No Symptoms:

- Your child has been diagnosed as having COVID-19 by a positive lab test OR
- You or your doctor suspect COVID-19 because it is widespread in your community and your child has developed symptoms that match (cough and/or fever).
- Getting a COVID-19 lab test is the only way to know for sure.
- Most infections are mild, especially in children.
- What to Expect: Mild symptoms usually last less than 2 weeks. Complications are rare in children.
- Here's some care advice to help your child and to help prevent others from getting sick.

#### 2. Treatment of Symptoms:

- The treatment is the same whether you have COVID-19, influenza or some other respiratory virus.
- The only difference for COVID-19 is you need to stay on home isolation until you recover (a

minimum of 5 days). Reason: You want to protect other people from getting it.

- Treat the symptoms that are bothering you the most.

- **Note to Triager:** Care Advice is available for Cough, Fever, Chills and Shivering, Runny nose, Sore throat, Muscle pains, Headache and Loss of smell. Only discuss treatment for the caller's main symptoms.

- There is no anti-viral medication for treating COVID-19 at home. New antiviral treatments have been developed for patients who need to be hospitalized.
- Antibiotics are not helpful for viral infections.
- You don't need to see your doctor unless you develop trouble breathing or become worse in any other way.

### 3. **Home Isolation Is Needed:**

- Isolation means separating sick people with a contagious disease from people who are not sick. (CDC) That means stay at home if you are sick OR if you test positive without symptoms. (Note: For influenza-like illnesses, you should also remain at home (isolate) until at least 24 hours after fever is gone). (CDC)
- Follow local, state or provincial Department of Health directives.
- Students should follow their school's COVID-19 policy.
- See the Home Isolation section for details.

### 4. **Fever Treatment:**

- For fever above 102 F (39 C), you may use acetaminophen or ibuprofen if the patient is uncomfortable. (See Dosage table). Avoid aspirin.
- For fevers 100-102 F (37.8 to 39 C), fever medicines are not needed. Reason: Fever turns on your body's immune system. Fever helps fight the infection.
- Exception: if the patient also has pain, treat it.
- Fluids: Offer cool fluids in unlimited amounts. Reason: prevent dehydration. Staying well hydrated helps the body sweat and give off heat.
- Note to triager about ibuprofen concerns: Discuss only if caller brings up concerns about ibuprofen. Response: The CDC, WHO, AAP and other experts support the use of ibuprofen (if needed) for patients with COVID-19. They found no scientific evidence to support the claim that ibuprofen made this disease worse.

### 5. **Chills, Shivering and Rigors - Treatment:**

- Shivering occurs when the body needs to raise its core temperature quickly. Shivering generates body heat until the level of fever that the brain needs to fight the infection is reached.
- Whether or not you take a fever-reducing medicine, here are some ways to stop the shivering:
- **Blanket.** Wrap the patient in a warm blanket.
- **Warm bath.** For severe shivering (rigors), the quickest way to get the fever level up is to take a warm bath. Once the fever peaks, the shivering or rigors will stop.
- **Fluids.** Drink extra fluids to improve hydration and circulation.

### 6. **Homemade Cough Medicine:**

- **Age:** 3 Months to 1 year:

- Give warm clear fluids (e.g., apple juice or lemonade) to thin the mucus and relax the airway. Dosage: 1-3 teaspoons (5-15 ml) four times per day.

- Note to Triager: Option to be discussed only if caller complains that nothing else helps: Give a small amount of corn syrup. Dosage: 1/4 teaspoon (1 ml). Can give up to 4 times a day when coughing. Caution: Avoid honey until 1 year old (Reason: risk for botulism).

- **Age** 1 year and older: Use **Honey** 1/2 to 1 tsp (2 to 5 ml) as needed as a homemade cough medicine. It can thin the secretions and loosen the cough. (If not available, can use corn syrup.) OTC cough syrups containing honey are also available. They are not more effective than plain honey and cost much more per dose.

- **Age** 6 years and older: Use **Cough Drops** (throat drops) to decrease the tickle in the throat. If not available, can use hard candy. Avoid cough drops before 6 years. Reason: risk of choking.

- OTC cough medicines are not recommended. (Reason: no proven benefit for children.) Honey

has been shown to work better.

- Don't use OTC cough medicines under 6 years of age. Reason: Cough is a protective reflex.

7. **Coughing Fits or Spells - Warm Mist and Fluids:**

- Breathe warm mist (such as with shower running in a closed bathroom).
- If the air is dry, use a humidifier in the bedroom (Reason: dry air makes coughs worse).
- Give warm clear fluids to drink. Examples are apple juice and lemonade. Don't use warm fluids before 3 months of age.
- Amount. If 3 - 12 months of age, give 1 ounce (30 ml) each time. Limit to 4 times per day. If over 1 year of age, give as much as needed.
- Reason: Help relax the airway and loosen up any phlegm.
- What to Expect: The coughing fit should stop. But, your child will still have a cough.

8. **Runny Nose - Blow or Suction the Nose:**

- The nasal mucus and discharge is washing viruses and bacteria out of the nose and sinuses.
- Having your child blow the nose is all that is needed. Teach your child how to blow the nose at age 2 or 3.
- For younger children, gently suction the nose with a suction bulb. Use saline (salt water) nose drops or spray to loosen up the dried mucus as needed.

9. **Sore Throat Pain Relief:**

- Here are some tips on treating a sore throat:
- Age over 1 year: Can sip warm fluids such as chicken broth or apple juice. Some children prefer cold foods such as popsicles or ice cream.
- Age over 6 years: Can also suck on hard candy or lollipops. Butterscotch seems to help.
- Age over 8 years: Can also gargle. Use warm water with a little table salt added. A liquid antacid can be added instead of salt. Use Mylanta or the store brand. No prescription is needed.
- Pain medicine: Use if pain interferes with swallowing. Not needed for mild pain.

10. **Sore Throat - Fluids and Soft Diet:**

- Try to get your child to drink adequate fluids.
- Goal: Keep your child well hydrated.
- Cold drinks, milk shakes, popsicles, slushes, and sherbet are good choices.
- Solid Foods: Offer a soft diet. Also avoid foods that need much chewing. Avoid citrus, salty, or spicy foods.
- Note: Fluid intake is much more important than eating any solid foods.

11. **Muscle Pains - Treatment:**

- Here are some tips for treating muscle pains and body aches:
- **Massage:** Gently massage any sore muscles.
- **Stretching:** Gently stretch any sore muscles.
- **Apply Heat:** Use a heat pack, heating pad or warm wet washcloth. Do this for 10 minutes 3 times per day.
- **Warm bath:** For widespread muscle pains, consider a warm bath for 20 minutes 2 times a day. Gently exercise the sore muscles under water.
- **Pain medicine:** For widespread body aches, give acetaminophen every 4 hours OR ibuprofen every 6 hours as needed. (See Dosage table.) Not needed for mild aches.

12. **Headache - Treatment:**

- Here are some tips on treating a headache:
- **Pain medicine:** Give acetaminophen every 4 hours OR ibuprofen every 6 hours as needed. (See Dosage table.) Not needed for mild headaches.
- **Cold pack:** Apply a cold wet washcloth or cold pack to the forehead for 20 minutes.
- **Massage:** Stretch and massage any tight neck muscles.

13. **Loss of Smell and Taste:**

- Losing the sense of smell and taste can be an early symptom of COVID-19.
  - It is strong evidence for having COVID.
  - In 50% of patients, these senses return within 1 to 3 weeks.
  - In 85%, they return within 6 months.
  - Most of the others recover by 1 year.
  - If symptoms persist, it should not delay the end of isolation.
14. **COVID-19 Vaccine - Reasons to Postpone Questions:**
- **Positive COVID-19 Test with Symptoms:** If your child has a positive COVID-19 test, the vaccine should be postponed for a full 10 days. Also, fever needs to be gone for over 24 hours without fever meds, and the symptoms need to be resolving (gone or almost gone).
  - **Positive COVID-19 Test without Symptoms:** If your child has a positive COVID-19 test without symptoms, the vaccine should be postponed for a full 10 days. The 10 day period starts on the day the test sample was collected.
  - **Exposed to COVID-19, But No Symptoms:** If your child has been exposed to COVID-19 and is scheduled for the vaccine, the vaccine should be postponed for a full 10 days. The 10 day period starts on the last day of exposure.
  - **Child is Sick and Scheduled for Vaccine:** If your child has symptoms compatible with COVID-19, should get a test before receiving the vaccine. If negative and mild illness (such as isolated runny nose or mild diarrhea), can receive the vaccine. For moderate or severe illness (including a fever), the vaccine should be postponed until fever is gone for over 24 hours and symptoms are resolving (gone or mild).
  - **Flu and COVID-19 Vaccines:** Can be given at the same time. No waiting period needed between the 2 shots.
  - **After Monoclonal Antibody Therapy:** Vaccine must be postponed at least 90 days.
  - **Multisystem Inflammatory Syndrome (MIS-C):** Vaccine must be postponed at least 90 days since MIS-C was diagnosed.
15. **Call Back If:**
- Shortness of breath occurs
  - Difficulty breathing occurs
  - Your child becomes worse

### **COVID-19 Home Isolation Questions**

1. **Home Isolation For Children with Positive COVID-19 Test - With or Without Symptoms:**
- Isolation means separating sick people with a contagious disease from people who are not sick. (CDC)
  - Home isolation is needed for at least 5 full days after the symptoms started OR when the sample was collected for the positive COVID-19 lab test.
  - Children under 2 years: Home isolation will be needed for a full 10 days.
  - Presence or absence of symptoms does not change this requirement.
  - Vaccine status does also does not change the length of home isolation.
  - Follow local, state or provincial Department of Health directives.
  - Students should follow their school's COVID-19 policy.
  - The patient does not need to be confined to a single room. Reason: Preventing spread of respiratory infections within a home is nearly impossible.
  - The sick person should try to avoid very close contact with other family members. That includes hugging, kissing, sitting next to or sleeping in the same bed. None of this is realistic for young children.
  - Older children and adults with symptoms should wear a mask in common household areas.
  - Note to Triager: Many families have limited options. Triagers should individualize their recommendations for isolation after discussing it with the caller.
  - **Isolation Questions for PCP - Note to Triager:** Home isolation can be complicated. A parent may need to return to work. Someone in the household may be elderly or have a serious medical

problem. If a caller has additional questions, involve the PCP.

**2. Stopping Home Isolation (CDC) for COVID-19 Positive Patients:**

- **Symptomatic** patients must meet 3 criteria: [1] Fever gone for at least 24 hours off fever-reducing medicines AND [2] Cough and other symptoms must be resolving (gone or almost gone) AND [3] Symptoms started more than 5 days ago.
- **Asymptomatic** patients with a positive COVID-19 lab test who don't develop symptoms: must stay at home until 5 full days have passed since the date the sample was collected for the positive test.
- Summary: Must isolate at home for at least 5 full days. Then wear a mask around others for another 5 days. Children under 2 and children that aren't cooperative with wearing a mask should isolate for 10 full days.
- Repeat diagnostic tests: After a positive test, repeat tests are not recommended. Even after it is safe to stop isolation. PCR tests may stay positive, even up to 90 days.
- If unsure it is safe for you to leave isolation, call back during office hours.

**3. Household Exposure and Quarantine:**

- Living with a person who has a COVID-19 positive test means ongoing exposure. Here is some general guidance:
  - The infected person is contagious for up to 10 days. That means all household members will continue to be exposed for a minimum of 10 days.
  - If a household member develops COVID symptoms, it should be assumed that they also have COVID. Getting tested is optional. Reason: a negative rapid test cannot be trusted.
  - If a household member does NOT develop symptoms, a test is not needed until 5 days after the sick family member is released from isolation. If a second family member tests positive, the cycle starts over.
  - If household members do not develop symptoms, quarantine as follows:
    - **Fully vaccinated people with a booster**, do not need to quarantine at home. They need to wear a mask if they leave the home.
    - **Unvaccinated or partially vaccinated people** need to quarantine at home for at least 10 days or longer. (CDC 1/20/2022)

**4. How to Protect Others - When You or Your Child Have COVID-19:**

- **Stay Home for Minimum of 5 Days.** Do not allow visitors.
- **Wear a Mask for 10 Days.** Wear a face mask when around others or if you have to go to a medical facility.
- **Wash Hands often with Soap and Water.**
- **Don't Share Personal Household Items.** Don't share glasses, plates or eating utensils.
- **Avoid High-Risk People.** Carefully avoid any contact with the elderly and people with weak immune systems or other chronic health problems.

**5. Call Back If:**

- Shortness of breath occurs
- Difficulty breathing occurs
- Your child becomes worse

**COVID-19 Prevention Questions**

**1. COVID-19 - How to Protect Yourself and Family from Catching It - The Basics:**

- Get the COVID-19 vaccine and booster. It is your best protection against this serious infection.
- Avoid close contact with people outside your family unit. Avoid closed spaces (indoors) when possible and all crowds (even outdoors).
- Always wear a face mask when you must leave your home. Also, observe social (safe) distancing.
- Everyone 6 months and older should get an annual flu shot. Reason: Getting COVID-19 while you also have or are recovering from the flu may increase the chances of getting severe

symptoms.

- **Wash hands often with soap and water (very important).** Always do before you eat.
- Use an alcohol-based hand sanitizer if water is not available. Remember: soap and water work better.
- Don't touch your eyes, nose or mouth unless your hands are clean. Germs on the hands can get into your body this way.
- Don't share glasses, plates or eating utensils.
- No longer shake hands. Greet others with a smile and a nod.
- If your child needs to be seen for an urgent medical problem, do not hesitate to go in. ERs, urgent care sites and your doctor's office are safe places. They are well equipped to protect you against the virus. For non-urgent conditions, talk to your doctor's office first.

**2. Social (Safe) Distancing and COVID-19 Prevention:**

- Avoid any contact with people known to have COVID-19 infection. Avoid talking to or sitting close to them.
- **Social (Safe) Distancing:** Try to stay at least 6 feet (2 meters) away from anyone who is sick, especially if they are coughing. Also called physical distancing. Avoid crowds because you can't tell who might be sick.
- If COVID-19 is widespread in your community, try to stay 6 feet away from everyone outside your family unit.
- **Stay at Home Orders:** Follow any stay at home (stay in place) orders in your community. Leave your home only for essential needs such as buying food or seeking medical care.
- **After Stay at Home Orders are Lifted:** Continue social distancing. Also wear a mask when entering any public building or outdoor crowded area. These precautions will be needed for many months. Your state public health department will decide when they are no longer needed.

**3. Face Masks and COVID-19 Prevention:**

- **Overview:** Face masks are essential for reducing the spread of COVID-19. They will also reduce the spread of influenza. People with COVID-19 can have no symptoms, but still spread the virus.
- Because of the Omicron variant (and other possible future variants) recommendations for wearing masks are pretty much the same for people who are vaccinated or unvaccinated. Mask wearing is even more important if you are in an area of high COVID-19 spread or if you have a weak immune system.

**People Who Are Well (Not Sick With COVID-19) Should Wear Masks If:**

- You are in indoor public spaces (such as a church or a grocery store).
- You are in a crowded outdoor setting (e.g., concert, music festival, rally).
- You are traveling on a plane, bus, train, or other form of public transportation or in transportation hubs such as airports and train stations.
- You must be around someone who has symptoms of COVID-19 or has tested positive for COVID-19.

**People Who Are Sick With COVID-19 Must Wear Masks If:**

- You need to leave the home. Example: for medical visits. Patients with trouble breathing in a mask can consider a loose face covering such as a bandana.
- You are around other people or animals (such as pets).

**Exceptions to Masks:**

- Face coverings are **NOT** recommended for **children under 2 years**.
- Face mask or covering is optional if outdoors and you can avoid being within 6 feet (2 meters) of other people. Some examples are an outdoor walk or run.

**4. Keep Your Body Strong:**

- Get your body ready to fight the COVID-19 virus.
- Get enough sleep (very important).
- Keep your heart strong. Walk or exercise every day. Take the stairs. Caution: avoid physical exhaustion.

- Stay well hydrated.
  - Eat healthy meals. Avoid overeating to deal with your fears.
  - Avoid the over-use of anti-fever medicines. Fever fights infections and ramps up your immune system.
5. **Keep Your Mind Positive:**
- **Live in the present, not the future.** The future is where your needless worries live.
  - **Stay positive.** Use a mantra to reduce your fears, such as "I am strong".
  - **Get outdoors.** Take daily walks. Go to a park if you have one. Being in nature is good for your immune system.
  - **Show love.** As long as they are well, hug your children and partner frequently. Speak to them in a kind and loving voice. Love strengthens your immune system.
  - **Stay in touch.** Use regular phone calls and video chats to stay in touch with those you love.
6. **How to Protect Others - When You or Your Child are Sick:**
- Stay home from school or work if you are sick.
  - See the Home Isolation section for details.
7. **Call Back If:**
- Your child becomes worse
  - You have other questions

## COVID-19 Testing Questions

1. **COVID-19 Diagnostic Testing:**
  - Note to Triager: Follow the policy for testing recommended by your practice.
  - Testing is the only way to know for sure that your child has COVID-19. You can't tell by symptoms. Reason: Most respiratory viruses cause similar symptoms.
  - Testing is now widely available without a doctor's order. Exception: age less than 3. Where to get a test can be different for some communities. Check your state's public health website for community testing centers.
  - Many retail clinics and urgent care centers also perform COVID-19 testing. Even pharmacies (such as CVS and Walgreens) now perform drive-thru testing on children age 3 and older. Visit their website to schedule a test.
  - Self-tests (such as Abbot BinaxNow) for use at home are now available in most drugstores (such as CVS, Walgreens) or on-line. (Note: Most rapid home tests are not FDA approved for use under 2 years of age).
2. **COVID-19 Testing Facts:**
  - Here are some facts that may answer some of the caller's questions.
  - **Diagnostic Tests:** These are performed on nasal or mouth secretions and tell us if your child has a COVID-19 infection now. The type of diagnostic tests that are available continues to improve.
  - **Tests for COVID-19: Recommended Timing (CDC):**
  - **Symptomatic patients** - get a test immediately (or at least within 3 days of onset of symptoms.)
  - **Asymptomatic Unvaccinated or Partially Vaccinated patients with a COVID-19 close contact** - Get a COVID-19 test immediately (within 24 hours). If the test is negative, the test should be repeated 5 days after exposure. Test sooner if symptoms develop.
  - **Asymptomatic Fully Vaccinated with a Booster and a COVID-19 close contact** - Get a test on day 5 after exposure. Test sooner if symptoms develop.
3. **Antibody Tests - Rarely Needed:**
  - **Antibody Tests:** These tests are different. These are performed on blood. They can sometimes tell us if there are antibodies from a previous infection. They require a doctor's order and are rarely helpful. If you have questions, your doctor can discuss this with you during office

hours.

- **Timing guideline for Antibody Tests:** If indicated, antibody tests are not recommended until at least 2 or 3 weeks have passed since the start of the infection (CDC). Waiting for a few weeks will give the most accurate result (highest positive rate).

4. **Negative COVID-19 Tests:**

- Negative rapid test results are usually accurate but can sometimes be wrong.
- An error is more likely with tests performed at home. Rapid tests performed at a test site are usually more accurate.
- Repeat testing with a PCR test may be indicated after a negative rapid test.
- Note to Triager: For callers who are worried about a false negative test, especially if they had a known exposure, discuss with the PCP.
- If a person is exposed again or develops symptoms suggestive of COVID-19, then repeat viral testing should be performed.

5. **Positive COVID-19 Tests:**

- **Repeating Positive Tests:** After a positive rapid or PCR test, repeat tests are not recommended. Positive rapid tests are reliable. Repeat testing with a PCR test is not indicated after a positive rapid test. After it is safe to stop isolation (usually 5 days), repeat rapid tests may be negative or stay positive for 5 - 10 days. Repeat PCR tests may stay positive for up to 90 days. A repeat positive PCR test does not mean the patient can spread the infection once the required isolation period is completed.
- Main reason not to repeat positive tests: A negative test result will not allow a patient with a positive test result to leave quarantine or isolation any sooner. It will not allow earlier return to child care or school.

6. **Call Back If:**

- Shortness of breath occurs
- Difficulty breathing occurs
- Your child becomes worse

## COVID-19 Disease FAQs

1. **Trusted Sources for Accurate Information - CDC and AAP:**

- To meet the extreme demand for COVID-19 information, when possible, find your answers online. Here are the most reliable websites:
  - CDC website: <https://www.cdc.gov/coronavirus>.
  - American Academy of Pediatrics parent website: [www.healthychildren.org](http://www.healthychildren.org)

2. **COVID-19 Cause:**

- It is caused by a new coronavirus: SARS-CoV-2 (COVID-19).
- Viruses change through mutation. New variants of the COVID-19 virus are expected to appear and spread.
  - In the fall of 2021, the Delta variant became the most common COVID-19 variant.
  - In December 2021, the Omicron variant became the dominant strain. It is more highly contagious than Delta, leading to rapid spread. On the positive side, it caused more URI symptoms and less lung infections.
- The COVID-19 vaccines help protect against the serious complications and hospitalization risk with the disease and variants. The unvaccinated continue to have a 20 times higher rate of hospitalizations and deaths.

3. **COVID-19 Symptoms:**

- COVID-19 coronavirus most often causes a respiratory illness. The most common symptoms are cough and fever. Some patients progress to shortness of breath.
- Other common symptoms are chills, shivering (shaking), runny nose, sore throat, muscle pain, headache, fatigue, and loss of smell or taste.
- The CDC also includes the following less common symptoms: nausea, vomiting and diarrhea.

- Some people may have minimal symptoms or even have no symptoms (asymptomatic).
4. **Multisystem Inflammatory Syndrome (MIS-C):**
- MIS-C is a very rare complication of COVID-19. In general, COVID-19 continues to be a mild disease in children. It cannot be predicted who will get this complication.
  - Prevention: MIS-C can be prevented by getting your child vaccinated against COVID-19. Recent CDC report of 102 teens with MIS-C, over 95% were not vaccinated.
  - The most common symptoms are fever, a red rash, abdominal pain with vomiting and diarrhea. Half of the patients develop trouble breathing. Some children become confused or overly sleepy. Always has multiple symptoms.
  - Onset of symptoms: Usually about 4 weeks after a COVID-19 infection and apparent recovery.
  - Peak age: 8 years. Age range: 6 months to 21 years.
  - Treatment: Most patients with MIS-C need to be admitted to the hospital. MIS-C is treatable with medications, including IV immune serum globulin and steroids.
  - Prognosis: Most children with MIS-C have a full recovery. The death rate is about 1 per 100.
5. **COVID-19 - Exposure Risk Factors:**
- Here are the main risk factors for getting sick with COVID-19:
  - Household Close Contact: Living in the home with someone infected with COVID-19 (based on a positive lab test) carries the greatest risk for catching the infection.
  - Close contact with a person who tested positive for COVID-19 AND contact occurred while they were ill. Close contact is defined as being within 6 feet (2 meters) for a total of 15 minutes or more over a 24-hour period. Prolonged close contact would extend the risk to the 48 hours prior to the person becoming ill with symptoms. This includes living with someone infected with COVID-19.
  - Living in or travel to an area where there is high community spread of COVID-19 also carries some risk.
  - International travel: The CDC (<https://www.cdc.gov/coronavirus>) has the most up-to-date list of where COVID-19 outbreaks are highest.
  - Not being fully vaccinated with a booster shot
  - **Masks:** Even if both people are wearing face masks, definitions of Close Contact do not change. (CDC)
6. **COVID-19 - How it is Spread:**
- COVID-19 is spread from person to person.
  - The virus spreads when respiratory droplets produced when a person coughs, sneezes, sings or shouts. The infected droplets can then be inhaled by a nearby person or land on the surface of their face or eyes. Droplets fall quickly to the floor or ground. This is how most COVID is spread.
  - Most infected people also have respiratory secretions on their hands. These secretions get transferred to healthy people on doorknobs, faucet handles etc. The virus then gets transferred to healthy people when they touch their face or rub their eyes. This is a less common cause of spread.
  - These methods are how most respiratory viruses spread.
  - Aerosols are tiny, invisible particles that can float in the air for 1 to 2 hours. They mainly occur in a closed room with poor ventilation. Aerosols are an uncommon cause of COVID-19 transmission (CDC and WHO).
7. **COVID-19 - Travel:**
- Avoid all non-essential air travel.
  - Travel is much safer for people who are vaccinated and boosted.
  - The Centers for Disease Control and Prevention (CDC) maintains a website with the latest recommendations regarding travel and your health.
  - Currently, the CDC recommends against travel to any geographic areas with widespread and ongoing spread of COVID-19. See current list at <https://wwwnc.cdc.gov/travel/>.
8. **Breastfeeding and COVID-19:**

- Breastfeeding experts recommend you continue to breastfeed even if you are sick with COVID-19. (AAP)
- Wash your hands before feeding your baby.
- The CDC recommends wearing a face mask. Be careful to avoid coughing on your baby.
- Breastmilk gives beneficial antibodies your body is making against this illness to your baby. This will provide some protection against this illness for your baby, like it does for influenza and most other viral illnesses.
- Research has proven that the virus is not passed through breastmilk.
- Breastfeeding mothers are also encouraged to get the COVID-19 vaccine. (CDC) After a few weeks, the breastmilk will contain protective antibodies against COVID-19.

**9. COVID-19 - Other Facts:**

- **Incubation Period:** average 5 days (range 2 to 10 days) after coming in contact with the secretions of a person who has COVID-19.
- **No Symptoms but Infected:** Over 30% of infected adult patients have no symptoms (asymptomatic patients). Children and teens are even more likely to have no symptoms. Such patients do however spread the disease and most develop protective antibodies (immunity).
- **Mild Infections:** 80% of adults with symptoms have a mild illness, much like normal flu or a bad cold. The symptoms usually last 2 weeks.
- **Severe Infections:** 20% of unvaccinated adults with symptoms develop trouble breathing from viral pneumonia. Many of these need to be admitted to the hospital. About 2% of unvaccinated children with COVID-19 need to be admitted to the hospital. About 10% of unvaccinated teens need hospitalization. About 3% require ICU care. (CDC). People with complications generally recover in 3 to 6 weeks. Severe infections are rare in people who are vaccinated.
- **Deaths:** Children generally have a mild illness and recover quickly. Pediatric deaths are very rare. (CDC) Older adults, especially those with chronic lung disease, heart disease, diabetes, obesity or weak immune systems, have the highest death rates. The overall death rate is around 2 per 1000 people. Over 90% of deaths occur in people who are not vaccinated.

**10. COVID-19 Vaccines and Treatment:**

- **Vaccines:** Safe and effective vaccines are available. At this time, vaccines have been tested and are FDA approved for 5 years and older. Trials on children younger than 5 years have started. The COVID-19 vaccine will reduce the chance of your child getting COVID-19. The vaccine prevents almost all hospital admissions, ICU care and deaths.
- **Booster Vaccines:** In December 2021, the CDC recommended a booster shot for those 12 and older. For Pfizer or Moderna vaccines, a booster shot for those 12 and older is needed if 5 or more months has passed after the first ones. For Johnson and Johnson vaccine, a booster shot is needed 2 or more months after the first one. Experts predict we may need a yearly booster, just like the flu vaccine.
- **"Breakthrough Cases":** These are COVID-19 infections that bypass vaccine protection. They are more common with new variants. Many do not cause any symptoms. The vaccine prevents almost all hospital admissions and deaths.
- **Treatment:** New treatments for severe COVID-19 are available. They are mainly prescribed for high risk patients or those who are hospitalized. **Caution** - Only discuss the following if caller asks about the new anti-viral pill (paxlovid): Paxlovid is given by mouth during the first 3 days of symptoms to prevent serious complications. It has emergency approval from the FDA (December 2021) and can be used for 12 and older at high-risk for complications. Supply may be limited.
- **Prevention:** The COVID-19 vaccine and booster are the best way to prevent infections. Face masks, social (safe) distancing and extra handwashing are also proven to help prevent disease.

**11. Call Back If:**

- You have other questions

## FIRST AID

N/A

## BACKGROUND INFORMATION

### Matching Pediatric Care Advice (PCA) Handouts for Callers

Detailed home care advice instructions have been written for this protocol. If your software contains them, they can be sent to the caller at the end of your call. Here are the names of the pediatric handouts that are intended for use with this protocol:

- COVID-19 - Diagnosed or Suspected
- COVID-19 Prevention
- COVID-19 or Influenza - How to Tell
- COVID-19 Vaccines - Answers to Common Questions
- Coughs and Colds: Medicines or Home Remedies?
- Fever - How to Take the Temperature
- Fever - Facts Versus Myths
- Acetaminophen (Tylenol) Dosage Table - Children
- Ibuprofen (Advil, Motrin) Dosage Table - Children

### COVID-19 Main Symptoms (CDC)

COVID-19 should be suspected in people who have 1 or more of the following symptoms (CDC) and have not been vaccinated against COVID-19:

- Cough
- Shortness of breath (difficulty breathing)
- Fever or chills
- Loss of smell or taste
- Muscle or body aches
- Headache
- Sore throat
- Runny nose (not from allergies)
- Fatigue
- The CDC also includes the following less common symptoms: nausea, vomiting and diarrhea. In isolation, these symptoms (such as diarrhea) are not very helpful for recognizing COVID-19. Reason: Too common, multiple causes and sometimes subjective. For example, mild diarrhea is often caused by a change in the diet.
- **"COVID Toes":** Reddish or purple toes have been reported as a rare finding. They can occur alone and go away without treatment. Or they can occur 1-2 weeks after the more common symptoms.
- **Long-Haul Symptoms:** Have been reported in some children after hospitalization with severe infections. Main symptoms are fatigue, brain fog, muscle pains and joint pains. Up to 2% have symptoms beyond 8 weeks.

### Cause

- It is caused by a novel (new) coronavirus (COVID-19).
- Viruses change through mutation. Variants of the COVID-19 virus continue to emerge and spread.
- In the summer and fall of 2021, the Delta variant became the most common COVID-19 variant.
- In December 2021, the Omicron variant became the dominant strain. It is more highly contagious than Delta, leading to rapid spread. On the positive side, it caused more URI symptoms and less lung infections.

- The COVID-19 vaccines help protect against the serious complications and hospitalization risk with the disease and variants. The unvaccinated continue to have a 20 times higher rate of hospitalizations and deaths.

## **COVID-19 Origins**

- An outbreak of this new viral infection began in Wuhan, China in early December 2019.
- The first COVID-19 cases in the United States and Canada were reported in January 2020.
- The World Health Organization (WHO) declared COVID-19 a global pandemic on March 11, 2020.
- The Centers for Disease Control and Prevention (CDC) is considered the source of truth for this guideline. This continues to be a rapidly changing situation and recommendations from the CDC are updated daily. See: <https://www.cdc.gov/coronavirus>. If the CDC recommendations are different than what is in this guideline, follow the CDC guidelines.

## **Multisystem Inflammatory Syndrome (MIS-C)**

- MIS-C is a very rare complication of COVID-19. In general, COVID-19 continues to be a mild disease in children. It cannot be predicted who will get this complication.
- Prevention: MIS-C can be prevented by getting your child vaccinated against COVID-19. Recent CDC report of 102 teens with MIS-C, over 95% were not vaccinated.
- The most common symptoms are fever, a red rash, abdominal pain with vomiting and diarrhea. Half of the patients develop trouble breathing. Some children become confused or overly sleepy. Always has multiple symptoms.
- Onset of symptoms: Usually about 4 weeks after a COVID-19 infection and apparent recovery.
- Peak age: 8 years. Age range: 6 months to 21 years.
- Treatment: Most patients with MIS-C need to be admitted to the hospital. MIS-C is treatable with medications, including IV immune serum globulin and steroids.
- Prognosis: Most children with MIS-C have a full recovery. The death rate is about 1 per 100.

## **High-Risk Children for Complications with Influenza (also with COVID-19)**

- Significance: HIGH-RISK children also are the main patients who may need prescription anti-viral medications when they develop influenza. New anti-viral medications for COVID-19 may also be indicated for similar patients.
- Aspirin long-term therapy (e.g., Kawasaki's disease and rheumatoid arthritis)
- Down's syndrome
- Heart disease (e.g., congenital heart disease, rheumatic heart disease)
- Immune system compromised (e.g., cancer, chemotherapy, HIV/AIDS, transplant, taking oral steroids)
- Liver disease (e.g., liver failure, chronic hepatitis)
- Lung disease (e.g., asthma, cystic fibrosis, bronchopulmonary dysplasia)
- Lung disease technology-dependent (e.g., oxygen required, tracheostomy, ventilator)
- Lung risk for aspiration from compromised ability to handle respiratory secretions (e.g., spinal cord or brain injury)
- Metabolic disease (e.g., diabetes mellitus)
- Neuromuscular disease (e.g., muscular dystrophy, cerebral palsy, epilepsy)
- Obesity (BMI > 30, the 95th percentile)
- Pregnancy
- Renal disease (e.g., nephrotic syndrome, renal dialysis)
- Sickle cell disease
- Healthy children under 2 years old are also considered HIGH-RISK. Reason: higher rate of pneumonia and hospitalization.
- Note: All other patients are referred to as LOW-RISK.

## **High-Risk Children: Possible Exceptions**

- The current HIGH-RISK list includes over 20% of children because 10% of children are under 2 years of age and 10% of children have asthma.
- To reduce unnecessary prescribing of Tamiflu, our call center and ED have decided to exclude children who only have exercise-induced asthma or cough-variant asthma. We have also excluded any child with asthma who has not needed to use any asthma medications within the last year. The latter would indicate that they have very mild intermittent asthma.
- Each call center or office practice will need to decide if certain conditions will not be included in the HIGH-RISK group.

## **Influenza Calls: Preventing the Need to Use 2 Protocols**

Here are the reasons why this protocol can be used simultaneously for calls about patients with suspected COVID-19 and also for those with suspected Influenza:

- **Symptoms** are nearly identical. Cannot differentiate based on symptoms. Only exception: loss of taste or smell is highly specific for COVID.
- **Triage for serious symptoms** or complications is the same. The nurse can triage both at same time.
- **Viral Testing** is the only way to reach an accurate diagnosis. Tests for both are available.
- **Care Advice** is the same. Treat symptoms and stay well hydrated.
- **Oral Antivirals** are readily available for patients with influenza who also are High Risk for complications. Antivirals have also been FDA approved for emergency use for COVID-19 for high-risk children 12 and older, but supply may be limited.
- **High-Risk patients for Complications:** The long-established list for influenza is similar to the evolving list for patients with COVID-19. It can be used for both.
- **Isolation:** Home isolation is required for 5 days or longer for COVID-19. Isolation for flu is only recommended until the fever is gone for 24 hours or longer. Reason: COVID-19 is far more dangerous than flu.
- **Why COVID-19 Protocol was Chosen to Cover Both:** Influenza is seasonal. COVID-19 is not seasonal. It will not go away in 6 months like influenza.

## **Child Abuse During the COVID-19 Pandemic**

- The pandemic has increased the incidence of abuse and domestic violence due to social isolation and financial burdens.
- Also, young children often become irritable and demanding when confined to the home.
- Triagers need to be alert for calls about bruises or other injuries that are suspicious, unexplained or occur in the first year of life.
- Offer help to families in crisis before they reach the breaking point. Be alert to increased domestic violence. Know where to refer at-risk families.
- See the Psychosocial Problems or Child Abuse protocols for details.

## **Symptomatic COVID-19 Calls: Patients Who Need to Be Seen and Telemedicine Visits**

- At this point in the COVID-19 pandemic, most PCP's offices are equipped to handle sick child visits. Many also are providing telemedicine visits (video visits).
- A telemedicine visit is appropriate if it can provide a definitive diagnosis and care without being seen in-person.
- How to implement: The triage nurse continues to manage the Home Care disposition calls and the "for information only" calls. These are more than half of incoming calls.
- If available, the triager schedules many other nonemergent calls with the PCP for a video visit. If unsure, triager discusses patient eligibility with the PCP.

## **Animals and COVID-19**

- The main way COVID-19 spreads is from person to person. There is low risk of getting COVID-19 from a pet or other animal.
- It is possible for animals to catch COVID-19 from people. A few pets have tested positive for COVID-19 (including cats and dogs).
- The CDC recommends treating pets like other family members when trying to avoid spreading COVID-19.
- Call your vet if your pet gets sick or you have other questions.
- The CDC has more information on COVID-19 and animals at: <https://www.cdc.gov/coronavirus>.

## **COVID-19 Disease and Repeat Infections**

- Most viral infections cause our immune system to create antibodies that protect us from getting that infection again.
- Sometimes this provides lifelong protection, but sometimes that protection only lasts months or years.
- **Protection Duration after an Infection.** Research about how long protection against COVID-19 lasts is ongoing. Protection has been proven to last for at least 90 days (3 months) after infection. The CDC recommends using 90 days post exposure as a protected period.
- For now, it remains important for people who have recovered from COVID-19 infections to be careful. Take normal precautions such as wearing a mask and social distancing.
- **Recovery and Re-infections.** Re-infections after full recovery do occur. The arrival of COVID-19 variant (mutant) viruses has increased the rate of re-infections for some of the variants.
- **Need for Vaccine.** People who have recovered from COVID-19 should still get a COVID-19 vaccine and booster shot. Reason: Vaccination provides greater protection than the natural immunity from a COVID-19 infection.
- **Break-through Infections.** Breakthrough cases are COVID-19 infections that bypass vaccine protection. They are more common with new variants. Many do not cause any symptoms. The vaccine prevents almost all hospital admissions and deaths.
- **Booster Vaccines:** Booster vaccines are recommended 5 or more months after the Pfizer or Moderna vaccines and 2 or more months after the Johnson and Johnson vaccine. These booster shots reduce the rate of COVID-19 break-through infections.

## **Ibuprofen and other NSAID Use for COVID-19**

- Many callers have expressed concerns that ibuprofen (or other NSAID) use to treat COVID-19 symptoms may worsen the disease.
- These concerns originated from a few physicians' comments and have since spread over social media.
- To date, there is no scientific evidence (clinical trials or studies) that show that using ibuprofen negatively impacts outcome in COVID-19 patients. We will continue to review any new literature as it is published.
- The CDC, WHO, AAP and our Infectious Disease expert reviewers continue to approve the use of ibuprofen for COVID-19.
- For this reason, STCC guidelines continue to recommend ibuprofen as an acceptable way to treat high fevers and pain. (Note: Remind callers that fevers are beneficial, help fight the infection, and may speed recovery. Low-grade fevers should not be treated.)
- If callers remain concerned, they can use acetaminophen for symptoms that warrant treatment.
- Caution: For suspected COVID-19 patients on oral steroids, such as prednisone, the triager should involve the PCP for a decision about whether the drug can be continued.

## **Office Call Surges: How to Better Manage**

Getting behind in responding to calls is always a problem during infection outbreaks or panic created

by the media. The COVID-19 pandemic caused major surges in call volumes. Here are some suggestions for off-loading calls:

- Refer callers to the American Academy of Pediatrics parent website: [www.healthychildren.org](http://www.healthychildren.org) while they are waiting for a callback. The answer to their questions will likely be found there.
- The website contains numerous articles written for parents on every COVID-19 issue. Examples are masks, getting outside, breastfeeding, dealing with anxiety, etc.
- Every topic is available in both English and Spanish.
- Your favorite COVID-19 handouts from the AAP or CDC can be emailed or texted to parents directly or using your EHR portal.
- The AAP website also features a Pediatric Symptom Checker. It helps a parent self-triage. It also provides self-care advice if they don't need to be seen. In addition to 160 other symptom topics, it contains 2 COVID-19 self-triage guides.
- Changing Parent Behavior: During a major pandemic, encourage parents to use a pediatric symptom checker before calling. Result: Parents would only call about patients who might need to be seen or tested.

### Internet Resources

- Centers for Disease Control and Prevention (CDC): Coronavirus. <https://www.cdc.gov/coronavirus>.
- Public Health Agency of Canada: <https://www.canada.ca/en/public-health/services/diseases/coronavirus.html>.
- World Health Organization (WHO): Coronavirus. <https://www.who.int/health-topics/coronavirus>.
- American Academy of Pediatrics: <http://www.healthychildren.org>

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## REFERENCES

1. Alramthan A, Aldaraji W. A case of COVID-19 presenting in clinical picture resembling chilblains disease. First report from the Middle East. Clin Exp Dermatol 2020 Aug;45(6):746-748.
2. Bautista-Rodriguez C, Sanchez-de-Toledo J, Clark BC, et al. Multisystem Inflammatory Syndrome in children: An international survey. Pediatrics 2021 Feb;147(2):e2020024554.
3. Castagnoli R, Votto M, Licari A, et al. Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) Infection in Children and Adolescents: A Systematic Review. JAMA Pediatr. 2020 Sep 1;174(9):882-889.
4. CDC COVID-19 Response Team. Coronavirus Disease 2019 in Children - United States, February 12 - April 2, 2020. MMWR Morbidity and Mortality Weekly Report. ePub: 6 April 2020.

5. Chung E, Chow EJ, Wilcox NC, et al. Comparison of Symptoms and RNA Levels in Children and Adults With SARS-CoV-2 Infection in the Community Setting. *JAMA Pediatr.* 2021 Jun 11.
6. De Rose DU, Piersigilli F, Ronchetti MP, et al. Novel coronavirus (COVID-19) in newborns and infants. *Ital J Pediatr.* 2020 Apr 29;46(1):56.
7. DeLaroche AM, Rodean J, Aronson PL, et al. Pediatric Emergency Department visits at US Children's Hospitals during the COVID-19 pandemic. *Pediatrics.* 2021 Apr;147(4):e2020039628.
8. Dufort EM, Koumans EH, Chow EJ, et al. Multisystem Inflammatory Syndrome in children in New York state. *N Engl J Med.* [published online ahead of print, 2020 Jun 29]
9. Farooqi KM, Chan A, Weller RJ, et al. Longitudinal Outcomes for Multisystem Inflammatory Syndrome in Children. *Pediatrics.* 2021 Aug;148(2):e2021051155.
10. Feldstein LR, Rose EB, Horwitz SM, et al. Multisystem Inflammatory Syndrome in U.S. children and adolescents. *N Engl J Med.* [published online ahead of print, 2020 Jun 29].
11. Fernandes DM, Oliveira CR, Guerguis S, et al. Severe Acute Respiratory Syndrome Coronavirus 2 Clinical Syndromes and Predictors of Disease Severity in Hospitalized Children and Youth. *J Pediatr.* 2021 Mar;230:23-31.e10.
12. Fouda GGA, Kwiek JJ, Yotobieng M. Safety of breastfeeding by mothers with COVID-19: New evidence from Israel. *Pediatrics.* 2021 Apr 13;e2020049772.
13. Harrison E, Garbutt J, Sterkel R, et al. Collaborating to advocate in primary care for children during COVID-19. *Pediatrics.* 2021 Oct;148(4):e2021052106.
14. Hatoun J, Correa ET, Donahue SMA, et al. Social distancing for COVID-19 and diagnoses of other infectious diseases in children. *Pediatrics.* 2020 Oct;146(4):e2020006460.
15. Hernandez C, Bruckner AL. Focus on "COVID Toes". *JAMA Dermatol.* 2020 Sep 1;156(9):1003.
16. Humphreys KL, Myint MT, Zeanah CH. Increased risk for family violence during the COVID-19 pandemic. *Pediatrics.* 2020 Jul;146(1):e20200982.
17. Jain SS, Steele JM, Fonseca B, et al. COVID-19 Vaccination - Associated Myocarditis in Adolescents. *Pediatrics.* Nov 2021, 148 (5) e2021053427.
18. Kainth MK, Goenka PK, Williamson KA, et al. Early experience of COVID-19 in a US children's hospital. *Pediatrics.* 2020 Oct;146(4):e2020003186.
19. King JA, Whitten TA, Bakal JA, et al. Symptoms associated with a positive result for a swab for SARS-CoV-2 infection among children in Alberta. *CMAJ.* 2021 Jan 4;193(1):E1-E9.
20. Laws RL, Chancey RJ, Rabold EM, et al. Symptoms and transmission of SARS-CoV-2 among children - Utah and Wisconsin, March-May 2020. *Pediatrics.* 2021 Jan;147(1):e2020027268.
21. Lu X, Zhang L, Hui, D, et al. SARS-CoV-2 Infection in children. *N Engl J Med.* 2020 Apr 23;382(17):1663-1665.
22. Ludvigsson JF. Systematic review of COVID-19 in children shows milder cases and a better prognosis than adults. *Acta paediatrica.* March 2020. doi:10.1111/apa.15270.

23. McCormick DW, Richardson LC, Young PR, et al. Deaths in Children and Adolescents Associated With COVID-19 and MIS-C in the United States. *Pediatrics*. Nov 2021; 148 (5) e2021052273.
24. Mithal LB, Machut KZ, Muller WJ, et al. SARS-CoV-2 infection in infants less than 90 days old. *J Pediatr* 2020 Sep;224:150-152.
25. Muchmore B, Muchmore P, Lee CW, et al. Tracking potential COVID-19 outbreaks with influenzalike symptoms urgent care visits. *Pediatrics*. 2020 Oct;146(4):e20201798.
26. Ouldali N, Yang DD, Madhi F, et al. Factors associated with severe SARS-CoV-2 infection. *Pediatrics* March 2021;147 (3) e2020023432.
27. Paret M, Lalani K, Hedari C, et al. SARS-CoV-2 among infants <90 days of age admitted for serious bacterial infection evaluation. *Pediatrics*. 2021 Oct;148(4):e2020044685.
28. Romero Ramírez DS, Lara Pérez MM, Carretero Pérez M, et al. SARS-CoV-2 Antibodies in Breast Milk After Vaccination. *Pediatrics*. Nov 2021; 148 (5) e2021052286.
29. Ruiyun Li, Sen Pei, Bin Chen, et al. Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus (SARS-CoV2). *Science* 10.1126/science.abb3221 (2020)
30. Shekerdemian LS, Mahmood NR, Wolfe KK, et al. Characteristics and outcomes of children With Coronavirus Disease 2019 (COVID-19) infection admitted to US and Canadian pediatric intensive care units. *JAMA Pediatr*.2020 Sep 1;174(9):868-873.
31. Shlomai NO, Kasiser Y, Strauss T, et al. Neonatal SARS-CoV-2 infections in breastfeeding mothers. *Pediatrics*. 2021 May;147(5):e2020010918
32. Song W, Li J, Zou N, et al. Clinical features of pediatric patients with coronavirus disease (COVID-19). *J Clin Virol*. 2020 Apr 24;127:104377.
33. Su L, Ma X, Yu H, et al. The different clinical characteristics of corona virus disease cases between children and their families in China - the character of children with COVID-19. *Emerging Microbes and Infection* 2020; 9(1): 707-13.
34. Wong CA, Ming D, Maslow G, et al. Mitigating the impacts of the COVID-19 pandemic response on at-risk children. *Pediatrics*. 2020 Jul;146(1):e20200973.

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