COVID-19 - Diagnosed or Suspected

Schmitt-Thompson Clinical Content

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
- **Parent or patient makes suspected diagnosis** based on symptoms consistent with COVID-19 AND possible close contact with COVID-19 patient within last 2 weeks OR
- **Triage Nurse makes suspected diagnosis** based on symptoms consistent with COVID-19 and nurse judgment. Perspective: triage nurses are more qualified to suspect a clinical diagnosis of this infection than parents.
- Confirmation of Diagnosis: COVID-19 testing is now widely available. It should be performed on all the above suspected cases.
- Also Included: Suspected Influenza calls when flu is also widespread in the community.
- **Updated: November 15, 2021** (version 14)

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 9 months in most people after completing the vaccine series.
- However, some may develop a mild breakthrough infection.
- This guideline continues to SMAP *fully vaccinated* patients with COVID-19 compatible symptoms **and no known or possible exposure** to other symptom-based protocols. This is a practical decision.
- Each medical director or office will need to consider this decision based on changes in variants and vaccines.
- Note: A ***fully vaccinated*** patient means 2 weeks have passed since the final dose. A ***partially vaccinated*** patient means incomplete vaccine series or less than 2 weeks have passed since final dose.
- ***Fully vaccinated symptomatic*** people with known or possible exposure should be tested at the

time they start showing symptoms.
• ***Fully vaccinated asymptomatic*** people who have close contact with COVID-19 should be tested 5-7 days after exposure and wear a mask in public indoor settings for 14 days or until they receive a negative test result. No home quarantine is needed. (CDC recommendations)

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 available for patients with influenza who also are High-Risk for complications.
• **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 10 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.

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] COVID-19 compatible respiratory symptoms BUT [2] no possible COVID-19 close contact within last 2 weeks (e.g. only child kept at home with vaccinated caregivers)

Go to the specific symptom-based protocol. Reason: COVID-19 unlikely.

[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 series completed (fully vaccinated) AND [2] new-onset of possible COVID-19 symptoms BUT [3] no possible exposure

Go to the specific symptom-based protocol. Reason: COVID-19 unlikely in fully vaccinated person with no possible new exposure to COVID-19.

[1] Had lab test confirmed COVID-19 infection within last 3 months AND [2] new-onset of possible COVID-19 symptoms BUT [3] no possible exposure

Go to the specific symptom-based protocol. Reason: COVID-19 unlikely in previously infected person with no possible new exposure to COVID-19.

[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 Guideline: Immunization Reactions (Pediatric)

COVID-19 vaccine, questions about

Go to Protocol: Immunization Reactions (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: very rare complication

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.

[1] COVID-19 infection suspected by caller or triager AND [2] mild symptoms (cough, fever and others) AND [3] no complications or SOB

Reason: arrange COVID-19 testing. Triager will provide advice for treating symptoms.

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

Reason: PCP will decide if PCR test is indicated.

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 or suspected by doctor (or NP/PA) AND [2] mild symptoms (cough, fever, chills, sore throat, muscle pains, headache, loss of smell) AND [3] needs symptom care advice

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 with Mild 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 10 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 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 Vaccines - Vaccine Postponement Questions:**
    - **Positive COVID-19 Test:** If your child has a positive COVID-19 test, the vaccine should be postponed until after the 10 day quarantine period is over and the symptoms are improving.
    - **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 gone and symptoms are improving.
    - **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 until after the quarantine period is over.
    - **Flu and COVID-19 Vaccines:** Can be given at the same time. No waiting period needed between the 2 shots.

15. **Call Back If:**
    - Shortness of breath occurs
    - Difficulty breathing occurs
    - Your child becomes worse

COVID-19 Home Isolation Questions

1. **Home Isolation Is Needed for those that are Sick with COVID-19:**
    - Isolation means separating sick people with a contagious disease from people who are not sick. (CDC)
    - Stay Home for a Minimum of 10 Days: Home isolation is needed for at least 10 days after symptoms started.

- Follow local, state or provincial Department of Health directives.
- Students should follow their school's COVID-19 policy.
- Living with a suspected COVID-19 patient implies close contact has occurred.
- Both patient and any exposed unvaccinated/partially vaccinated family members should stay home on isolation and quarantine. Period of quarantine starts on the date of last exposure and goes for 10 days.
- Exception for Fully Vaccinated Exposed Persons with NO symptoms: If 2 weeks have passed since your final vaccine, you do not have to quarantine after close contact with a COVID-19 infected person. However, you should be tested 5-7 days after exposure and wear a mask in public indoor settings for 14 days or until they receive a negative test result.
- Also, essential workers who have COVID-19 exposure but do not have any symptoms, should talk to their employer.
- **Ongoing Close Contact (Household):** If living with a person who has a COVID-19 positive test, it implies ongoing exposure. Here is some general guidance: The infected person is contagious for up to 10 days. Living in the same household means all household members continue to be exposed a minimum of 10 days. If a household member develops COVID symptoms, they should get tested within 3 days of onset of symptoms. If a household member does NOT develop symptoms, a test is not needed until 15 to 17 days after the date the first household member's symptoms started or positive test was collected. If a second family member tests positive, the cycle starts over.
- 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 may consider wearing 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):**
   - 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 improved AND [3] Symptoms started more than 10 days ago.
   - Asymptomatic unvaccinated/partially vaccinated patients who don't develop symptoms: Stay at home until 10 days have passed since the date of the positive test was done (test specimen collected). Period of quarantine starts on the date of last exposure and goes for 10 days.
   - Shorter quarantine option for exposed asymptomatic unvaccinated/partially vaccinated people: If they get a negative COVID-19 lab test on day 5 to 7 after exposure, can leave quarantine after day 7. (CDC). This helps essential workers return to the work force.
   - If unsure it is safe for you to leave isolation, check the CDC website or call your PCP.

3. **How to Protect Others - When You or Your Child are Sick with COVID-19:**
   - **Stay Home for a Minimum of 10 Days:** Home isolation is needed for at least 10 days after symptoms started.
   - Follow local, state or provincial Department of Health directives.
   - Students should follow their school's COVID-19 policy.
   - **Cover the Cough:** Cough and sneeze into your shirt sleeve or inner elbow. Don't cough into your hand or the air. If available, sneeze into a tissue and throw it into trash can.
   - **Wash Hands often with Soap and Water:** After coughing or sneezing are important times.
   - **Don't Share Personal Household Items:** Don't share glasses, plates or eating utensils.
   - **Wear a Mask:** Wear a face mask when around others or you go to a medical facility.

- **Avoid High-risk People:** Carefully avoid any contact with the elderly and people with weak immune systems or other chronic health problems.

4. **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. 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 Delta 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 - Who Needs It:**
   - Note to Triager: Follow the policy for testing recommended by your practice.
   - If COVID-19 is suspected, getting a lab test is the only way to know for sure. Getting the test is not urgent.
   - Testing is now widely available without a doctor's order (Exception: age less than 3). Where to get it can be different for some communities.
   - In addition to hospital labs and some offices, many retail clinics and urgent care centers can also perform COVID-19 testing. Even pharmacies (such as CVS and Walgreens) now perform drive-thru testing on children age 3 and older. Testing is also available at some local and state public health departments. Self- tests (such as Abbot BinaxNow) for use at home are now available in some drugstores (such as CVS, Walgreens).

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. The test can tell us if

you have a COVID-19 infection now. Your doctor is the best resource for up-to-date information on diagnostic testing. Timing is important on when to do diagnostic tests.

- **COVID-19 Tests - 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 to 7 days after exposure. Test sooner if symptoms develop.
- **Asymptomatic Fully Vaccinated Patients with a COVID-19 close contact** - Get a test on day 5 to 7 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:**
   - Positive rapid test results are accurate and can be trusted.
   - After a positive test, repeat tests are not recommended.
   - Repeat testing with a PCR test is not indicated after a positive rapid test.
   - The COVID-19 vaccine does NOT affect the results of a COVID-19 test.
   - Even after it is safe to stop isolation (usually 10 days), tests may stay positive for up to 90 days.
   - A positive test does not mean the patient can spread the infection once the required isolation period is completed.

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

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 has become the most common COVID-19 variant.

- The Delta variant spreads much faster than other variants.
- It may cause more severe illness and more hospitalizations.
- The COVID-19 vaccines help protect against the delta variant.
- Infection with COVID-19 Delta variant occurs less often in people who are vaccinated. When it happens it is called a 'breakthrough' infection.
- The risk of serious illness and hospitalization is much lower than if a person is not vaccinated.

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.
   - 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:
   - 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

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 only occur in a closed room with poor ventilation. Aerosols are a rare 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.
- 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 should 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 14 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.
   - **Vaccine:** Safe and effective vaccines are available. Some vaccines are 2 doses, given 3-4 weeks apart. Others are a single dose. Similar to flu shots, they will probably provide protection for 6 to 9 months. At this time, vaccines have been tested and are FDA approved for 5 years and older. 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.
   - **"Breakthrough Cases":** These are COVID-19 infections that bypass vaccine protection. They are rare and many are asymptomatic.
   - **Treatment:** New treatments for severe COVID-19 are available. They are mainly used on hospitalized patients and are given in a vein (IV). **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 awaits FDA approval and will initially be used for adults at high risk for severe disease.
   - **Prevention:** The COVID-19 vaccine is the best way to prevent infections. Face masks, social (safe) distancing and extra handwashing are also proven to help prevent disease. **Caution** - only discuss the following if caller asks about monoclonal antibody therapy: A monoclonal antibody therapy has become available in the US for people 12 years and older at *high risk for severe disease* AND who have had a recent close contact exposure OR confirmed COVID-19 mild symptoms. It is usually given IV to prevent progression and complications. People hospitalized with COVID-19 are not eligible.

10. **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: SARS-CoV-2 (COVID-19).

- Viruses change through mutation. New variants of the COVID-19 virus are expected to appear and spread.
- In the summer and fall of 2021, the Delta variant has become the most common COVID-19 variant.
- The Delta variant spreads much faster than other variants.
- It may cause more severe illness and more hospitalizations.
- The COVID-19 vaccines help protect against the delta variant.
- Infection with COVID-19 Delta variant occurs far less often in people who are vaccinated. When it happens, it is called a 'breakthrough' infection. In general, the patient has mild or no symptoms.
- The risk of serious illness and hospitalization is rare compared to a person who was not vaccinated.

COVID-19 Origins

- An outbreak of this new viral infection began in Wuhan, China in early December 2019.
- The first COVID-19 patient in the United States was reported on January 21, 2020.
- Four patients were confirmed in Canada on January 31, 2020.
- The World Health Organization (WHO) declared COVID-19 a global pandemic on March 11, 2020.
- In the summer and fall of 2021, the Delta variant has become the most common COVID-19 variant.
- The Centers for Disease Control and Prevention (CDC) is considered the source of truth for this protocol. 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 protocol, 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.
- 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.
- Lung disease (e.g., asthma, cystic fibrosis, bronchopulmonary dysplasia)
- Technology-dependent lung disease (e.g., oxygen required, tracheostomy, ventilator)
- Compromised ability to handle respiratory secretions (e.g., spinal cord or brain injury)
- Heart disease (e.g., congenital heart disease, rheumatic heart disease)
- Neuromuscular disease (e.g., muscular dystrophy, cerebral palsy, epilepsy)
- Metabolic disease (e.g., diabetes mellitus)
- Sickle cell disease
- Renal disease (e.g., nephrotic syndrome, renal dialysis)
- Liver disease (e.g., liver failure, chronic hepatitis)
- Down syndrome
- Compromised immune system (e.g., cancer, chemotherapy, HIV/AIDS, transplant, taking oral steroids)
- Diseases requiring long-term aspirin therapy (e.g., Kawasaki's disease and rheumatoid arthritis)

- Pregnancy
- Obesity (BMI > 30) (95th percentile)
- Healthy children under 2 years old are also considered HIGH-RISK. Reason: higher rate of pneumonia and hospitalization.

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.

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. Do not let pets have close contact with other people or animals outside your household. A sick person should self-isolate and avoid contact with both people and pets.
- 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.
- **Need for Vaccine.** People who have recovered from COVID-19 should still get a COVID-19 vaccine. Reason: Vaccination provides greater protection than the natural immunity from a COVID-19 infection. The greatest protection comes from having both (CDC).
- **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.
- **Vaccines and Break-through Infections.** COVID-19 vaccines protect against most of the COVID-19 variants. Even when they don't, they usually protect against severe disease and the need for hospitalization.
- **Booster Vaccines.** Booster vaccines are recommended 6 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. Initially, they are recommended for people at high risk of severe disease. Soon they will be available to everyone.

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 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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- Lisa M. Koonin DrPH, MN, MPH; Founder, Health Preparedness Partners; Pandemic preparedness specialist
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COVID-19 - Exposure

Schmitt-Thompson Clinical Content

DEFINITION

- Exposed (close contact) to a person who has been diagnosed (confirmed by testing) or suspected to have COVID-19
- The exposed person is well and has NO COVID-19 associated symptoms (cough, fever, shortness of breath or others). For symptomatic suspected COVID-19 patients, use the COVID-19 Diagnosed or Suspected protocol.
- Also included: Questions about COVID-19 and COVID-19 vaccines
- **Updated: November 15, 2021** (version 14)

CONTACT (EXPOSURE) to COVID-19 Definition: Higher Risk

- **Household Close Contact.** Lives with a person who has positive test for COVID-19. This carries the highest risk of transmitting the infection.
- **Other Close Contact.** Close contact includes kissing, hugging or sharing eating and drinking utensils. It also includes close conversations. Direct contact with secretions of a person with COVID-19 is also close contact. Includes being in the same childcare room, classroom or carpool. These exposures are usually lower risk than living with an infected person.

NOT CLOSE CONTACT - Low Risk Exposure:

- Walking by a person who has COVID-19 carries no risk.
- Being outdoors and observing safe distancing (greater than 6 feet). Outdoor contacts are much safer than indoor contacts.
- Being in the same school, workplace, place of worship or building as ONE person with COVID-19 carries a small risk. This risk increases once multiple people in that setting develop COVID-19.

COVID-19 Fully Vaccinated Exposed Patients who are Asymptomatic

- COVID-19 vaccines approved by the FDA are highly effective. Research data has confirmed that protective antibody levels are still high at 9 months for most people after completing the vaccine series.
- However, some may develop a mild breakthrough infection.
- Note: A ***fully vaccinated*** patient means 2 weeks have passed since the final dose. A ***partially vaccinated*** patient means incomplete vaccine series or less than 2 weeks have passed since final dose.
- ***Fully vaccinated symptomatic*** people with known or possible exposure should be tested at the time they start showing symptoms.
- ***Fully vaccinated asymptomatic*** people who have close contact with COVID-19 should be tested 5-7 days after exposure and wear a mask in public indoor settings for 14 days or until they receive a negative test result. No home quarantine is needed. (CDC recommendations)

TRIAGE ASSESSMENT QUESTIONS

See More Appropriate Protocol

Positive COVID-19 test

Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)

[1] Symptoms of COVID-19 (cough, SOB or others) AND [2] diagnosed by HCP has having COVID-19

Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)

[1] Symptoms of COVID-19 (cough, SOB or others) AND [2] recent household exposure to known influenza (flu test positive)

Go to Protocol: Influenza (Flu) - Seasonal (Pediatric)

[1] Symptoms of COVID-19 (cough, SOB or others) AND [2] lives in an area with community spread

Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)

[1] Symptoms of COVID-19 (cough, SOB or others) AND [2] within 14 days of close contact with confirmed or suspected COVID-19 patient

Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)

[1] Symptoms of COVID-19 AND [2] lives in area or has recently traveled to an area with high community spread

Go to Protocol: COVID-19 - Diagnosed or Suspected (Pediatric)

[1] Difficulty breathing (or shortness of breath) AND [2] onset > 14 days after COVID-19 exposure (Close Contact) AND [3] no community spread where patient lives

Go to Protocol: Breathing Difficulty (Respiratory Distress) (Pediatric)

[1] Cough AND [2] onset > 14 days after COVID-19 exposure AND [3] no community spread where patient lives

Go to Protocol: Cough (Pediatric)

[1] Common cold symptoms AND [2] onset > 14 days after COVID-19 exposure AND [3] no community spread where patient lives

Go to Protocol: Colds (Pediatric)

COVID-19 vaccine reactions

Go to Protocol: Immunization Reactions (Pediatric)

Discuss With PCP and Callback by Nurse Today

[1] Close Contact COVID-19 Exposure within last 14 days BUT [2] COVID-19 vaccine series completed (fully vaccinated)

Reason: PCP will decide if COVID-19 testing is needed.

[1] Close Contact COVID-19 Exposure of unvaccinated or partially vaccinated child within last 14 days BUT [2] NO symptoms

Reason: Home quarantine is needed if NOT fully vaccinated. COVID-19 test is recommended.

[1] Close Contact COVID-19 Exposure within last 14 days AND [2] needs COVID-19 test to return to work or school AND [3] NO symptoms

Reason: PCP will discuss testing.

[1] School notification about school "exposure" to COVID-19 AND [2] unknown if true close contact occurred AND [3] school requesting test to come back AND [4] NO symptoms

Reason: PCP will discuss testing.

[1] Unvaccinated or partially vaccinated child was at a large, crowded event within the last 14 days AND [2] caller wants COVID-19 test AND [3] NO symptoms

Reason: PCP will discuss testing.

See in Office Within 3 Days

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

Caller wants child seen for non-urgent problem

Home Care

[1] Close Contact COVID-19 Exposure 15 or more days ago AND [2] NO symptoms

Reason: Asymptomatic for 14 days. Risk of developing COVID-19 infection has passed. Reassure and discontinue isolation.

[1] Living in or travel from high risk area for COVID-19 community spread as identified by the Public Health Department (PHD) BUT [2] NO symptoms

Reason: Follow local PHD directives regarding staying at home, etc.

Caller concerned that COVID-19 exposure occurred BUT does not meet CDC criteria for close contact

Reason: No exposure and needs reassurance

COVID-19 testing, questions about

COVID-19 prevention, questions about

COVID-19 Disease, questions about

Note: Refer most callers to CDC website: www.cdc.gov/coronavirus

COVID-19 vaccines, questions about

HOME CARE ADVICE

COVID-19 Close Contact Exposed Person with No Symptoms

1. **Reassurance and Education - Close Contact, Unvaccinated or Partially Vaccinated and No Symptoms, but Less than 14 Days:**
   - Although your child may have been or was exposed to COVID-19, your child does not currently have any symptoms of this infection. COVID-19 infections start within 14 days following the last exposure.
   - Since it's been less than 14 days, your child is still at risk for getting sick with it.
   - **Home Quarantine:** Keep your child on home quarantine for 10 days to protect others (CDC). If you have further questions about when it is safe to return to school or work, call us back.
   - **Monitor for Symptoms until 14 Days from Last Exposure:** Check your child's temperature two times a day. Watch for symptoms of COVID-19.
   - **Get Tested:** A person who had a COVID-19 exposure and is asymptomatic should get a COVID-19 test immediately (within 24 hours). If the test is negative, the test should be repeated 5 to 7 days after exposure. Test sooner if symptoms develop. (CDC recommendations)
   - **Wear a Mask:** Wear a mask if you must be around other people.
   - Follow local, state or provincial Department of Health directives.
2. **Reassurance and Education - Close Contact, Fully Vaccinated and No Symptoms, but Less than 14 Days:**
   - You have told me that your child is fully vaccinated against COVID-19 and 2 weeks have passed since the final vaccine dose.

- The risk of getting infected is low.
- **Home Quarantine is NOT needed.**
- **Monitor for Symptoms 14 Days after the Last Exposure:** Check your child's temperature two times a day. Watch for symptoms of COVID-19.
- **Get Tested:** A fully vaccinated person who had a COVID-19 exposure and is asymptomatic should get a COVID-19 test about 5 to 7 days after exposure (CDC). Test sooner if symptoms develop.
- **Wear a Mask:** Wear a mask if you must be around other people until you get a negative test result.
- Follow local, state or provincial Department of Health directives.

3. **Ongoing Close Contact (Household):**
   - If living with a person who has a COVID-19 positive test, it implies ongoing exposure.
   - Here is some general guidance: The infected person is contagious for up to 10 days. Living in the same household means all household members continue to be exposed a minimum of 10 days.
   - If a household member develops COVID symptoms, they should get tested within 3 days of onset of symptoms. If a household member does NOT develop symptoms, a test is not needed until 15 to 17 days after the date the first household member's symptoms started or positive test was collected.
   - If a second family member tests positive, the cycle starts over.

4. **Measure Temperature:**
   - Measure your child's temperature 2 times each day.
   - Do this until 14 days after exposure to COVID-19.
   - If fever occurs, call back.

5. **Watch for Other COVID-19 Symptoms:**
   - COVID-19 coronavirus most often causes a respiratory illness. The most common symptoms are cough, fever and 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.
   - A rare symptom is red or purple toes ("COVID toes").
   - If any of these symptoms occur, call back.
   - Early detection of symptoms and home isolation is the only way to reduce spread of the disease.

6. **Quarantine (Isolation) at Home Recommendations:**
   - *Isolation will definitely be needed if your child develops a cough or fever within 14 days of COVID-19 exposure or has a positive COVID test with no symptoms.*
   - For unvaccinated/partially vaccinated patients without symptoms, home quarantine also is usually required for 10 days. Period of quarantine starts on the date of last exposure and usually goes for 10 days.
   - Shorter quarantine option for asymptomatic people: If they get a negative COVID-19 lab test on day 5 to 7 after exposure, can leave quarantine after day 7. (CDC). This helps essential workers return to the work force.
   - **Exception**: Quarantine not needed following exposure for asymptomatic parents or children who completed their COVID-19 vaccine series. (CDC)
   - Follow the current directives of your local health department or the CDC.
   - Keep your child at home. Do Not go to stores, restaurants, places of worship or other public places. Avoid public transportation or ride sharing. Do Not allow any visitors (such as friends).
   - **Exception:** Leave the house only if you need to seek medical care. For routine medical appointments, check with your PCP or specialist first. They may want to re-schedule you. Always wear a mask.

- Home isolation of younger children can be very difficult. Many families also have limited options. Therefore, each triager should individualize the 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.

7. **Day 15 or Later After Close Contact and No Symptoms:**
   - The COVID-19 infection starts within 14 days of an exposure.
   - Your child developed no symptoms of respiratory infection (such as fever or cough) during the 14 days after an exposure.
   - Your child should be safe from getting COVID-19 from this exposure.
   - If your child has been on home quarantine (isolation), it can be discontinued.

8. **Call Back If:**
   - Fever occurs within 14 days of COVID-19 exposure
   - Cough or difficulty breathing occur within 14 days of COVID-19 exposure
   - Other symptoms of COVID-19 infection occur
   - You have other questions

COVID-19 Testing Questions

1. **COVID-19 Testing - Who Needs It:**
   - Note to Triager: Follow the policy for testing recommended by your practice.
   - If COVID-19 is suspected, getting a lab test is the only way to know for sure. Getting the test is not urgent. You can't tell by symptoms. Reason: Most respiratory viruses cause similar symptoms.
   - Testing is now widely available. Where to get it can be different for some communities.
   - In addition to hospital labs and some offices, many retail clinics and urgent care centers can also perform COVID-19 testing. Even pharmacies (such as CVS and Walgreens) now perform drive-thru testing on children age 3 and older. Testing is also available at some local and state public health departments. Self- tests (such as Abbot BinaxNow) for use at home are now available in some drugstores (such as CVS, Walgreens).

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. The test can tell us if you have a COVID-19 infection now. Your doctor is the best resource for up-to-date information on diagnostic testing. Timing is important on when to do diagnostic tests.
   - **COVID-19 Diagnostic Tests - Recommended Timing (CDC Recommendations):**
   - **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 to 7 days after exposure. Test sooner if symptoms develop.
   - **Asymptomatic Fully Vaccinated Patients with a COVID-19 close contact** - Get a test on day 5 to 7 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. 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:**
   - Positive rapid test results are accurate and can be trusted.
   - After a positive test, repeat tests are not recommended.
   - Repeat testing with a PCR test is not indicated after a positive rapid test.
   - The COVID-19 vaccine does NOT affect the results of a COVID-19 test.
   - Even after it is safe to stop isolation (usually 10 days), tests may stay positive for up to 90 days.
   - A positive test does not mean the patient can spread the infection once the required isolation period is completed.

6. **Call Back If:**
   - You have other questions

COVID-19 Prevention Questions

1. **COVID-19 - How to Protect Yourself and Family from Catching It - The Basics:**
   - Get the COVID-19 vaccine. It is your family's best protection against this serious infection.
   - **Vaccine Site.** Find a nearby vaccine site at vaccines.gov. If your doctor's office doesn't supply the vaccine, also look on your state's public health department website.
   - Avoid close contact with people outside your family unit. Avoid closed spaces (indoors) when possible and all crowds (even outdoors).
   - Always wear a mask when you 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 Delta 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:** Stay home from school or work if you are sick. Your doctor or local health department will tell you when it is safe to return.
   - **Cover the Cough:** Cough and sneeze into your shirt sleeve or inner elbow. Don't cough into your hand or the air. If available, sneeze into a tissue and throw it into trash can.
   - **Wash Hands often with Soap and Water:** After coughing or sneezing are important times.
   - **Don't Share Personal Household Items:** Don't share glasses, plates or eating utensils.
   - **Wear a Mask:** Wear a face mask when around others or you go to a medical facility.
   - **Avoid High-risk People:** Carefully avoid any contact with the elderly and people with weak

immune systems or other chronic health problems.

7. **Call Back If:**
   - You have other questions

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

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 has become the most common COVID-19 variant.
   - The Delta variant spreads much faster than other variants.
   - It may cause more severe illness and more hospitalizations.
   - The COVID-19 vaccines help protect against the delta variant.
   - Infection with COVID-19 Delta variant occurs far less often in people who are vaccinated. When it happens it is called a 'breakthrough' infection. In general, the patient has mild or no symptoms.
   - The risk of serious illness and hospitalization is rare compared to a person who is not vaccinated.

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. **COVID-19 - Exposure Risk Factors:**
   - Here are the main risk factors for getting sick with COVID-19:
   - 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

5. **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 only occur in a closed room with poor ventilation. Aerosols are a rare cause of COVID-19 transmission (CDC and WHO).

6. **COVID-19 - Travel:**
   - Avoid all non-essential air travel.
   - Travel is much safer for people who are vaccinated.
   - The Centers for Disease Control and Prevention (CDC) maintains a website with the latest recommendations regarding travel and your health.
   - I**nternational travel:** The CDC recommends all travelers get a COVID-19 lab test on day 3-5 after arriving home. Fully vaccinated people do not need to quarantine. Non- and partially-vaccinated people need to stay home for 7 days even if the lab test is negative.
   - 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

7. **COVID-19 - Other Facts:**
   - **Incubation Period:** average 5 days (range 2 to 14 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.
   - **Vaccine:** Safe and effective vaccines are available. Some vaccines are 2 doses, given 3-4 weeks apart. Others are a single dose. Similar to flu shots, they will probably provide protection for 6 to 9 months. At this time, vaccines have been tested and are FDA approved for 5 years and older. 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.
   - **"Breakthrough Cases":** These are COVID-19 infections that bypass vaccine protection. They are rare and many are asymptomatic.
   - **Treatment:** New treatments for severe COVID-19 are available. They are mainly used on hospitalized patients and are given in a vein (IV). **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 awaits FDA approval and will initially be used for adults at high risk for severe disease.
   - **Prevention:** The COVID-19 vaccine is the best way to prevent infections. Face masks, social (safe) distancing and extra handwashing are also proven to help prevent disease. **Caution** - only discuss the following if caller asks about monoclonal antibody therapy: A monoclonal antibody therapy has become available in the US for people 12 years and older at *high risk for severe disease* AND who have had a recent close contact exposure OR confirmed COVID-19 mild symptoms. It is usually given IV to prevent progression and complications. People hospitalized with COVID-19 are not eligible.

8. **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.
- 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.

9. **Call Back If:**
   - You have other questions

COVID-19 Vaccine Questions

1. **COVID-19 Vaccines - Efficacy Questions:**
   - **Vaccine Efficacy:** All the vaccines approved by the FDA for use in the US are highly effective at preventing COVID-19. The protection against getting the new variants has gone down some, but most people have mild symptoms or none. The vaccines continue to prevent serious symptoms, complications and the need for hospital or ICU admission, even for the variants. They are much more effective than flu vaccines.
   - **Other Major Benefits:** Vaccines also prevent the rare serious delayed onset complications from COVID-19 infections that can occur in some unlucky people. One example is multisystem inflammatory syndrome in children (also called MIS-C). Another is "long hauler" symptoms (such as brain fog or chronic breathing problems). Key: Vaccines prevent death from COVID-19 infections.
   - **Vaccines and Normal Life:** Having almost everyone vaccinated is the only way we can get back to normal. Normal means no masks, open schools, safe to travel, safe to visit grandparents, less mental health crisis and no deaths from COVID-19. Vaccinated people also do not have to quarantine after exposure to COVID-19.
   - **Best Vaccine:** Any vaccine approved by the FDA is highly effective and safe. Get the first one that becomes available to you. They will protect you and your family.
   - **Booster Shots:** In October 2021, the CDC recommended a booster shot 6 or more months after the Pfizer or Moderna 2nd vaccine. It recommended a booster shot 2 or more months after the Johnson and Johnson vaccine. Initially boosters were given to people with risk factors for severe COVID-19 infections. Soon they will be available to everyone. Experts predict we may need them yearly, just like flu vaccine booster shots.

2. **COVID-19 Vaccines - Safety Questions:**
   - **Vaccine Safety:** Very safe. Most people get a sore arm for a few days. About half get some general symptoms for about 24 hours, such as feeling tired and achy. A smaller number have a fever. These are the normal side effects seen with most vaccines and they go away quickly. They show your immune system is working. Serious reactions are extremely rare.
   - **Blood Clot Concerns:** Very rare. Occur in about 1 person per million vaccinated people. Blood clots occur much more commonly in people who get the natural COVID-19 infection. (Note: have NOT occurred with Moderna or Pfizer vaccines)
   - **Myocarditis Concerns:** Myocarditis is inflammation of the heart muscle. Main symptoms are chest pain and shortness of breath. Symptoms start within 1 week of getting the vaccine. Note to triager: If chest pain is the only symptom, refer to PCP or ED urgently. Very rare side effect of the COVID-19 vaccines. Occurs in about 6 per million vaccinated people. Mainly in teen or young adult males. The symptoms are usually mild and go away quickly. Myocarditis occurs much more commonly in people who get the natural COVID-19 infection. Plus it is more severe in them.

3. **COVID-19 Vaccines - Answers to Special Patient Questions**:
   - **Children and Teens:** Currently approved for 5 years and older. Results: strong protection and also safe (normal side effects). Importance: while most children have mild or asymptomatic

infections, they can get rare complications such as MIS-C. Also, they can innocently transmit the disease to others.
- **Pregnant Women:** Vaccines are approved and safe.
- **Breastfeeding Mothers:** Vaccines are approved and safe. Studies show that breastmilk passes antibody protection against COVID-19 to the baby.
- **Underlying High Risk Conditions:** Vaccines are approved and safe. These patients need the vaccine protection the most. If you have questions about a specific condition, discuss with your doctor.
- **Person Already had the Disease:** Get the vaccine. It provides higher levels of antibodies and better protection than the natural disease. Restriction: not approved until you are over any acute symptoms and the 10 days of isolation have passed.
- Go to CDC website for other questions: https://www.cdc.gov/coronavirus/2019-ncov/vaccines.

4. **COVID-19 Vaccines - Vaccine Postponement Questions:**
   - **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 until after the quarantine period is over.
   - **Positive COVID-19 Test:** If your child has a positive COVID-19 test, the vaccine should be postponed until after the 10 day quarantine period is over and the symptoms are improving.
   - **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 gone and symptoms are improving.
   - **Flu and COVID-19 Vaccines:** Can be given at the same time. No waiting period needed between the 2 shots.

5. **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 - Exposure
- COVID-19 Prevention
- COVID-19 Vaccines - Answers to Common Questions
- Fever - How to Take the Temperature

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.

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.
- 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.

COVID-19 Origins

- COVID-19 stands for Coronavirus disease 2019.
- Cause: The name of the new virus is SARS-CoV-2.
- An outbreak of this infection began in Wuhan, China in early December 2019.
- The first COVID-19 patient in the United States was reported on January 21. 2020.
- The first COVID-19 patient in Canada was reported on January 31, 2020.
- The World Health Organization (WHO) declared COVID-19 a global pandemic on March 11, 2020.
- In the summer and fall of 2021, the Delta variant has become the most common COVID-19 variant.
- The Centers for Disease Control and Prevention (CDC) is considered the source of truth. This continues to be a changing situation and recommendations from the CDC are being updated regularly. If the CDC recommendations are different than what is in this protocol, follow the CDC guidelines.
- See: https://www.cdc.gov/coronavirus

Child Abuse During the COVID-19 Pandemic

- Social isolation combined with the financial crisis has caused unremitting stress for many parents.
- Young children often become irritable and demanding when confined to the home.
- These factors have increased the rate of angry outbursts and child abuse.
- Triagers need to be alert for calls about bruises or other injuries that are suspicious, unexplained or occur in the first year of life.
- They also need to offer help to families in crisis before they reach the breaking point. Also be alert to

increased domestic violence. Be prepared. Know where to refer at-risk families.
- Also, see the Psychosocial Problems or Child Abuse protocols.

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. Do not let pets have close contact with other people or animals outside your household. A sick person should self-isolate and avoid contact with both people and pets.
- 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.
- **Need for Vaccine.** People who have recovered from COVID-19 should still get a COVID-19 vaccine. Reason: Vaccination provides greater protection than the natural immunity from a COVID-19 infection. The greatest protection comes from having both (CDC).
- **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.
- **Vaccines and Break-through Infections.** COVID-19 vaccines protect against most of the COVID-19 variants. Even when they don't, they usually protect against severe disease and the need for hospitalization.
- **Booster Vaccines:** Booster vaccines are recommended 6 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. Initially, they are recommended for people at high risk of severe disease. Soon they will be available to everyone.

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 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 need testing.

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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Immunization Reactions

Schmitt-Thompson Clinical Content

DEFINITION

- A reaction to a recent vaccination (immunization)
- Types of Reactions: Local reactions (e.g. pain, swelling, redness), Systemic general reactions (e.g. fever, fussiness, decreased activity) and Anaphylactic reactions are covered.
- Reactions to the following vaccines are covered: COVID-19, Chickenpox (varicella), DTaP (Diphtheria, Tetanus, acellular Pertussis), Haemophilus influenzae type b, Hepatitis A, Hepatitis B, Influenza, MMR (Measles, Mumps, Rubella), Meningococcal, Papillomavirus, Pneumococcal, Polio, Rabies, Rotavirus, Synagis (for RSV), Tuberculosis (BCG vaccine) and Typhoid
- **Also Included:** COVID-19 vaccine answers to common questions and reasons to avoid pre-dosing with fever medicine
- **Updated for COVID-19 Vaccines: November 15, 2021** (version 5)

TRIAGE ASSESSMENT QUESTIONS

Call EMS 911 Now

Difficulty with breathing or swallowing

R/O: anaphylactic reaction

Limp, weak, or not moving

R/O: acute encephalopathy

Unresponsive or difficult to awaken

R/O: acute encephalopathy

Sounds like a life-threatening emergency to the triager

See More Appropriate Protocol

COVID-19 vaccine given recently and now has COVID-19 compatible respiratory symptoms (e.g., runny nose, cough, sore throat, shortness of breath, etc)

Go to Guideline: COVID-19 - Diagnosed or Suspected (Pediatric)

Fever starts over 2 days after the shot and no signs of cellulitis (Exception: MMR or varicella vaccines can cause delayed fever) and 3 months or older

Go to Protocol: Fever - 3 Months or Older (Pediatric)

Go to ED Now

Newborn < 4 weeks with fever 100.4° F (38.0° C) or higher rectally

R/O: sepsis

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

Age 4 - 12 weeks old with fever > 102 F (39 C) rectally following vaccine

R/O: sepsis

Age 4 - 12 weeks old with fever 100.4 F (38 C) or higher rectally and begins > 24 hours after shot OR lasts > 48 hours

R/O: sepsis

Age 4 - 12 weeks old with fever 100.4 F (38 C) or higher rectally following vaccine and has other RISK FACTORS for sepsis

Other Risk Factors: Baby acts SICK (not feeding or breathing normally, etc) OR high risk newborn (preterm, on oxygen, etc)

Age 4 - 12 weeks old with fever 100.4 F (38 C) or higher rectally following vaccine and only received Hep B vaccine

Reason: fever rare (3%) with Hep B vaccine

Rotavirus vaccine and vomiting 3 or more times, bloody diarrhea or severe crying

R/O: intussusception

Measles vaccine rash (onset day 6-12) is purple or blood-colored

R/O: purpura or petechiae

Sounds like a severe, unusual systemic reaction to the COVID-19 vaccine to the triager

Child sounds very sick or weak to the triager (Exception: severe local reaction)

Reason: serious complication suspected

Go to Office Now

Fever > 105° F (40.6° C)

R/O: severe reaction

Crying continuously for > 3 hours

R/O: severe reaction or severe pain

Discuss With PCP and Callback by Nurse within 1 Hour

Fever and weak immune system (sickle cell disease, HIV, splenectomy, chemotherapy, organ transplant, chronic oral steroids, etc)

Reason: PCP will decide if vaccine-related fever or needs to be seen

See in Office Today

Over 3 days since shot and general symptoms (such as muscle aches, headache, fussiness, chills) are getting worse

R/O: unrelated cause

Fever present > 3 days

R/O: bacterial superinfection

See in Office Today or Tomorrow

Over 3 days since shot and redness is larger than 2 inches (5 cm) (Note: can be normal after 4th and 5th DTaP)

R/O: low grade infection

Over 3 days since shot and redness at the injection site is getting worse

R/O: low-grade infection

See in Office Within 3 Days

Deep lump (following DTaP at 2-8 weeks) becomes tender to the touch

R/O: bacterial superinfection

Measles vaccine rash (onset day 6-12) persists > 4 days

R/O: wrong diagnosis

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

Caller wants child seen for non-urgent problem

Home Care

Age 6 - 12 weeks old with fever > 100.4 F (38 C) rectally starting within 24 hours of vaccine and baby acts WELL (normal suck, alert, etc) and without risk factors for sepsis

Normal immunization reaction

COVID-19 vaccine answers to common questions

HOME CARE ADVICE

Common Vaccine Reactions

1. **Reassurance and Education - Normal Reactions:**
   - Vaccines protect us against serious diseases.
   - Having some temporary symptoms from the shot is normal.
   - The symptoms mean the vaccine is working. They mean your immune system is building antibodies against the vaccine. The antibodies will protect you against the real disease.
   - These brief side effects do not cause any risks to your health.
   - There is no need to see your doctor for normal reactions, such as pain, swelling, redness or fever.

2. **Vaccine Injection Site Reactions - Treatment:**
   - Some pain, redness and swelling at the injection site is NORMAL. It means the vaccine is working. Redness does not mean there's any infection.
   - **Heat:** For redness and pain, apply a heating pad or a warm wet washcloth to the area for up to 20 minutes. Repeat as needed. Reason: will increase blood flow to the area. It will also speed up healing.
   - **Exception:** can use a cold pack if your PCP recommends it, but only on the day of the shot.
   - **Massage:** Gently massage the injection site during the first few days. Do so several times a day.
   - **No Pain Medicines:** Try not to give any pain medicines for local reactions. Reason: pain medicines may reduce the body's normal immune response. Use local heat instead. The local pain rarely becomes bad.
   - **Hives at Injection Site:** If very itchy, can apply a 1% hydrocortisone cream OTC twice daily as needed.

3. **Fever with Vaccines - Treatment:**
   - Fever with vaccines is NORMAL, harmless and probably beneficial. Reason: Fever speeds up your body's immune system.
   - Fever with most vaccines begins within 12 hours and lasts 1 or 2 days.
   - For low grade fevers 100-102 F (37.8 to 39 C), do not give fever medicines. Reason: Research

has shown these meds may reduce the body's normal immune response.
- For fever above 102 F (39 C), can give medicine for discomfort if needed. Use acetaminophen (See Dosage table).
- **Fluids.** Encourage cool fluids in unlimited amounts. Reason: prevent dehydration. Fluids can also lower high fevers. Age younger than 6 months, only give formula or breastmilk.
- **Clothing.** Dress in normal clothing. For shivering or chills, use a blanket until it stops.
- **Caution:** For babies under 1 year, do not overdress or bundle up. Reason: Babies can get over-heated more easily than older children.

4. **Pre-Dosing with Fever Medicine - Not Recommended:**
   - Giving a fever or pain medicine before getting a vaccine is not advised.
   - Reason: Only 25% of children will develop a fever. There's no point in treating every child.
   - Also, fevers help the body's immune system build antibodies.
   - Do not give dose at regular intervals, only if needed.
   - Exception: The rare child who had a previous severe reaction may receive pre-dosing. Talk with your child's doctor about this.

5. **General Body Symptoms from the Vaccine - Treatment:**
   - General symptoms usually start about 12 to 24 hours after the shot. They mean the immune system is turned on and doing its job.
   - General symptoms of feeling sick usually only last for one day, sometimes 2.
   - Follow the tips below to help your child feel better.
   - *Tiredness*: Encourage your child to rest or even sleep. Reason: The body needs all its energy going towards building antibodies against the vaccine. If we rest, the symptoms may pass sooner.
   - *Poor appetite or even nausea*: Drink extra fluids. Stay well hydrated. Reason: Good hydration keeps the body working at peak performance.
   - *Chills:* Wrap your child in a blanket. Reason: Warmth speeds up blood flow.
   - *Muscle aches:* Take a warm bath or shower.
   - *Fussiness:* Younger children may be more fussy than normal. They need extra holding and comforting.

6. **Call Back If:**
   - Fever lasts over 3 days
   - Redness becomes larger than 2 inches (5 cm)
   - Redness gets worse after 3 days
   - Your child becomes worse

Specific Reactions by Vaccine Type

1. **COVID-19 Vaccine - Common Harmless Reactions:**
   - In children, the side effects are similar to those seen in adults.
   - Injection site reactions: Pain and tenderness start within 8 hours (90% of patients). Other local reactions are some swelling (10%) or skin redness (5%). Local symptoms usually last 1 to 3 days. A lymph node in the armpit on that side can also become tender and swollen.
   - General body symptoms: Fever (15%), chills (40%), tiredness (70%), muscle aches (50%) and headaches (60%). Some other brief side effects are decreased appetite, nausea, dizziness and increased sleep. General symptoms start at about 24 hours. They usually last 1 day, sometimes 2.
   - Vaccines with 2 doses. Symptoms are more frequent after the 2nd vaccine. The above percentages are for the 2nd dose.
   - Vaccines with one dose. Side effects were the same type, but a little less frequent.
   - The vaccine does not cause any respiratory symptoms such as cough, runny nose, sore throat or shortness of breath.

- It is impossible to get COVID-19 from the vaccine. Reason: There is no live COVID-19 virus in the vaccine.
- A serious allergic reaction is very rare. It usually occurs within 20 minutes after the shot.

2. **Chickenpox Vaccine:**
   - Pain or swelling at the injection site for 1 to 2 days (in 19% of children with 1st dose; 33% with 2nd dose)
   - Fever lasting 1 to 3 days begins 14 to 28 days after the vaccine (in 10%).
   - Chickenpox-like vaccine rash (usually 2 lesions) at the injection site (in 3%)
   - Chickenpox-like vaccine rash (usually 5 lesions) scattered over the body (in 4%)
   - This mild rash begins 5 to 26 days after the vaccine and usually lasts a few days.
   - Children with these vaccine rashes can go to day care or school. (Reason: for practical purposes, vaccine rashes are not contagious)
   - Exception: avoid school if widespread, weepy lesions (Reason: probably actual chickenpox).
   - Precaution: if vaccine rash contains fluid, cover it with clothing or Band-Aid.

3. **DTaP or Td Vaccine - Common Harmless Reactions:**
   - Pain, tenderness, swelling and redness at the injection site is the main side effect (in 25% of children).
   - It lasts for 3 to 7 days.
   - A very swollen arm or leg following 4th or 5th DTaP occurs in 3%. There are no complications and future vaccines are safe.
   - Fever (in 25% of children) and lasts for 24 to 48 hours
   - Mild drowsiness (30%), fretfulness (30%) or poor appetite (10%) and lasts for 24 to 48 hours.
   - A painless lump (or nodule) at the DTaP injection site can begin 1 or 2 weeks later. It is harmless and usually will disappear in about 2 months.
   - **Call Back If:** the lump turns red or tender to the touch.

4. **DTaP Vaccine Reaction - Huge Swelling:**
   - A huge swelling of the entire thigh or upper arm can follow the 4th or 5th dose of DTaP in 3% of children.
   - A large swelling over 4 inches (10 cm) occurs in 5% of children with thigh injections (13% for arm injections). The area of redness is smaller.
   - Redness is also present in 60% of these cases.
   - Most children can still move the arm or leg normally.
   - The large thigh or upper arm swelling resolves without treatment by day 3 (60%) to day 7 (90%).
   - There are no complications and this reaction is not an allergy nor an infection.
   - Future DTaP vaccines are safe to give.

5. **Haemophilus Influenzae Type B Vaccine (Hib):**
   - No serious reactions reported
   - Sore injection site or mild fever only occurs in 1.5% of children

6. **Hepatitis A Vaccine:**
   - No serious reactions reported
   - Sore injection occurs in 20% of children, loss of appetite in 10%, and headache in 5%.
   - Usually no fever.
   - If these symptoms occur, they usually last 1-2 days.

7. **Hepatitis B Virus Vaccine (HBV):**
   - No serious reactions reported
   - Sore injection site occurs in 30% of children and mild fever in 3% of children

8. **Influenza Virus Vaccine:**
   - **Influenza Vaccine (Injected)**:

- Pain, tenderness or swelling at the injection site occurs within 6 to 8 hours in 10% of children.
- Mild fever under 103° F (39.5° C) occurs in 18% of children. Fevers mainly occur in young children.
- General reaction: headache, muscle aches, red eyes, nausea
- If these symptoms occur, they usually last 1 or 2 days.
- It is impossible to get flu from the injected vaccine. Reason: there is no live influenza virus in the vaccine.
- Severe allergic reactions are very rare.
- **Influenza Vaccine (Nasal):**
- Note: For each influenza season, follow the CDC current recommendations regarding using the nasal flu vaccine.
- It's an approved option for vaccination of healthy persons age 2 years and older.
- Congested or runny nose is the main symptom
- May cause fever especially in younger children
- Occasionally cough, headache or muscle aches
- Since the vaccine is made from a live but very weakened virus, your child can develop a mild flu-like illness.

9. **Measles Vaccine:**
   - The measles vaccine can cause a fever (10% of children) and rash (5% of children)
   - Onset: 6 to 12 days following the injection.
   - Mild fever under 103° F (39.5°C) in 10% and lasts 2 or 3 days.
   - The mild pink rash is mainly on the trunk and lasts 2 or 3 days.
   - No treatment is necessary. Your child is not contagious.
   - Fact from all research: The MMR vaccine does not cause autism.
   - **Call Back If:**
   - Rash becomes very itchy
   - Rash changes to purple spots
   - Rash lasts over 3 days

10. **Meningococcal Vaccines:**
    - No serious reactions
    - Sore injection site for 1 to 2 days occurs in 50%, with limited use of the arm in 15%.
    - Mild fever occurs in 4%, headache in 40% and joint pain in 20%.
    - MenB (optional meningitis vaccine) may also cause nausea, vomiting or diarrhea.
    - These symptoms only last a few days.
    - It is impossible to get meningitis from the vaccine. Reason: there is no live meningococcal bacteria in the vaccine.
    - No serious reactions reported.

11. **Mumps or Rubella Vaccine:**
    - There are no reactions except for an occasional sore injection site.

12. **Papillomavirus Vaccine:**
    - No serious reactions reported
    - Sore injection site for few days in 90%
    - Redness and swelling at the injection site (in 50%)
    - Fever over 100.4° F (38.0° C) in 10% and fever over 102° F (39° C) in 1- 2%.
    - Headache in 30%

13. **Pneumococcal Vaccine:**
    - No serious reactions
    - Pain, tenderness, swelling OR redness at the injection site in 15 - 30%
    - Mild fever under 102° F (39° C) in 15% for 1-2 days

14. **Polio Vaccine:**
    - No serious reactions
    - Polio vaccine by injection occasionally causes some muscle soreness.

15. **Rabies Vaccine:**
    - Several brands of rabies vaccine are available.
    - Reactions may vary between brands.
    - Rabies shots are given on days 0, 3, 7, and 14 following exposure.
    - The following harmless reactions can occur:
    - Pain, redness, swelling or tenderness at the injection site (in 20% adults).
    - Malaise, nausea, headache, abdominal pain, dizziness, muscle aches (in 15% adults).
    - These reactions are uncommon in children.

16. **Rotavirus Vaccine:**
    - Mild diarrhea for 1 to 2 days in 3%
    - Mild vomiting even less common
    - No fever
    - Rare serious reaction: intussusception risk 1 in 100,000 (CDC). Presents with vomiting, bloody diarrhea or severe crying.

17. **Synagis Injection:**
    - Synagis (palivizumab) contains antibodies against RSV and is given IM to high risk preterms
    - No serious reactions
    - Sore injection site is usually mild

18. **BCG Vaccine for Tuberculosis (TB):**
    - A vaccine used to prevent TB in high risk groups or countries. Not used in the US or most of Canada. Note: This is different than the PPD skin test to detect TB.
    - Given into the skin of the right shoulder area.
    - Timing: Mainly given to infants and young children.
    - Normal reaction: After 6 to 8 weeks a blister forms. It gradually enlarges and eventually drains a whitish yellow liquid. The blister then heals over leaving a scar. The raised scar is proof of BCG protection.
    - Abnormal reaction: Abscess (infected lump) occurs in the shoulder or under the arm. Occurs in 1% of patients.
    - **Call Back If:**
    - Blister turns into a large red lump OR
    - Lymph node in the armpit becomes large

19. **Typhoid Vaccine:**
    - **Typhoid (Shot):**
    - Mild redness and swelling at the injection site (in 7%)
    - Fever (in 1%)
    - **Typhoid (Oral):**
    - Fever or headache (in 5%)
    - Abdominal discomfort, nausea or vomiting less commonly

COVID-19 Vaccine Answers to Common Questions

1. **COVID-19 Vaccines - Efficacy and Safety Questions:**
    - **Vaccine Efficacy:** All the vaccines approved by the FDA for use in the US are highly effective at preventing COVID-19. The protection against getting the new variants have gone down some, but most people have mild symptoms or none. The vaccines continue to prevent serious symptoms, complications and the need for hospital or ICU admission, even for the variants. They are much more effective than flu vaccines.
    - **Other Major Benefits:** Vaccines also prevent the rare serious delayed onset complications

from COVID-19 infections that can occur in some unlucky people. One example is multisystem inflammatory syndrome in children (also called MIS-C). Another is "long hauler" symptoms (such as brain fog or chronic breathing problems). Key: Vaccines prevent death from COVID-19 infections.

- **Vaccines and Normal Life:** Having almost everyone vaccinated is the only way we can get back to normal. Normal means no masks, open schools, safe to travel, safe to visit grandparents, less mental health crisis and no deaths from COVID-19.
- **Vaccine Safety:** Very safe. Most people get a sore arm for a few days. About half get some general symptoms for about 24 hours, such as feeling tired and achy. A smaller number have a fever. These are the normal side effects seen with most vaccines and they go away quickly. They show your immune system is working. Serious reactions are extremely rare.
- **Blood Clot Concerns:** Very rare. Occur in about 1 person per million vaccinated people. Blood clots occur much more commonly in people who get the natural COVID-19 infection. (Note: have NOT occurred with Moderna or Pfizer vaccines)
- **Myocarditis Concerns:** Myocarditis is inflammation of the heart muscle. Main symptoms are chest pain and shortness of breath. Symptoms start within 1 week of getting the vaccine. Note to triager: If chest pain is the only symptom, refer to PCP or ED urgently. Very rare side effect of the COVID-19 vaccines. Occurs in about 6 per million vaccinated people. Mainly in teen or young adult males. The symptoms are usually mild and go away quickly. Myocarditis occurs much more commonly in people who get the natural COVID-19 infection. Plus it is more severe in them.
- **Best Vaccine:** Any vaccine approved by the FDA is highly effective and safe. Get the first one that becomes available to you. They will protect you and your family.

2. **COVID-19 Vaccines - Protection Questions:**
   - **Start of Vaccine Protection:** Full protection is reached about 2 weeks after you complete the vaccine series.
   - **Duration of Vaccine Protection:** Research data has confirmed that protection is still high at 6 months after completing the vaccine series. Experts predict the protection may last for 12 months or longer, but we need to wait for more data.
   - **Booster Shots:** In October 2021, the CDC recommended a booster shot 6 or more months after the Pfizer or Moderna 2nd vaccine. It recommended a booster shot 2 or more months after the Johnson and Johnson vaccine. Initially boosters were given to people with risk factors for severe COVID-19 infections. Soon they will be available to everyone. Experts predict we may need them yearly, just like flu vaccine booster shots. Ongoing studies will tell.
   - **COVID-19 Variants and Vaccine Protection:** For now, the current vaccines protect against the current variants in the US. The vaccinated person usually does not get infected. If they do, they develop either a mild illness or an asymptomatic infection. They are protected against serious symptoms and any complications. By contrast, natural immunity does not protect against some of the variants.
   - **Re-infections:** Reinfections can occur after natural infections. Vaccination provides much better protection against future infections.
   - **Quarantine after Exposure:** If you are vaccinated and 2 weeks have passed since your final dose, you do not have to quarantine for 10 days after close contact with a COVID-19 infected person. However, fully vaccinated people should get tested 5 to 7 days after an exposure to COVID-19. You should also wear a mask (for 14 days) when you are around other people or until you know that your test result is negative.

3. **COVID-19 Vaccines - Special Patient Questions:**
   - **Children and Teens:** Currently approved for 5 years and older. Results: strong protection and also safe (normal side effects). Importance: while most children have mild or asymptomatic infections, they can get rare complications such as MIS-C. Also, they can innocently transmit the disease to others.
   - **Pregnant Women:** Vaccines are approved and safe.
   - **Breastfeeding Mothers:** Vaccines are approved and safe. Studies show that breastmilk passes antibody protection against COVID-19 to the baby.
   - **Underlying High Risk Conditions:** Vaccines are approved and safe. These patients need the

vaccine protection the most. If you have questions about a specific condition, discuss with your doctor.

- **Person Already had the Disease:** Get the vaccine. It provides higher levels of antibodies and better protection than the natural disease. Restriction: not approved until you are over any acute symptoms and the 10 days of isolation have passed.
- Go to CDC website for other questions: https://www.cdc.gov/coronavirus/2019-ncov/vaccines.

4. **COVID-19 Vaccines - Vaccine Postponement Questions:**
   - **Positive COVID-19 Test:** If your child has a positive COVID-19 test, the vaccine should be postponed until after the 10 day quarantine period is over and the symptoms are improving.
   - **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 gone and symptoms are improving.
   - **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 until after the quarantine period is over.
   - **Flu and COVID-19 Vaccines:** Can be given at the same time. No waiting period needed between the 2 shots.

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 Vaccines - Answers to Common Questions
- Vaccine Reactions - Normal
- Vaccine Concerns - You're Undecided
- Vaccines - Infections They Prevent
- Fever - How to Take the Temperature
- Fever - Facts Versus Myths
- Acetaminophen (Tylenol) Dosage Table - Children
- Ibuprofen (Advil, Motrin) Dosage Table - Children

Types of Vaccine Reactions

- **Local Injection Site Reaction:** Most local swelling, redness and pain at the injection begins within 24 hours of the shot (rarely 24 to 48 hours.) Usually lasts 2 or 3 days. Occasionally, localized hives or itching occurs at the injection site. They usually last less than 24 hours. Localized hives do not mean your child is allergic to the vaccine.
- **Systemic General Reaction:** Fever with most vaccines (e.g., DTaP) usually begins within 24 hours (sometimes 24-48 hours). Headache, myalgias, malaise and poor appetite can also be seen. Systemic symptoms usually last 1 to 3 days. Exception: With live vaccines (MMR and chickenpox), fever and systemic reactions usually begin between 1 and 4 weeks later.

• **Anaphylactic Reaction:** Anaphylactic reactions can occur with any vaccine but they are very rare (1:500,000). In addition, they usually start while the child is still in the office where the injection was given, so calls about them are extremely rare.

Combination Vaccines and Triage - Symptoms Probably From DTaP Component

From a telephone management standpoint, most local and systemic reactions that follow the standard immunizations given at 2, 4 and 6 months, 12-18 months and 4 to 6 years are due to the DTaP vaccine. The nurse usually does not need to know exactly what the patient received but can base her advice upon the caller's description of the reaction and the DTaP care advice. The nurse may need to know the exact vaccine when a single vaccine (such as influenza or rabies) has been given.

Redness at Injection Site is Normal Vaccine Reaction (Rarely Cellulitis)

• Local vaccine reactions are normal and a good sign that the vaccine is working.
• Bacterial superinfections (e.g., cellulitis, lymphangitis, abscess) at the injection site are extremely rare. Abscesses are more common than cellulitis. In the 1993 report by Simon, 8 out of 9 abscesses required surgical drainage. These were caused by nonsterile vaccine injections contaminated with Group A Strep bacteria. To further document how rare bacterial cellulitis is following a vaccine, there have been no culture confirmed cases of vaccine associated bacterial cellulitis reported in the medical literature in over 20 years. UpToDate lists vaccine reactions as a masquerader of cellulitis and not as a potential cause. (April 2021 access).
• Clues from Appearance: Local vaccine reactions usually are blotchy red with indistinct borders.
• Vaccine reactions also are usually mildly tender, sometimes itchy. Cellulitis usually has confluent spreading redness with sharp borders. It also is very tender to the touch.
• Clues from Size of Redness: Redness over 1 inch (2.5 cm) for the first 3 DTaP doses occurs in less than 1% of children. Redness over 2 inches (5 cm) after dose 4 occurs in 3% and after dose 5 in 15%. All of these are normal vaccine reactions, not bacterial cellulitis. (Data from DAPTACEL package insert)
• Clues from Onset: Redness and fever from a vaccine reaction usually begins within 24 hours following the shot (rarely 24-48 hours). Redness and fever from a bacterial infection usually begins more than 48 hours after the shot (Reason: it takes time for the bacteria to become established and multiply).
• Clues from Duration: Redness that is getting worse after 72 hours also could mean that a bacterial infection has occurred. However, this has been reported as a normal finding after COVID-19 vacine. It's been called "COVID arm".
• Reassurance if no redness: Huge swelling without redness is always an atypical vaccine reaction. Cellulitis always has redness.

Vaccine Injection Site Redness and Pain: Advice to Apply Heat Rather than Cold (Author's reasoning to support this care advice change)

• This protocol now recommends applying warm compresses or a heating pad for local vaccine reactions. This advice applies to local reactions from all injected vaccines. Reason: The goal is to increase blood flow to the injection site. Blood brings lymphocytes and other immune helpers. Warmth may speed up the release of the vaccine into the lymphatic system, making it less concentrated at one site. Heat speeds healing of inflamed tissues.
• Boils and Cellulitis: Skin infections are examples where applying heat is standard advice.
• Sports Injuries and Ice: The advice to treat inflammation with ice or cold compresses comes from how sports injuries are generally treated. But injuries are different. Usually there is some bleeding and cold is thought to prevent the bleeding from recurring. Injuries cause muscle or other tissue damage. Cold is thought to reduce swelling of the damaged tissue. Neither of these reasons apply to vaccine injections. In addition, sports medicine specialists and athletic trainers recommend switching to heat after the first 24 to 48 hours to speed healing.
• Research: There is no study comparing the application of heat versus cold for local vaccine reactions. Facts from pathophysiology and the normal inflammatory response would support the use

of heat.
- Physician Preferences: If the caller states that their PCP recommends treating with cold, the triage nurse should support the PCP's preferred advice. Also, office-based pediatricians and call center medical directors can customize the care advice in this protocol for their facility.

Consultants for Heat versus Cold for Vaccine Injection Site Reactions

This approach of applying heat to local vaccine reactions was reviewed and is supported by the following vaccine specialists:

- Paul Offit MD, Professor of Pediatrics, pediatric infectious disease specialist, medical director of the Vaccine Education Center at Children's Hospital of Philadelphia.
- Sean O'Leary MD, Professor of Pediatrics, pediatric infectious diseases specialist, Children's Hospital Colorado, and Vice Chair of the Committee on Infectious Diseases, American Academy of Pediatrics

Muscle Pain and Site of Vaccine Injection

- Most vaccines are given intramuscular (IM). Part of the local reaction is muscle pain.
- Most shots are given into the vastus lateralis muscle (anterior-lateral thigh). Muscle pain in this site can cause a painful gait (limp). Having the needle touch the femur may contribute.
- After 5 years old, some shots can be given into the deltoid muscle. Muscle pain in this site can cause painful use of the shoulder. Local reactions are worse in the deltoid muscle than the thigh.
- Most muscle pain and any limping resolves in 3 to 5 days.

Anaphylactic Reactions From Vaccines

- A severe life-threatening reaction is called anaphylaxis.
- The main symptoms are difficulty breathing, difficulty swallowing, hypotension (manifested by fainting or too weak to stand)
- Anaphylactic reactions can occur with any vaccine, but they are very rare.
- Incidence is 1 per 500,000 doses of vaccine.
- Most serious anaphylactic reactions to vaccines occur in a physician’s office because it’s standard practice to observe the child for 20 minutes following injection of a vaccine.
- Such reactions are usually caused by vaccine stabilizers (gelatin) or vaccine components (egg protein), rather than the infectious agent in the vaccine.
- Egg protein is in the influenza vaccine. MMR does not contain significant amounts of egg cross-reacting proteins. Children with egg allergy can receive the MMR vaccine, without any need for prior skin testing. (AAP Red Book). They should receive the influenza vaccine in a medical setting if they ever had an anaphylactic reaction to eggs.
- Vaccines that contain gelatin are MMR, varicella, DTaP, and influenza.
- Gelatin-induced anaphylaxis (very rare) requires strict avoidance of many foods that contain gelatin (e.g., ice cream, yogurt, gel desserts, frostings).
- Reference: Bohlke, K. Pediatrics, 2003.

Frequency of Fevers in Young Babies Following the First Vaccines

- Fevers that occur after immunizations during the first 12 weeks of life can present a dilemma for the telephone triager (Reason: fevers at this age are usually referred in for evaluation)
- These fevers usually have an onset within 24 hours after the vaccine (rarely 48 hours)
- The first series of vaccines can be given between 6 and 8 weeks old
- DTaP vaccine causes a fever in 8% of 2 month olds (Note: from 4 months old onward, it causes a fever in over 20% of children)
- The first Hib vaccine causes a fever in 15% of infants
- The first Pneumococcal vaccine causes a fever in 15% of infants

- The first Hepatitis B vaccine causes a fever in 3% of infants
- When these 4 vaccines are given together as a first dose, a fever occurs in 22% of infants
- Source: Lederle Laboratories data and vaccine package inserts

Management of Fevers in 6 to 8 Week Olds Following the First Vaccines

- The following recommendations come from a survey of 10 pediatric groups in Denver (August 2007)
- See all of these infants: none
- See selected infants: 100%, but criteria varied
- RISK FACTORS for sepsis: Criteria for seeing these infants urgently include baby acts sick or abnormal (e.g., poor suck, decreased movement, not alert, abnormal breathing), systemic symptoms occur (e.g., vomiting), high-risk newborn (preterm or on oxygen), Hep B only vaccine given, fever begins over 24 hours after vaccine injection, fever above 102° F (39° C), OR fever lasts over 48 hours.
- The infants who act normal (feeding adequately and consolable fussiness) don't need to be seen. They can receive acetaminophen for their injection pain or fever if the triage nurse thinks it is necessary.
- Seeing all infants under 12 weeks old with a fever following a vaccine would be over-referral and a disservice to parents. (Reason: 22% of infants and co-payments are expensive).

Non-Immunized or Under- Immunized Children with a Fever: No Impact on Nurse Triage

- Some physicians recommend that "nurses should routinely ask about immunization status on every phone call where the child has a fever". I disagree with this suggestion for the following reasons:
- The immunization status does NOT change office-hours telephone triage about which children need to be seen. Serious symptoms and specific disease complications are thoroughly covered in all protocols. Nurses also can always opt to bring in a child who sounds seriously ill based upon their professional judgment.
- The immunization status, however, may impact the medical work-up of a child who is being evaluated within the office or ED setting. It may change the differential diagnoses for the child's symptoms or what testing might be needed for a febrile child.
- Our main concern is children who have not received their "Meningitis" vaccines (Pneumo, Hib and Meningococcal vaccines). Their risk for sepsis, meningitis, pneumonia and other SBI is higher. The protocols, however, are already structured to detect symptoms of these serious diseases and to send positive children in for evaluations. In addition, even though the bacteremia rate has gone down with vaccines, the protocol continues to include a question for detecting bacteremia, in children who have no symptoms except fever. (See Acute Fever Without a Source down below)
- The main scenario in which knowing the immunization status becomes a factor in telephone triage is for tetanus-prone wounds. This is covered in every injury protocol and discussed in depth in the Background Information of the Skin Trauma protocol. (see Tetanus Risk in Non- and Under-Immunized Children)
- Any child with a measles-like rash is seen whether or not they have received the MMR vaccine. Likewise, any child with varicella complications is seen whether or not they have received the Varicella vaccine.
- Any child with suspected influenza is seen if they develop any signs of complications (e.g., work of breathing or signs of dehydration), whether or not they have received the influenza vaccine
- Trying to cover over the telephone which immunizations the child may or may not have received, can be time-consuming (adding unnecessary time per call and something a parent may not automatically know without looking at a child's immunization record). For the majority of calls, this added time will not change the disposition of the call and is largely non-essential to phone triage.
- For practices that have a different view, offices may need to develop a separate policy for detecting and managing their partially and non-immunized children.

Prophylactic Acetaminophen May Cause Reduced Antibody Response to Vaccine: Avoid Using

- In 2009, a Czech Republic study looked at prophylactic acetaminophen administration after

vaccinations. (Pyrmula 2009)

- The study included 460 healthy children 9-16 weeks and 12-15 months receiving booster vaccinations.
- Children were randomly assigned to 2 groups: those who were given acetaminophen in 3 doses during the 24 hours post-vaccine versus no post-vaccine antipyretic treatment.
- Blood samples were drawn to determine the immunogenicity of vaccinations at 1 month after the injection.
- The study concluded that acetaminophen led to reduced immunogenic responses regardless of the presence of fever.
- In 2018, an Australian study on 3300 children confirmed the Czech study results. Children who received antipyretics after an influenza vaccine had a lower antibody response. (Li-Kim-Moy, Pediatr Infect Dis J, 2018).
- Application: This Immunization Reaction protocol has never recommended giving antipyretics prophylactically before receiving vaccines. Antipyretics are only recommended for fever over 102 F or for severe pain following immunizations. Furthermore, it is only recommended as needed based on symptoms, not dosed at regular intervals.
- Summary: No national organization (e.g., the AAP) has changed their recommendations for pre- or post-immunization care based on these 2 studies. For now, this protocol is in compliance with the findings. More research is needed to further confirm that these findings are valid and clinically important.

Vaccines on the Go: a Free App from CHOP

- This is a consumer app for vaccine facts.
- It is evidence-based and up-to-date.
- Source: Children's Hospital of Philadelphia (CHOP) ranked #1 in the US
- Recommend it to your worried callers.

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