Allergy & Asthma Network News

COVID-19 Coping Strategies
• Videos with Dr. Gia Rosenblum
• Allergyasthmanetwork.org - News

Need asthma coaching during COVID-19?
• Network has telehealth asthma coaching available
• More info at https://allergyasthmanetwork.org/telehealth-for-asthma-allergies/

July Webinar – 7/23 – 4:00 PM
• Coordinating Allergy Care Through the Life Span
• Dr. Kelly Maples

More information at allergyasthmanetwork.org

COVID-19 & Respiratory Tools: How to Access, Use and Clean Inhalers, Nebulizers & More

Dr. Purvi Parikh
Tonya Winders
Our Speakers

Dr. Purvi Parikh
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Tonya Winders
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Outline

• COVID-19 Update
• Respiratory Treatments at Home
• School Issues with Respiratory Tools
• Respiratory Care in the Office & Hospital Settings
• Resources to Help Patients Afford their Medications
Current State of COVID-19

Tonya Winders
### US Data Report

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<th>Total Confirmed Cases</th>
<th>Total New Cases</th>
<th>Total Deaths</th>
<th>Total New Deaths</th>
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### In the News

- Some states mandating face masks
- Lack of social distancing at protests likely added to new cases of coronavirus
- Dr. Fauci says a more infectious strain of the coronavirus may be emerging
  - New strain may make the virus more transmissible – not all scientists are in agreement – more research is needed
  - “We are still knee-deep in the first wave of this. And I would say, this would not be considered a wave. It was a surge, or a resurgence of infections superimposed upon a baseline”
  - “A false narrative to take comfort in a lower rate of death – don’t get yourself into false complacency”
In the News

- FDA is warning consumers and health care professionals that the agency has seen a sharp increase in hand sanitizer products that are labeled to contain ethanol (also known as ethyl alcohol) but that have tested positive for methanol contamination.
  - Methanol is not an acceptable active ingredient for hand sanitizers and must not be used due to its toxic effects
- Trump administration has begun formal process to withdraw from the World Health Organization
- COVID-19 antibody drug moves into phase 3 trials

COVID-19 Cases in US by Date Reported

New Cases by Day
COVID-19 Information Center – Allergy & Asthma Network

- https://allergyasthmanetwork.org/health-a-z/covid-19/
- Webinar recordings
- Patient program with ATS recording
- Infographics
- Fact Sheets and Q & A’s
- Managing Pediatric Asthma during COVID-19
- What coronavirus looks like
- State by State guidance on reopening

Please note:

- *This is a constantly evolving situation*

- Guidance is likely to change
  - And change back
  - And change again . . .
Respiratory Treatments at Home

Dr. Purvi Parikh

Definition of Respiratory Tools

- Inhalers
  - Metered dose inhaler (MDI)
  - Dry powdered inhaler (DPI)
- Spacer
- Valved Holding Chamber
- Nebulizer
- Spirometry
- FeNO
- Peak Flow Meters

Respiratory Tools

Nebulizers

Valved Holding Chambers and Spacers

Spirometers

Peak Flow Meters

Asthma Action Plan for Home & School

Controller Medicine(s):
- Albuterol/Levalbuterol

Exercise Medicine:  Albuterol/Levalbuterol

Parent/guardian signature:

Date:

Asthma Triggers:

- Allergy & Asthma Network
  - 800.878.4403

Dr. Purvi Parikh

The American Academy of Allergy, Asthma, & Immunology (AAAAI) is the leading professional organization in allergy, asthma, and immunology. AAAAI promotes the development and dissemination of knowledge in the field through education, research, and advocacy for the best interests of patients.


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References:
Based upon available information to date, those at high-risk for severe illness from COVID-19 include:

- People with chronic lung disease or moderate to severe asthma
- People who are immunocompromised including those on oral corticosteroids
- People of any age with certain underlying medical conditions, particularly if not well controlled

Your Best Defense: Keep your Asthma in Control

COVID-19 is spread through droplets in the air
- Inhalers with spacers contain respiratory droplets
- Nebulizers spread droplets through the air

Be sure to access asthma care
- Telehealth is a great tool during COVID-19
Asthma Care

- Check in that you are on the right dose
- Using the right technique of inhaled medications
- Know when to call if you are having trouble breathing
- Review the importance of taking maintenance medications to control your asthma
- Use your inhaler as directed
  - Quick relief inhaler
  - Controller medication

Nebulizers at Home

For people with known or suspected COVID-19 who are administering nebulizers at home:

- Nebulizers should be used in a location that limits exposure to other household members
- Locations where the air is not circulated into the home are preferable such as a porch, patio, or garage
Cleaning a Nebulizer at Home

- Follow the manufacturer’s instructions for cleaning the nebulizer equipment.
- Some suggested guidelines include the following:
  - 1. Take apart the nebulizer. Wash all parts (except tubing and finger valve) in liquid dish soap and water. Rinse with water.
  - 2. After washing the nebulizer shake off any excess water.
  - 3. Reattach the nebulizer pieces and tubing to the air compressor and turn on the compressor to dry the nebulizer quickly.
- Make sure the nebulizer is completely dry before storing the nebulizer.

School Issues with Respiratory Tools

Tonya Winders
Asthma, COVID & Schools

CDC: 1 out of 12 children has asthma — and it’s a leading cause of school absenteeism, causing more than 10 million missed days of school every year.

As symptoms of COVID-19 may overlap with asthma, students experiencing a cough and shortness of breath should not attend school unless approved by a health care provider.

Inhalers at School

Policies
- When permitted by school policies or state laws students should be allowed to use their personal inhaler

Cleaning
- All surfaces of the inhaler should be cleaned using a wipe with 70% alcohol or greater after each use and then allowing to airdry

Administering
- Staff administering inhalers should practice good hand hygiene – either washing hands for 20 seconds with soap and water before and after administration. If soap and water is unavailable, then staff should use a alcohol-based hand sanitizer with at least 60% alcohol
How to Clean a Spacer/Valved Holding Chamber

Washing instructions will vary from one brand to another, but these are the most common steps:

**Disassemble:** Follow instructions for taking the holding chamber apart. This may include removing the soft plastic port where the inhaler is inserted, the mouthpiece cap and sometimes the mask. Do not take the valve section apart, unless instructed.

- **TIP:** Always remove your MDI from the holding chamber before washing. MDIs require a totally different cleaning procedure, usually without water.

**Soak:** Prepare a large bowl with a solution of lukewarm water and liquid dishwashing detergent. (Washing with water alone causes an electrostatic charge to develop.) Soak the device and all its pieces for 15 minutes.

- **TIP:** Choose a bowl large enough for the chamber to rest fully in the water.

**Rinse:** Rinse all the pieces in clean water.

- **TIP:** You can reduce the static charge of non-antistatic holding chambers and spacers by washing the device in a dishwashing liquid solution and letting it air dry without rinsing, but this is not as effective as using antistatic materials.

**Air Dry:** Shake off excess water, then place pieces on a clean, lint-free cloth or drying rack to air dry. Rest the chamber section on end (vertically), rather than on its side.

- **TIP:** Do not towel-dry, as that can build up static charge.

**Reassemble:** When all the pieces are completely dry, carefully put them back together according to instructions.
Stock Albuterol Inhalers

If stock inhaler is used:

- Must be cleaned according to the manufacturer’s instructions
- Disposable mouthpieces or spacers should be used
- Employ additional strategies to reduce risk include using spacers with one-way valves, and not allowing the student to touch the inhaler (can touch the spacer)

Nebulizers & Peak Flow Meters

- During the COVID-19 pandemic, asthma treatments using inhalers with spacers are preferred over nebulizers. Nebulizers should be reserved for students who cannot use an inhaler or do not have access to one
- Peak flow meters involve forceful exhalation, which is not considered an aerosol generating procedure, though data is limited, and it can produce a cough in students with asthma
- Both pose some risk in the school setting
**Cleaning Nebulizers at School**

- After every use: rinse the nebulizer cup, mask, or mouthpiece thoroughly with warm water, shake off excess water and let air dry.
- At the end of each day: the nebulizer cup, mask, or mouthpiece should be washed with warm soapy water and rinsed with clean water, then laid out on a paper towel over night to dry.
- Once a week: wash with warm soapy water and after rinsing thoroughly, disinfect with white vinegar. To use the vinegar solution, mix 1/2 cup white vinegar with 1 1/2 cups of water. Soak the equipment for 20 minutes and rinse well under a steady stream of water. Shake off the excess water and allow to air dry on a paper towel. Always allow the equipment to completely dry before storing in a plastic, zippered bag.
- The nebulizer kit, cup, mask, or mouthpiece should not be used for multiple children.

**Nebulizer Administration**

**For staff administering nebulizers to students** -

- Should be wearing PPE (gloves, medical or surgical facemask, and gloves)
- Should receive training on how to safely administer treatments and appropriate use and disposal of PPE

**During administration of nebulizers** -

- Only the student and staff responsible for administering should be in the room and, if appropriate, the staff member may leave the room
- After administration, the room should undergo routine cleaning and disinfecting
METERED-DOSE INHALERS (MDIS)

- Hospitals may reuse MDIs, but an MDI should be dedicated to a single patient during their hospitalization (or until medication discontinued).
- Hospitals should implement a workflow regarding MDI use.
- If MDIs must be reused due to shortage, a strict sterilization protocol should be followed.
Aerosol Generating Procedures (AGP)

- Per the CDC:
  - The concern is for procedures that may generate higher concentrations of infectious respiratory aerosols.
  - These are AGPs known to create uncontrolled respiratory secretions

  - Open suctioning of airways
  - Sputum induction
  - Cardiopulmonary resuscitation
  - Endotracheal intubation and extubation
  - Non-invasive ventilation (e.g., BiPAP, CPAP)
  - Bronchoscopy
  - Manual ventilation

If performed, the following should occur:

HCP in the room should wear an N95 or equivalent or higher-level respirator, eye protection, gloves, and a gown.

The number of HCP present during the procedure should be limited to only those essential for patient care and procedure support. Visitors should not be present for the procedure.

AGPs should ideally take place in an AIIR (Airborne Infection Isolation Room).
Environmental Infection Control

Dedicated medical equipment should be used when caring for patients with suspected or confirmed SARS-CoV-2 infection.

- All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer’s instructions and facility policies.

Routine cleaning and disinfection procedures are appropriate for SARS-CoV-2 in healthcare settings, including those patient-care areas in which aerosol generating procedures are performed.

- Using cleaners and water to pre-clean surfaces first
- Apply an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product’s label


- We just talked about nebulizer guidance at school . . .
  - It is uncertain whether the aerosols from some procedures, including nebulizer administration and high flow O2 delivery, will result in generating infectious respiratory aerosols
  - During the SARS outbreak, nebulizers were not associated with significantly increased transmission risk of the virus
  - A 2004 study of SARS was unable to detect the presence of airborne SARS when a patient used a nebulizer or humidifier
  - In the United Kingdom, guidance on COVID-19 infection transmission does not list nebulizers as a potential infection risk as the aerosols come from the medication, not the patient
Spirometry / FeNO

Identified as aerosol generating procedures

- Use only when essential for immediate treatment decisions
- Recommended that care providers use appropriate PPE (limits droplet acquisition for staff and individuals)
- Enhanced cleaning of testing space
  - Wipe down surfaces with appropriate cleaners
- Transmission may occur from asymptomatic individuals
- Increasing levels of Fractional exhaled Nitrous Oxide (FeNO) may be an early indicator of the presence of the coronavirus

Public Health Guidance

If the patient can tolerate a metered-dose-inhaler, then they should be switched to one with a dedicated spacer

If nebulizer needed, all health care workers should wear appropriate PPE, including face mask (if respirator not available), eye protection, gloves, and a gown

Keep door closed during nebulizer treatment

Once nebulizer is set up, health care workers should remain 6 feet away or more, or even outside the door
Asthma inhalers and other types of respiratory medications vary in price. Some are less costly, and some are very expensive. If you cannot afford the cost of your asthma inhaler or other respiratory medication you can:

- **Shop around.** Compare prices at other pharmacies or check prices at [GoodRx](https://www.goodrx.com).
- **Contact the manufacturer** for patient assistance programs.
- **Ask your doctor to prescribe an alternative.** Sometimes less costly alternatives are available.
Patient Medication Assistance

Use the list below to contact the manufacturer to find out about its patient assistance program.

If you are still unable to afford the prescribed medication, talk with your doctor. It's very important to use your medication as prescribed. Be sure to ask your doctor for help so you don't go without taking your asthma medication or other respiratory medication.

Allergyasthamanetwork.org – Asthma – What if I Can’t Afford my Asthma Medication? OR https://allergyasthamanetwork.org/what-is-asthma/what-if-i-cant-afford-my-asthma-medication/

Examples:

For demonstration purposes: We are not endorsing a specific brand

Includes:
- Short-acting beta2-agonist bronchodilators
- Long-acting beta2-agonist bronchodilators
- Inhaled corticosteroids
- Combination medications
- Muscarinic antagonist bronchodilators
- Severe asthma treatments
- PDE4 Inhibitors
Questions?

Please record your questions in the Question box on your webinar control panel.
We will address as many questions as we can.

Join us on July 29th at 4:00 PM for the 9th webinar in our COVID-19 Webinar Series -

Back to School: Considerations for Students with Asthma in the Era of COVID-19

Dr. Mary Cataletto
Tonya Winders
Dr. Purvi Parikh
COVID-19 & Respiratory Tools: How to Access, Use and Clean Inhalers, Nebulizers & More

Thank you for listening!
Get guidelines-based information at allergyasthmanetwork.org