

## Response to an Outbreak of Respiratory Disease in Long Term Care

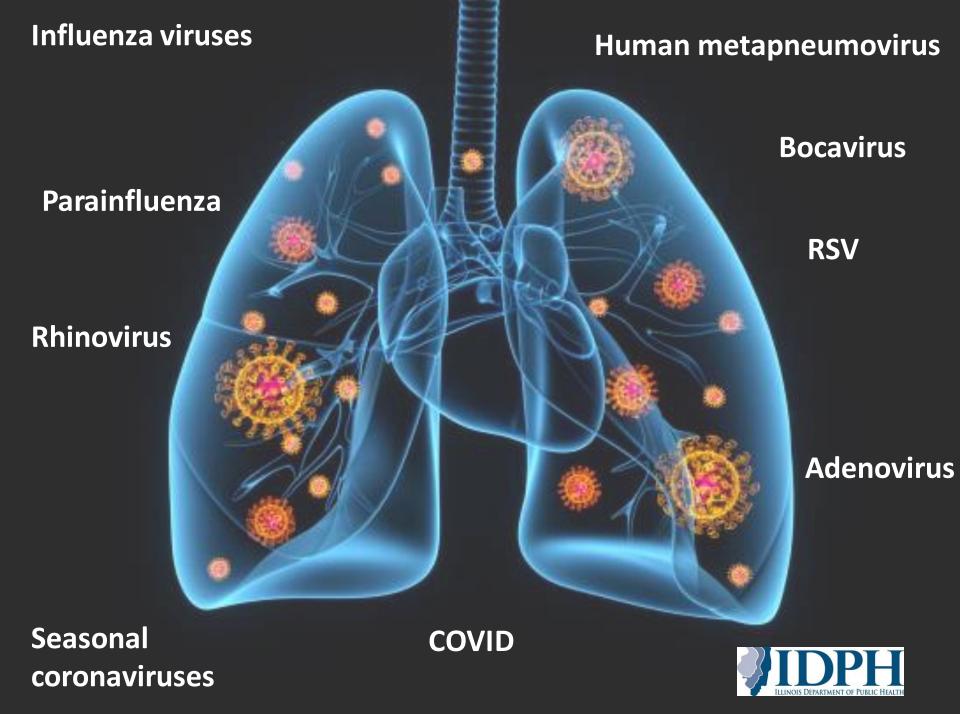
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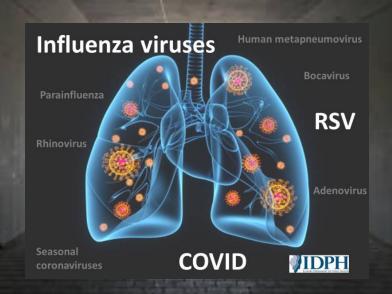
September 15, 2023



## Influenza viruses

Darainfluon





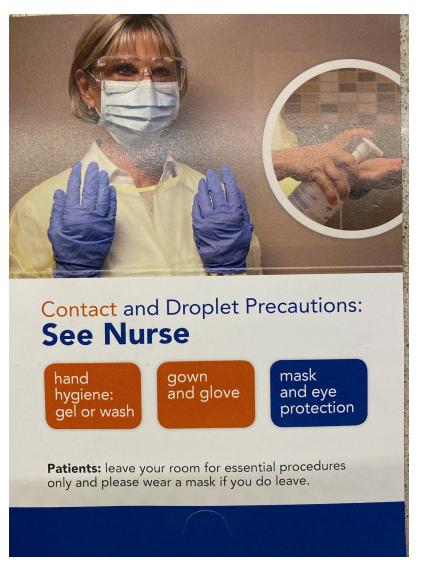


## **Transmission-Based Precautions**

Infection/Condition	Type of Precaution: Standard PLUS
Adenovirus	Droplet + Contact
Influenza	Droplet
Human metapneumovirus	Contact
Parainfluenza virus	Contact
Rhinovirus	Droplet
RSV	Contact
Respiratory infections	Contact + Droplet (Droplet can be discontinues when adenovirus and influenza ruled out)
COVID	Contact + Droplet



## Syndromic Approach



- Contact, Droplet, Eye protection for all respiratory syndromes
- Adaptable to the unknown
- Anticipate multiple respiratory pathogens
- Novel pathogens
- KIS = Keep It Simple!



Influenza viruses Human metapneumovirus

Bocavirus

Parainfluenza

Rhinovirus

**RSV** 

Adenovirus

Seasonal coronaviruses

**COVID** 



## Influenza, COVID, and RSV

- High morbidity and mortality
- Vaccinations available
- Considerations for:
  - Therapeutics
  - Isolation and quarantine





## Influenza

- Influenza is a respiratory illness caused by one of the influenza viruses
- It may be mild or severe
- Some people experience complications and even death
- Older people, young children, and people with certain health conditions are at a higher risk for developing a severe illness, including complications

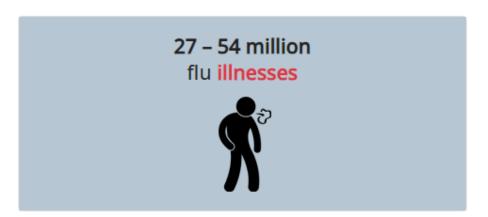


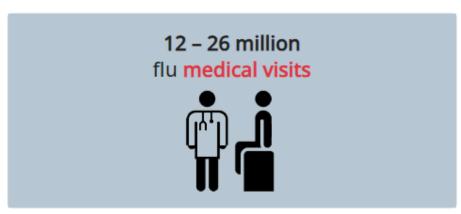


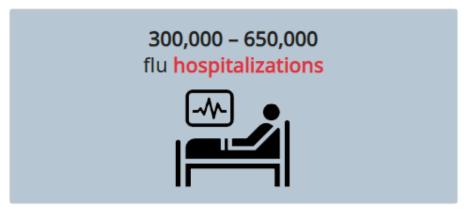


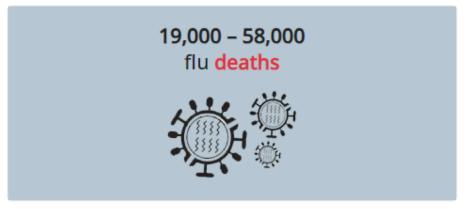


#### CDC estimates\* that, from October 1, 2022 through April 30, 2023, there have been:











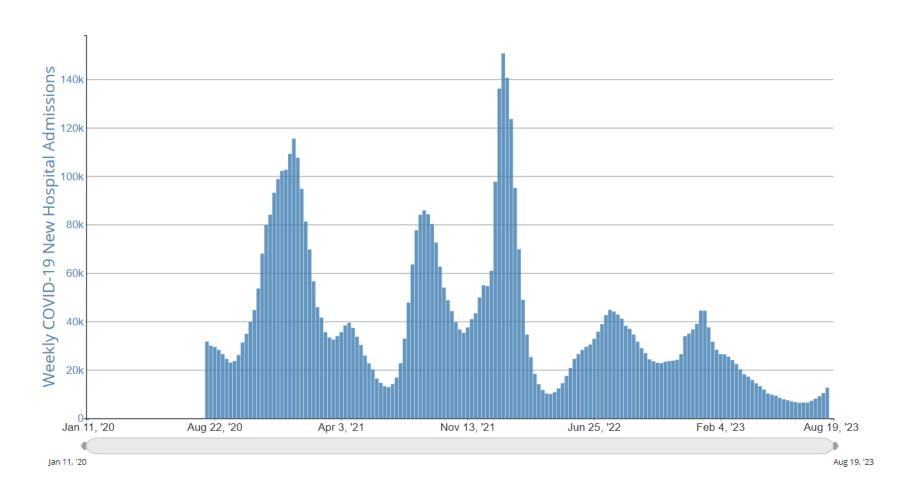
### COVID-19

- COVID-19 is a disease caused by the SARS-CoV-2 virus
- Primarily a respiratory virus but can affect more than the respiratory system
- It may be mild or severe and some people experience complications and even death

- "Long COVID": some people experience symptoms that last past the acute illness
- Older people and people with certain health conditions are at a higher risk for developing a severe

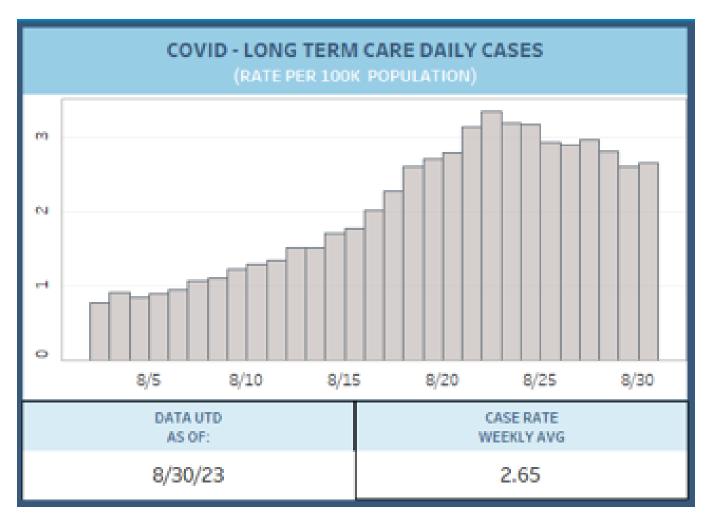


## COVID-19 Hospital Admissions in the US





## **COVID** in IL LTC





### COVID-19

- 96% of people >16 years have SARS-CoV-2 antibodies from previous infection or vaccination
  - 22.6% from infection alone
  - 26.1% from vaccination alone
  - 47.7% from hybrid immunity



## **COVID-19: Variants**



### What to Know About EG.5 (Eris)—the Latest Coronavirus Strain

EG.5 (Eris), the latest coronavirus strain, is on the rise. A Yale Medicine expert discusses whether EG.5 is more transmissible or severe...

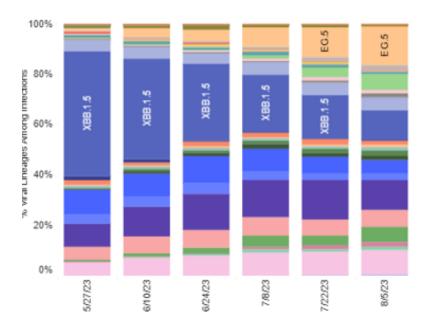


The Washington Post

Why BA.2.86 covid variant cases have scientists worried



Weighted Estimates: Variant proportions based on reported genomic sequencing results



### **RSV**

- RSV is a respiratory illness caused by the Respiratory Syncytial Virus
- Historically RSV causes seasonal epidemics which start in the late fall and peak in the winter
- COVID-19 pandemic interrupted the usual seasonal pattern of RSV circulation
- Likely gradual return to pre-pandemic seasonality

### **RSV**

- May cause a mild disease such as a common cold in healthy adults and older children
- In very young children (0-5 years) and older adults RSV causes substantial morbidity and mortality
  - Lower respiratory tract disease (LRTD), hospitalization, and death.
- Older adults over 65 annually:
  - Estimated 60,000–160,000 hospitalizations
  - Estimated 6,000–10,000 deaths



## Symptoms overlap!

Symptoms of COVID-19	Strep Throat	Common Cold	Flu	Asthma	Seasonal Allergies
FEVER .	<b>②</b>		<b>②</b>		
COUGH		<b>Ø</b>	<b>②</b>	<b>②</b>	
SORE THROAT	<b>Ø</b>	<b>②</b>	<b>Ø</b>		<b>Ø</b>
SHORTNESS OF BREATH					
FATIGUE FATIGUE			<b>Ø</b>		
DIARRHEA OR VOMITING			<b>Ø</b>		
RUNNY NOSE					
BODY/ MUSCLE ACHES	<b>②</b>				









# A resident has a cough and fever... now what?

# Infection Prevention and Control Measures

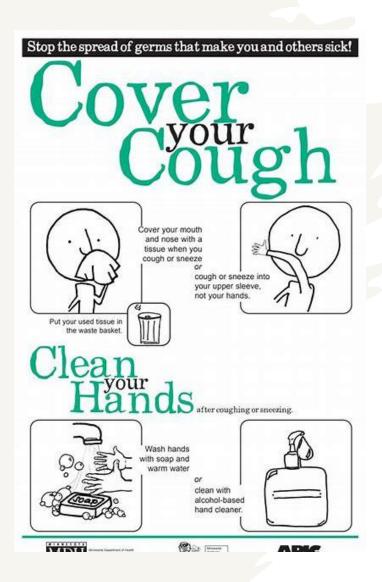


# Respiratory Hygiene/Couth Etiquette in Healthcare Settings

To prevent the transmission of respiratory infections in healthcare settings the following infection control measures should be implemented at the **first point of contact with a potentially infected person.** 

- 1. Visual Alerts signs
- 2. Cough Etiquette:
  - Cover mouth and nose when coughing
  - Tissue or upper arm
  - Perform hand hygiene after contact with resp. secretions
- 3. Masking and empiric isolation
- 4. Droplet precautions where appropriate





# When To Use Source Control

- Source control is recommended for individuals in healthcare settings who:
  - Have confirmed respiratory infection
  - Have <u>symptoms</u> of a respiratory infection (i.e. runny nose, cough, sore throat, etc.)
  - Had close contact or a high-risk exposure with someone (patients/visitors/HCP) who is Covid +
    - Duration = 10 days post exposure

## When To Use Source Control

- Source control is recommended more Broadly as described in <u>CDC's Core Infection</u> <u>Prevention Practices</u> in the following circumstances:
  - Residents & staff on a unit or area experiencing respiratory infection outbreak
  - Facility wide during periods of higher-level community transmission (any respiratory virus)
  - Have otherwise had source control recommended by public health authorities



# Influenza: General Infection Control Measures

- Vaccinate your residents & staff
- Source Control
  - Wear mask/place mask on patient
- Respiratory Etiquette
  - Cover your coughs and sneezes with a tissue or your upper shirt sleeve, not your hands. Dispose of used tissues in the trash
- Proper Precautions
  - Place patient in contact-droplet precautions
  - Place patient in private room if possible
  - Cohort positive patients together if possible to avoid unnecessary risk/exposures
  - Continue for the duration of illness
- Enhanced Environmental Cleaning
  - Clean and disinfect commonly touched surfaces. Flu can survive for up to 3 days on hard surfaces such as tables and doorknobs
- Report Outbreaks
  - Two or more cases of ILI occurring within 72 hours among residents in an institutional setting/facility with at least one of the ill residents having laboratory-confirmed influenza
- IDPH Influenza Guidance



## Flu Precautions

#### Contact



#### **Droplet**





### COVID-19: Refer to IDPH Guidelines!

- The guidelines are comprehensive and address many of the questions we frequently receive
- The guidelines are a living document and will continue to change
  - Last update May 25, 2023
- Long-Term Care Facility Guidance

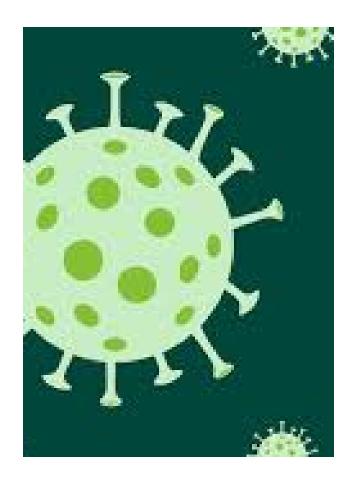


- Topics covered include:
  - Core principles of Covid-19 infection prevention
  - Case reporting
  - How to handle exposures among staff and residents
  - Isolation precautions and duration
  - Outbreak response
  - How to manage positive/suspected staff and residents
  - Visitation
  - Staff return to work guidance
  - And more!



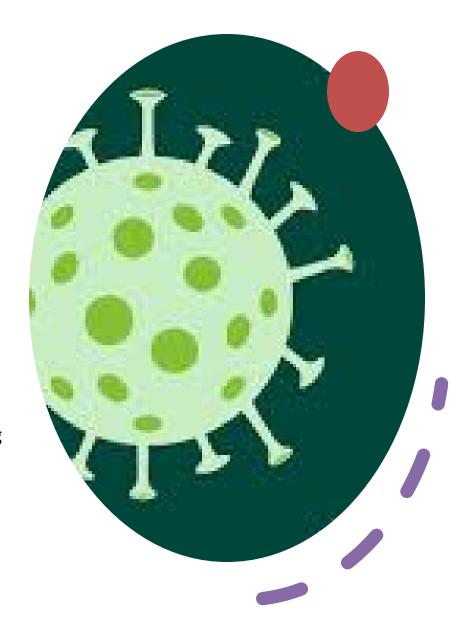
# Residents with Confirmed COVID-19

- Resident placement:
  - Single room with door closed if safe to do so.
  - Dedicated bathroom if possible
- If limited single rooms are available or if numerous residents are simultaneously identified to have COVID-19, residents can remain in their current location with appropriate signage and PPE use.
  - Cohorting may occur with other positive COVID-19 residents
- Isolate using Transmission-Based Precautions
  - 1. Mild to moderate illness
    - A minimum of 10 days since symptoms first appeared or first diagnostic test.
    - Fever free for 24 hours without fever-reducing medications.
    - Symptoms improving (e.g., shortness of breath, cough)
  - 2. Severe to critical or moderate to severe
    - A minimum of 10 days (or up to 20 days) since symptoms first appeared. o Fever free for 24 hours without fever-reducing medications.
    - Symptoms improving (e.g., shortness of breath, cough).
    - Consider consultation with infectious disease expert.



## Residents with Confirmed COVID-19 cont'd

- Monitor the resident every four hours for clinical worsening. Include an assessment of symptoms, vital signs, oxygen saturation via pulse oximetry, and respiratory exam to identify and to quickly manage serious infections.
- In general, residents should continue to wear source control until symptoms resolve or, for those who never developed symptoms, until they meet the criteria to end isolation
- Use dedicated medical equipment
- Staff must wear full PPE (N95 respirator, gown, gloves, eye protection) when providing care
- Residents with confirmed COVID-19 should have in-room meals and activities until recovered
- Follow the environmental cleaning and visitation guidance!



#### PPE: Covid-19

#### Donning:

- 1. Perform hand hygiene
- 2. Put on isolation gown
- 3. Put on NIOSH approved N95 respirator or facemask
- 4. Put on goggles or face shield
- Put on gloves
- Enter room

#### Doffing:

- 1. Remove gloves
- 2. Remove gown
- 3. Exit room
- 4. Perform hand hygiene
- 5. Remove face shield or goggles
- 6. Remove respirator or mask
- 7. Perform hand hygiene

**CDC PPE Infographic** 

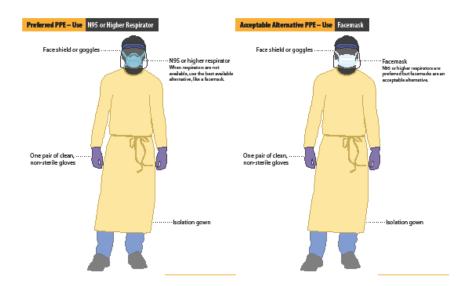
## Use Personal Protective Equipment (PPE) When Caring for Patients with Confirmed or Suspected COVID-19

#### Before caring for patients with confirmed or suspected COVID-19, healthcare personnel (HCP) must:

- Receive comprehensive training on when and what PPE is necessary, how to don (put on) and doff (take off) PPE, limitations
  of PPE, and proper care, maintenance, and disposal of PPE.
- Demonstrate competency in performing appropriate infection control practices and procedures.

#### Remember:

- PPE must be donned correctly before entering the patient area (e.g., isolation room, unit if cohorting).
- PPE must remain in place and be worn correctly for the duration of work in potentially contaminated areas. PPE should not be adjusted (e.g., retying gown, adjusting respirator/facemask) during patient care.
- PPE must be removed slowly and deliberately in a sequence that prevents self-contamination. A step-by-step process should be
  developed and used during training and patient care.





www.cdc.gov/coronavirus



## General Infection Control Measures: RSV

Source Control

Wear mask/place mask on patient

Respiratory Etiquette

Cover your coughs and sneezes with a tissue or your upper shirt sleeve, not your hands. Dispose of used tissues in the trash

- Proper Precautions
  - Place patient in contact precautions
  - Place patient in private room if possible
  - Cohort positive patients together if possible to avoid unnecessary risk/exposures
  - · Continue for the duration of illness
- Enhanced Environmental Cleaning

Clean and disinfect commonly touched surfaces. RSV can survive for hours on hard surfaces such as tables and doorknobs

Report Outbreaks

Two laboratory confirmed cases during a 14-day period that are healthcare associated

IDPH RSV Guidance



# CONTACT PRECAUTIONS EVERYONE MUST:

STOP

Clean their hands, including before entering and when leaving the room.

#### **PROVIDERS AND STAFF MUST ALSO:**



Put on gloves before room entry. Discard gloves before room exit.



Put on gown before room entry. Discard gown before room exit.





Use dedicated or disposable equipment. Clean and disinfect reusable equipment before use on another person.



U.S. Department of Health and Human Samboo Centers for Disease Control and Prevention



### Vaccination

Influenza:



COVID-19:



RSV:

rolling out for select populations!



- Everyone\*, every year 6 months and older
  - Children 6 months and older:
  - Pregnant people
  - Adults over 65



- Quadrivalent
- Cell-based flu vaccines
- Flu vaccination by jet injector
- Nasal spray flu vaccine
  - select individuals 2-49 years
  - not for pregnant people
  - and those with certain medical conditions
- Recombinant flu vaccine (18+)
- Adjuvanted flu vaccine (65+)
- High-dose (65+)

Preferred for individuals > 65 years



### People who should **NOT** get a flu shot:

- Children younger than 6 months
- People with severe, life-threatening allergies to any ingredient in a flu vaccine should not get THAT vaccine
  - Gelatin, antibiotics, other ingredients
  - People with egg allergy CAN receive a flu immunization
- People who have had a severe allergic reaction to a dose of influenza vaccine should not get that flu vaccine again and might not be able to receive other flu vaccines.



When's the best time?

For most people, including older adults, September and October are the best times for flu vaccination

Can you give RSV and COVID vaccinations at the same time as flu vaccine?

Yes!

Give in different anatomic sites/limbs



## Vaccination: COVID

- Fall 2023 updated monovalent XBB.1.5 vaccine
  - Pfizer and Moderna (mRNA technology) 6 months+
  - Coming soon: Novavax (recombinant protein technology) 12 years +
- Replaced previous vaccines
- Recommended for everyone 6 months and up
- Being up-to-date depends on what COVID vaccines an individual has had, their age, and underlying conditions
  - Stay Up to Date with COVID-19 Vaccines | CDC (being updated)







# Vaccination: RSV

New this year for select populations!

- Infants
- People > 60 years of age

## **Coming soon:**

Pregnant people

## RSV vaccine for older adults

- Two manufacturers
  - Pfizer (Abysvo) and GSK (Arexvy)
- Vaccine technology = Recombinant protein vaccine (similar to HepB)
  - Typical vaccine, induces immunity rather than the prophylaxis of the infant monoclonals
- Single dose (not annual) for individuals >60
  years recommended based on shared decision
  making



# RSV vaccine for older adults: Shared decision making

# Chronic underlying medical conditions associated with increased risk

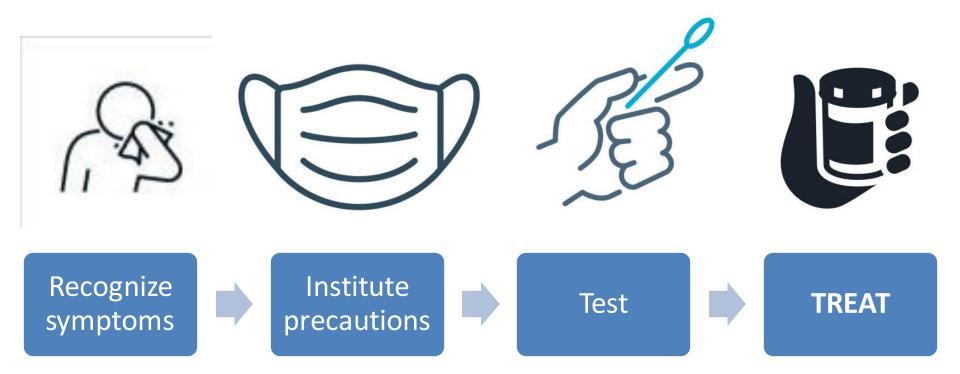
- Lung disease (such as chronic obstructive pulmonary disease and asthma)
- Cardiovascular diseases (such as congestive heart failure and coronary artery disease)
- Moderate or severe immune compromise
- Diabetes mellitus
- Neurologic or neuromuscular conditions
- Kidney disorders
- Liver disorders
- Hematologic disorders
- Other underlying conditions identified by healthcare provider

# Other factors associated with increased risk

- Frailty
- Advanced age
- Residence in a nursing home or other long-term care facility
- Other underlying factors that a health care provider determines might increase the risk for severe respiratory disease

<u>Use of Respiratory Syncytial Virus Vaccines in Older Adults:</u>
<u>Recommendations of the Advisory Committee on</u>
<u>Immunization Practices — United States, 2023 | MMWR</u>
(cdc.gov)

# Therapeutics





# Therapeutics: Influenza

- Priority groups for influenza antiviral treatment
  - Hospitalization
  - Severe, complicated, or progressive illness
  - Higher risk for influenza complications (e.g. age 65+, age <2, asthma, <u>other underlying conditions</u>)
- Other outpatient populations with confirmed or suspected influenza, if treatment can be initiated within 48 hours of illness onset



# Therapeutics: Influenza

Antiviral agent	Activity against	Use	Recommended for
Oral oseltamivir (Tamiflu™)	Influenza A and B	Treatment	Any age
		Chemoprophylaxis	3 months and older
Inhaled zanamivir (Relenza™)	Influenza A and B	Treatment	7 years and older
		Chemoprophylaxis	5 years and older
Intravenous peramivir (Rapivab™)	Influenza A and B	Treatment	6 months and older
		Chemoprophylaxis	Not recommended
Oral Baloxavir (Xofluza™)	Influenza A and B	Treatment	5 years and older
		Chemoprophylaxis	5+ years of age*
Amantadine and rimantadine	High levels of resistance in recent years therefore not recommended		

ILLINOIS DEPARTMENT OF PUBLIC HEALTH

<sup>\*</sup>There are no data on use of baloxavir to control influenza outbreaks in LTC; oseltamivir is the recommended antiviral drug for chemoprophylaxis in LTC

# Therapeutics: COVID

- Outpatient antivirals are recommended for those with mild-moderate symptoms and who are at high risk for getting very sick from COVID-19
- Mild-moderate symptoms =
  - not hospitalized
  - not requiring oxygen, or an increase in home oxygen



# Outpatient Therapeutics\*: COVID

Treatment	Who	Start time from symptoms	How
Nirmatrelvir with ritonavir (Paxlovid™)	Adults and children ages 12+	ASAP and up to 5 days	Taken at home by mouth (orally)
Molnupiravir (Lagevrio™)	Adults for whom other treatment options are not appropriate	ASAP and <b>up to 5 days</b>	Taken at home by mouth (orally)
Remdesivir (Veklury™)	Adults and children	ASAP and up to 7 days	Intravenous (IV) infusions at a healthcare facility for 3 consecutive days

<sup>\*</sup>Corticosteroids including dexamethasone are NOT recommended for outpatient treatment



# Therapeutics: RSV

- No routinely used antiviral treatments
- Most children infected with RSV do not need hospitalization
  - Some may need to be admitted for supportive care including oxygen, rehydration, or mechanical ventilation
- Most adults with RSV have mild or no symptoms
  - Some older adults and adults with chronic medical conditions may have severe symptoms with lower respiratory tract infection (pneumonia) and require hospitalization









# **STATeam**

## **Mobile Vaccine Clinics**

Presenting the LTC STATeam's Mobile Vaccination Clinics. This Fall we are here to help by offering the new COVID-19 Monovalent XBB 1.5 Vaccine to protect your community.



- Coverage all across Illinois
- Personalized vaccination schedules for your residents
- Knowledge of the latest ACIP, CDC, and IDPH recommendations
- · Streamlined procurement process with your local pharmacy or ours
- . Mobile vaccine administration at your facility, saving valuable staff time
- . Multilingual call center support for obtaining consent forms

We understand the complexities you face in managing a facility while balancing all the new changes from the pandemic. It can be overwhelming to constantly adapt!

Let's connect to discuss how we can make this Fall a safer and healthier season for your facility.



Coronavirus

ACCIN



LTCSTAT@prism.org













# Is Your Long-Term Care Facility Having a COVID-19 Outbreak?

Book a free consultation to discuss your rapid response plan.



Phase 1: Early Detection

Screen residents for the rapid identification of COVID-19 or other respiratory viruses. Per



Phase 2: Isolation & Containment



Phase 3: Treatment & Recovery

Treatments, like Paxlovid, help improve prognosis and reduce the period of



# Available to residents of IL statewide

COVID-19
TEST TO TREAT
CLINIC

If you've tested positive for COVID-19 or have COVID-like symptoms, contact SIU Medicine.

If you have COVID-19 and are at a high risk of getting very sick, an oral treatment may help you recover. If needed, SIU Medicine can prescribe that medication and put you on the road to recovery.

### Schedule a telehealth appointment:

Call 217.545.5100

Monday – Friday, 8AM - 8PM Saturday and Sunday, 10AM - 5PM

The **Test to Treat** program can provide faster, easier access to lifesaving COVID-19 treatments at no cost to you\*.

Learn more, scan the QR code or visit siumed.org/treatment/covid-19-test-treat-clinic









## **THANK YOU**

# **SPARE PARTS**





#### What is RSV?



- RSV (respiratory syncytial virus) is a common respiratory virus that can cause severe illness in older adults
- You can get RSV by being in close contact with someone who has it or by touching something with the virus on it and not cleaning your hands
- Illness may cause cold-like symptoms, pneumonia, or worsen pre-existing conditions like asthma and COPD



#### Why is this IMPORTANT?

- Older adults with chronic conditions and/or who live in a long-term care facility are at higher risk for severe RSV disease and death
- Over 60,000 older adults are hospitalized and 6,000-10,000 die each year in the U.S. from RSV infection



#### How can YOU stay protected?

- Adults aged 60 years and older may receive a single dose of the RSV vaccine
- The RSV vaccine can be administered at the same time as other vaccines (e.g., influenza, COVID)

TALK TO NURSING STAFF TO SEE IF VACCINATION IS RIGHT FOR YOU





	Arexvy	Abrysvo	
Manufacturer	GSK	Pfizer	
Туре	Adjuvanted	Bivalent	
Efficacy	In clinical trials, Arexvy was <b>74.6%</b> effective at preventing RSV lower respiratory tract disease	In clinical trials, Abrysvo was 84.4% effective a preventing RSV lower respiratory tract disease	
Recommendation (CDC's ACIP)	Individuals who are 60 years old or older speak with their healthcare provider about getting one of the new vaccines this fall		
Administration	Single dose IM injection		
With other vaccines?	Yes with flu vaccine Awaiting guidance on COVID-19 vaccine		
Reimbursement?	TBD (roughly \$260 per dose)		





## Risks of a Vaccine Reaction or Adverse Event

- Pain, redness, and swelling where the shot is given, fatigue (feeling tired), fever, headache, nausea, diarrhea, and muscle or joint pain can happen after RSV vaccination.
- Serious neurologic conditions, including Guillain-Barré syndrome (GBS), have been reported very rarely after RSV vaccination in clinical trials. It is unclear whether the vaccine caused these events.
- People sometimes faint after medical procedures, including vaccination.
   Observe patients for complaints of dizziness, vision changes, or ringing in the ears.
- As with any medicine, there is a very remote chance of a vaccine causing a severe allergic reaction, other serious injury, or death.



## Stop the Spread of Respiratory Infections



for flu, COVID-19, and pneumococcal disease.



WEAR A MASK.



STAY HOME IF YOU'RE SICK.



WASH YOUR
HANDS OFTEN.
Use hand sanitizer
when handwashing
is not available.



STAY 6 FEET
APART,
if possible.
Avoid large
crowds or groups
of people.



RUN YOUR
HVAC SYSTEM
OFTEN.
Change air filters
every 3 months.





## **RSV Vaccination: Infants**

New\*: nirsevimab (Beyfortus™) Old: palivizumab (Synagis™)

- Both are monoclonal antibodies (provide passive immunity; technically prophylaxis rather than immunization)
- Nirsevimab is LONG ACTING!!
  - Most infants only need <u>one dose</u> per season
  - Included in VFC (Vaccines for Children)
  - Recommended for ALL infants younger than 8 months born during or entering their first RSV season
  - Infants 8-19 months with high risk for severe RSV disease



# Nirsevimab for prevention of RSV

- Administer shortly before the start of RSV season for infants <8 months</li>
- Aim for administration in the first week of life; can be given during birth hospitalization (ok to co-administer with HepB)
- If nirsevimab, no pavilizumab
- If <5 pavilizumab given initially, can give nirsevimab (stop pavilizumab)
- If pavilizumab was given in season 1 and child eligible for RSV ppx in season 2 (high risk), should receive nirsevimab



# Coming soon? RSV vaccine for pregnant people

- Abrysvo, from Pfizer, recombinant protein
- Maternal vaccination for infant protection
  - Similar to pertussis vaccination in pregnancy
- In maternal vaccination trial, vaccination at 24-36 weeks of pregnancy was 82% effective in preventing severe RSV in newborns birth to 6 months
- Possible safety signal around preterm birth
- Pending ??? (VRBPAC?)



# Inpatient therapeutics: COVID

Treatment recommendations depend on severity of illness and may include:

- Supportive care only (including anticoagulant therapy)
- Remdesivir
- Dexamethasone
- Monoclonal antibodies (oral baricitinib or IV tocilizumab)

