COVID-19 for the Allergist: Updates and Recommendations

The webinar will begin shortly (11:30am CT)
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Welcome to
COVID-19 for the Allergist: Updates and Recommendations

Today’s presenter is
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COVID-19 for the Allergist: Updates and Recommendations

- Updates
- Recommendations
- Q&A

Coronaviruses

- Family of viruses
- Can cause disease in humans and animals
  - Bats are host to largest variety of genotypes
- Ubiquitous virus that can cause infection at any time of the year
- Viral respiratory tract infection ranging from common cold to severe respiratory infection/pneumonia
- Incubation period generally 2-14 days (median 5-6 days)
- Common human coronavirus types 229E, NL63, OC43 and HKU1
  - Detected in Respiratory Pathogen PCR Panel used by many facilities
- Supportive care, No treatment
- No current vaccines
**COVID-19 (SARS-CoV-2): Clinical Presentation**

- **First week: myalgias, malaise, cough, low grade fevers**
- **Second week: worsening severity of illness**
  - Fever (77-98%)
  - Dry cough (46-82%)
  - Shortness of breath (3-31%)
  - Fatigue or myalgia (11-52%)
- Symptom onset 2-9 days post exposure, **median 5 days**
- **80% of infections are mild**
- Lymphopenia (70%), eosinopenia (52.9%)
- CXR – bilateral interstitial infiltrates most common
  - Very few concomitant/subsequent bacterial infections
- Viral shedding 1-4 weeks after symptoms resolve, unclear if infectious this whole time
- Children seem to be less impacted

Del Rio et al, JAMA 2020 Feb 28
Clinical characteristics of severe COVID disease

- Approx 14-20% infected with more severe disease/ARDS
  - ~5% critical
- Lancet study of 72 critically ill
  - Average age 60, slight male predominance
  - 62% critically ill individuals died
  - Duration onset of symptoms to ICU admission 9-11 days
  - Organ dysfunction common – kidney, liver, cardiac
  - 14% Hospital acquired infection (up to 40% in other reports)
- Non-survivors
  - >65
  - Comorbid conditions

Transmission COVID-19

- **Mode of transmission**
  - Droplet/Contact primarily
  - Close contacts most at risk
    - Household contacts
    - Within six feet for prolonged period of time/in waiting room
    - Unprotected direct contact with secretions or excretions of infected individual
  - Impact viral detection in stool??

- **Incubation period**
  - 2-14 days, average 5-6 days after exposure
  - Subclinical/milder symptoms early may cause issues with detection of cases within 14 day time frame

- Several reports of transmission of asymptomatic carriers
  - One paper estimates contribution <1% of cases from data from China

Who is at Higher Risk From COVID-19

- Older adults (>60-65 years old)
- Those with chronic medical conditions
  - Heart disease
  - High blood pressure
  - Diabetes
  - Lung disease including Asthma
  - Immunocompromised: e.g. Primary Immunodeficiency (PI)?
Treatment of COVID

• Primarily supportive
• Avoid systemic corticosteroids when possible
• Treatment trials ongoing
  – Kaletra (not looking great)
  – Remdesivir – NIH and Gilead Trial
• Vaccine trials
  – Underway (phase I trial started March 16, 2020)
  – Fast tracked but realistically minimum of 12-18 months before ready plus longer for production time


Special populations: Asthma and COVID-19

• Higher risk for severe disease
• No evidence to suggest increase risk for getting disease
• Continue using routine medications including inhaled corticosteroids (ICS)
  – Prevent or reduce asthma exacerbations associated with viral infections
• Biologic therapy should not be stopped
• Avoid oral corticosteroids when possible

ACAAI Statement 3/12/2020
Special populations: Immunodeficiency

- Primary Immunodeficiency patients and those receiving biologics or other immunosuppressive medications
- Higher risk? (probably)
- **Telehealth, work from home, stay at home, as much as possible** (for students, more schools moving to virtual curriculum)
- Continue all current medications
- **Seek prompt medical evaluation if sick**
- Wash hands, avoid touching face, social distancing, avoid sick people

Unique circumstances: Allergy Immunotherapy (AIT)

- No published guidelines; overall goal of allergy practices: reduce spread of virus as much as possible
- Consider adjusting Office Practice procedures
- Screening AIT patients for COVID-19, risk assessment
- Consider dose adjustment (less frequent, skip doses) based on individual risk assessment
- Waiting in the car if deemed safe by provider
- **Build-up, or maintenance injections may need to be interrupted**
Aerosolized Generating Procedures

- Potentially pose risk of transmission to HCP
- E.g. Tracheal intubation, manual ventilation, BiPAP
- What about nebulizer treatment, spirometry, peak flow, collection of sputum?

20 year review, graded evidence, Pubmed/Cochrane Library/etc

- Compared risk of transmitting acute respiratory infections (SARS included) by aerosolized generating procedures (AGP) to HCW with risk of acute respiratory infections to HCW without AGP
- Tracheal intubation associated with increased risk
- Nebulization, collection of sputum was not associated with increased risk
Aerosolized Generating Procedures and COVID-19

- Little is currently known specific to COVID-19
- Limit (or postpone) nonessential procedures (collection of sputum, spirometry, peak flow, nebulizer treatments)
- Only essential persons in procedure room
- MDI may cause less aerosolization than nebulizer
- Clean and disinfect procedure room and equipment immediately following (list of approved disinfectants for SARS-CoV-2 on cdc.gov)
- Personal protective equipment (PPE): gown, glove, mask, eye protection
  - Currently debated – necessary, type
  - Limited supplies

### WHO Rational Use of PPE: Feb 27, 2020

| Location          | Patients with respiratory symptoms | Patients without respiratory symptoms | Cleaners | Waiting room | Patients with respiratory symptoms | Patients without respiratory symptoms | Administrative areas | Administrative tasks | Snack | Snack
|-------------------|-----------------------------------|---------------------------------------|----------|--------------|-----------------------------------|---------------------------------------|----------------------|---------------------|-------|-------
| **Consultation room** | Healthcare workers | Physical examination of patient with respiratory symptoms | Medical mask | Guardians | Gown | Gloves
|                  | Healthcare workers | Physical examination of patient with respiratory symptoms | PPE according to standard precautions and risk assessment | Guardians | Gown |
|                  | Patients with respiratory symptoms | Any | Provide medical mask if tolerated |
|                  | Patients without respiratory symptoms | Any | No PPE required |
| **Waiting room** | Patients with respiratory symptoms | Any | Provide medical mask if tolerated |
|                  | Patients without respiratory symptoms | Any | No PPE required |
| **Administrative areas** | All staff, including healthcare workers | Administrative tasks | No PPE required |
| **Snack** | Healthcare workers | Preliminary screening not involving direct contact | Maintain spatial distance of at least 1 m. | No PPE required |
|                  | Patients with respiratory symptoms | Any | Maintain spatial distance of at least 1 m. | No PPE required |
|                  | Patients without respiratory symptoms | Any | No PPE required |
Testing for COVID-19

- Initially only CDC, then health departments
- Now several commercial labs (LabCorp, Quest, ViraCor, others) and some hospitals offer testing – up to 20,000 samples/day by end of March 2020 (for some labs)
- **Only HCP collects sample (do not send to lab)**
  - NP and OP swabs (in viral transport media) - preferred
  - NP or OP aspirate, BAL specimens (in sterile cup)
- Frozen \(-20^\circ\text{C}\) (preferred); refrigerated (if received within 72 hours), room air (within 24 hours)
- Turn-around time: same-day, up to 3-4 days

Clean and Disinfect During COVID-19 Pandemic

- Person-to-person transmission of COVID-19
- Transmission of COVID-19 to persons from contaminated surfaces has not been documented
- COVID-19 may remain viable for up to 3 hours (aerosolization) and up to 3 days of surfaces (NEJM correspondence, March 17)
- **Cleaning and disinfecting recommended**
- Frequently touched surfaces (tables, doorknobs, light switches, handles, desks, toilets, faucets, sinks) with household cleaners and EPA-registered disinfectants
  - Appropriate for surface – follow label instructions
  - Wear gloves, good ventilation
  - Daily (at least)


NEJM, March 17, 2020 DOI: 10.1056/NEJMc2004973)
Clean and Disinfect During COVID-19 Pandemic

Disinfectants

• Diluted household bleach solutions
  – 5 Tablespoons (1/3rd cup) bleach per gallon of water OR
  – 4 teaspoons bleach per quart of water
• Alcohol solutions (at least 70% alcohol)
• EPA-registered household disinfectants (274 listed)
  – Complete list: https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2

Pandemic Prep: What can practitioners do to slow spread of virus?

• Access Control: patients, visitors
  – Screen patients before entering your facility; put mask on patients who are express/display symptoms
• Protect your workforce
  – Virtual care/stay at home if sick
  – Hand hygiene, social distancing, avoid touching face, avoid sick persons
• Be Prepared
  – Alternative staffing plans
  – Keep emergency contact list (e.g. state and local health departments)

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For Q&A:
Please use the question box to submit your questions at any time for QA at the end of the presentation.

For a recording of this webinar and more COVID-19 resources for your practice: go to education.acaai.org/coronavirus