Guidance and responses were provided based on information known on 2/16/2022 and may become out of date. Guidance is being updated rapidly, so users should look to CDC and NE DHHS guidance for updates.

COVID-19 Treatment Update for LTC

February 16, 2022

NEBRASKA
Good Life. Great Mission.
DEPT. OF HEALTH AND HUMAN SERVICES

ASAP
Nebraska Antimicrobial Stewardship Assessment and Promotion Program

Presentation Information:

Panelists today are:

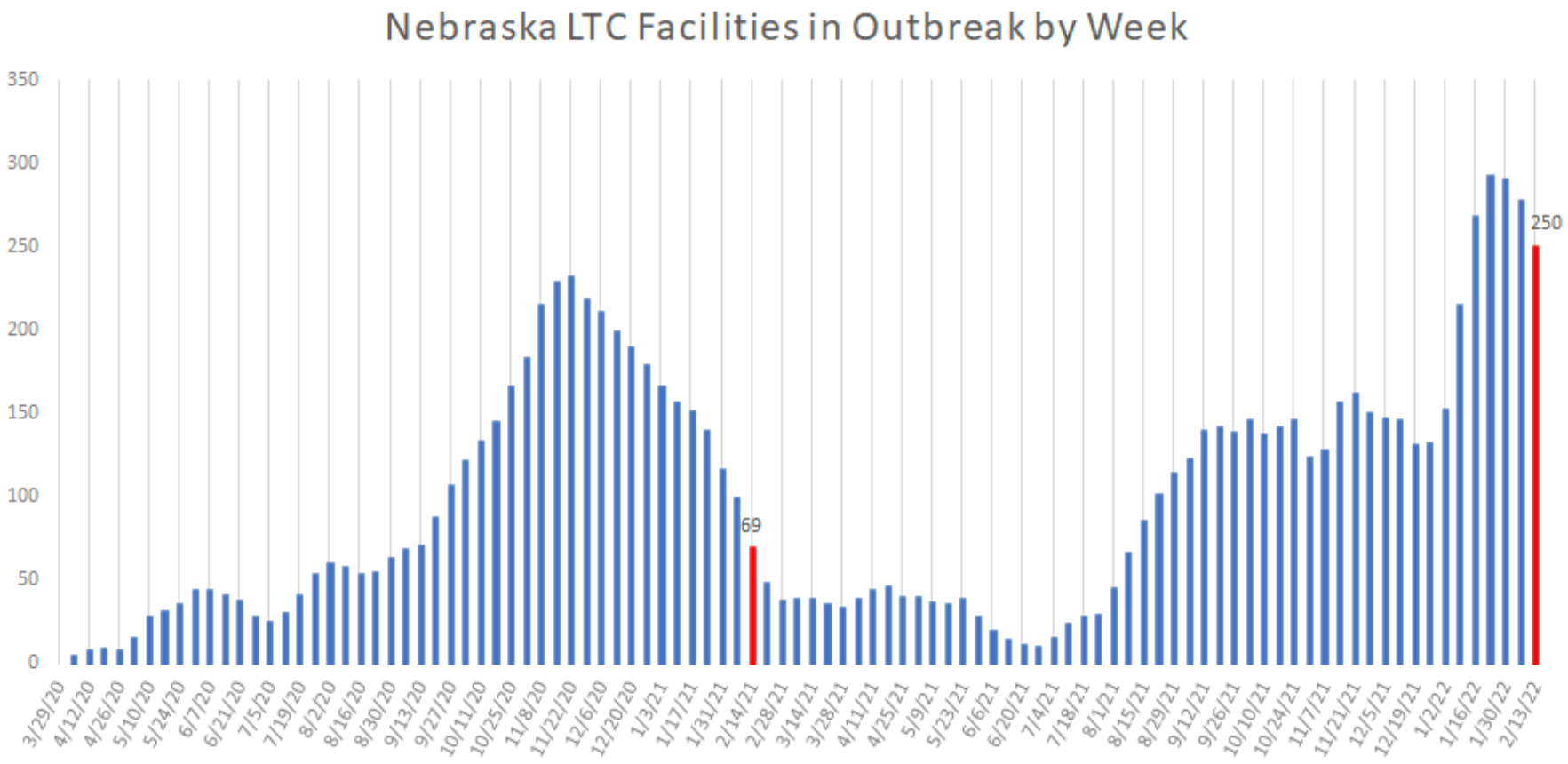
Dr. Salman Ashraf	salman.ashraf@unmc.edu
Dr. Trevor Van Schooneveld	tvanscho@unmc.edu
Dr. Andrew Watkins	anwatkins@nebraskamed.com

Please stay muted unless you are speaking.
You can type questions into the chat box or unmute to ask the panelists.

COVID-19 Data in Nebraska LTC

Nebraska Antimicrobial Stewardship Assessment and Promotion Program

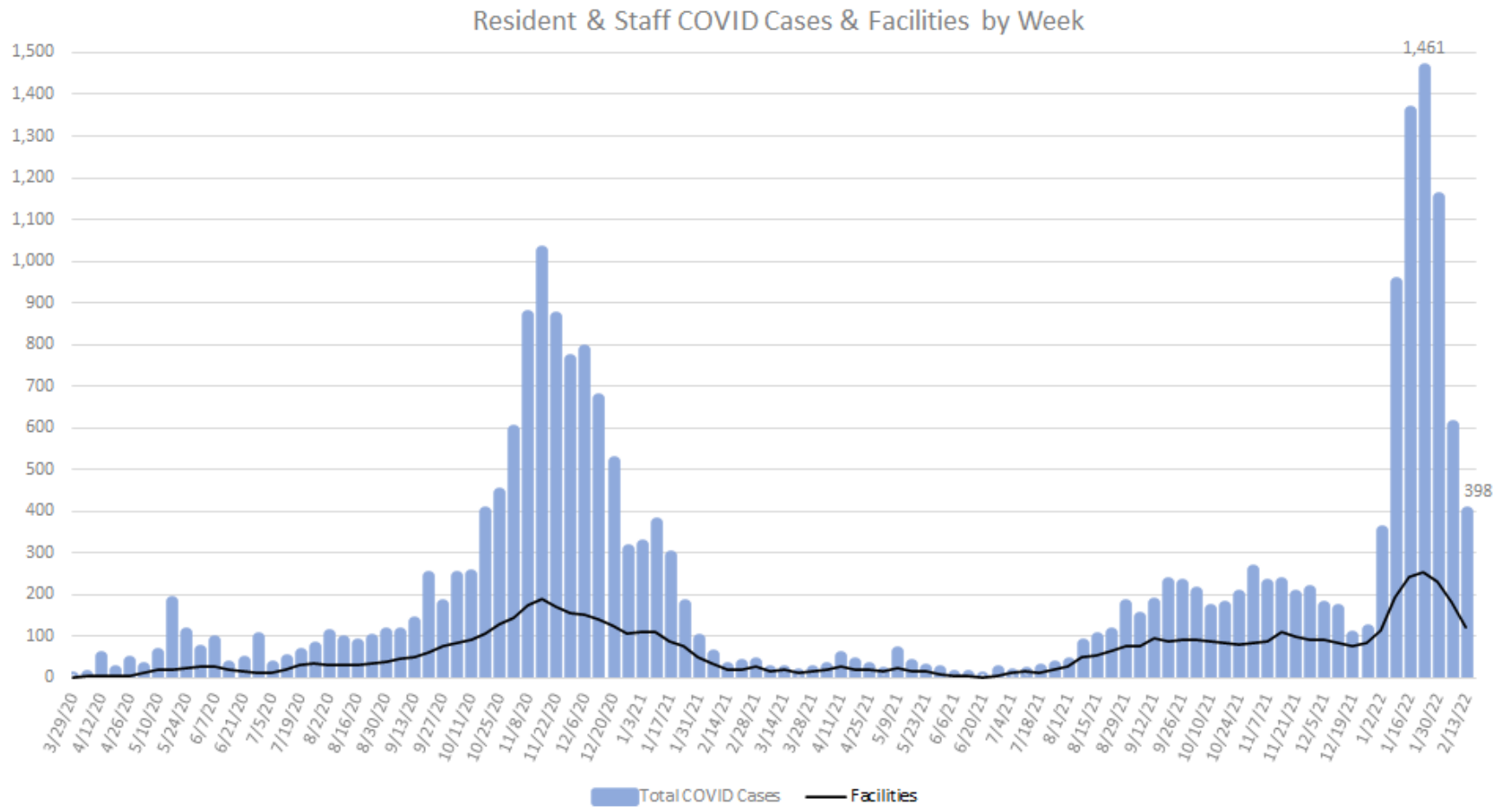
Nebraska LTC Facility COVID-19 Cases



**Updated: 2/14/2022

Source: Unofficial Counts Compiled by Nebraska ICAP based on data reported by facilities and DHHS; Actual numbers may vary slightly. Data represents the total and/or peak number for the week.

Nebraska LTC Facility COVID-19 Cases

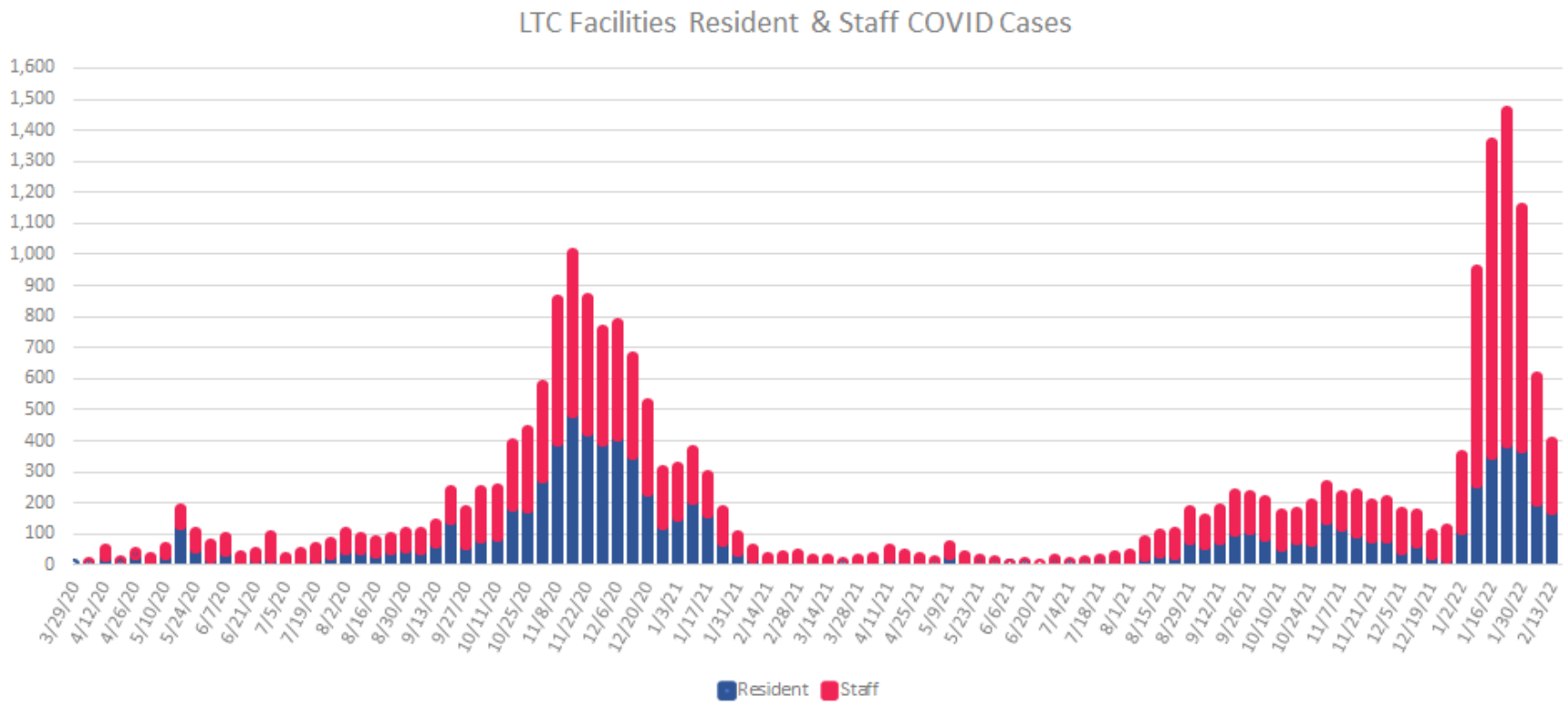


**Updated: 2/14/2022

Source: Unofficial Counts Compiled by Nebraska ICAP based on data reported by facilities and DHHS; Actual numbers may vary slightly. Data represents the total and/or peak number for the week.

ASAP

Nebraska LTC Facility COVID-19 Cases



**Updated: 2/14/2022

Source: Unofficial Counts Compiled by Nebraska ICAP based on data reported by facilities and DHHS; Actual numbers may vary slightly. Data represents the total and/or peak number for the week.

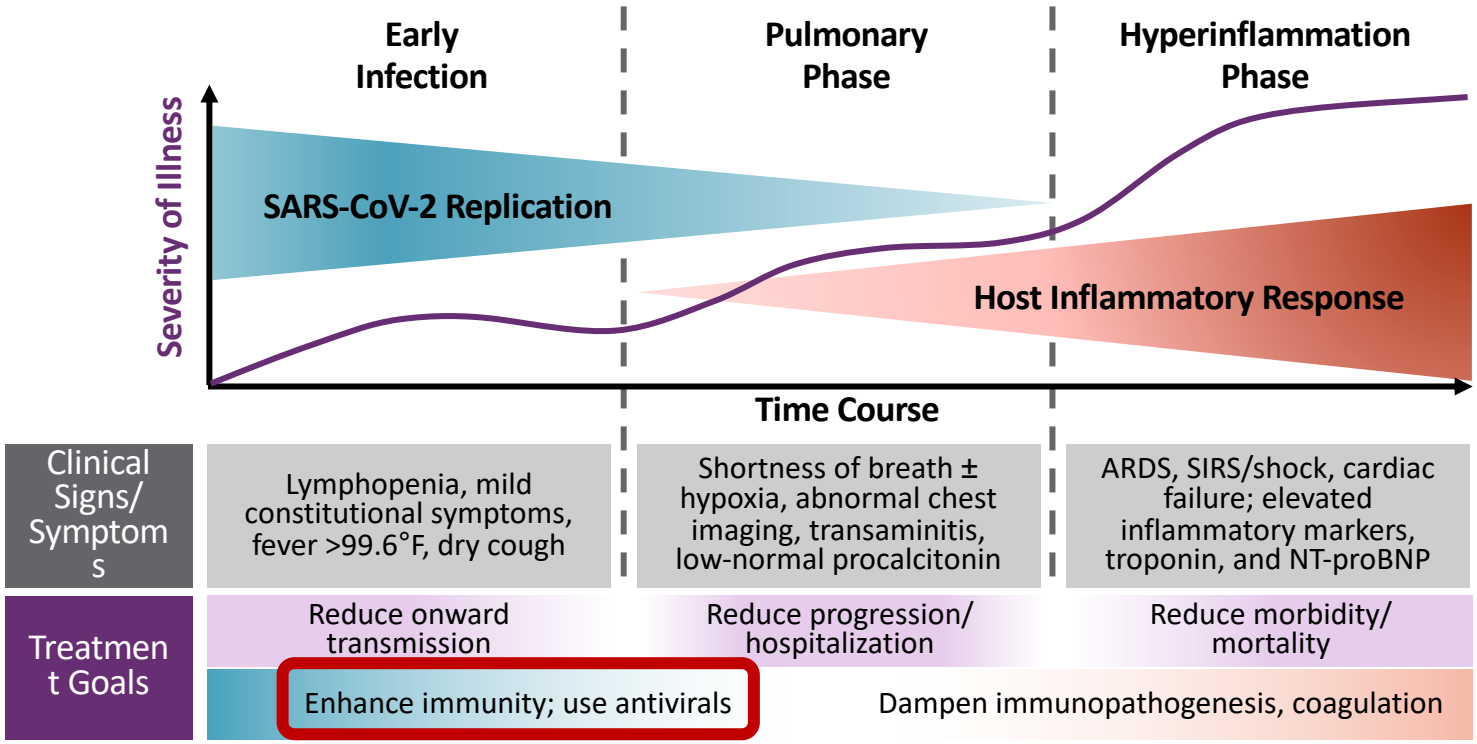
Treatment of COVID-19 Outside the Hospital

Dr. Trevor Van Schooneveld

ASAP

Nebraska Antimicrobial Stewardship Assessment and Promotion Program

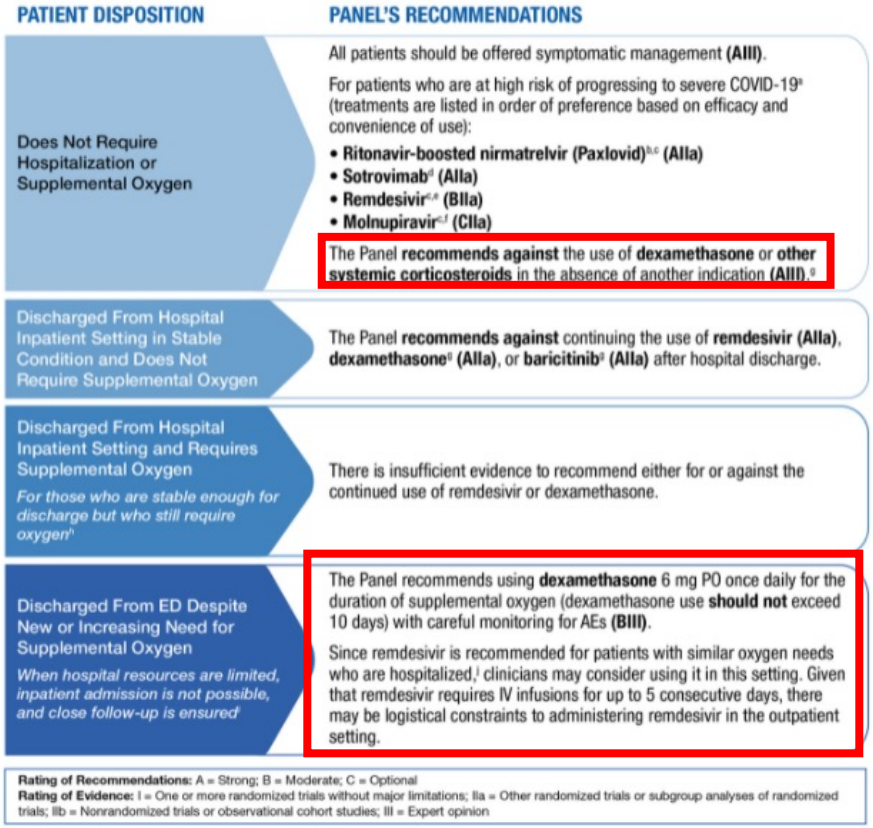
Benefit of Therapeutic Classes Dictated by SARS-CoV-2 Pathogenesis



NIH COVID-19 Treatment Guidelines. Clinical management summary. Last updated December 16, 2021.
Siddiqi. J Heart Lung Transplant. 2020;39:405.

Slide credit: clinicaloptions.com

Figure 1. Therapeutic Management of Nonhospitalized Adults With COVID-19



NIH Guidelines: https://www.covid19treatmentguidelines.nih.gov/management/clinical-management/nonhospitalized-adults--therapeutic-management/

Outpatient Therapy Options

Monoclonal antibodies (single IV infusion)

- Severely limited supplies but free

IV Remdesivir (3 daily IV infusions)

- Readily available but requires significant infusion center time and has cost to patient

Oral therapies (molnupiravir and Nirmatrelvir/ritonavir)

- Somewhat limited availability
- Limited time window
- Interactions and population restrictions
- Free

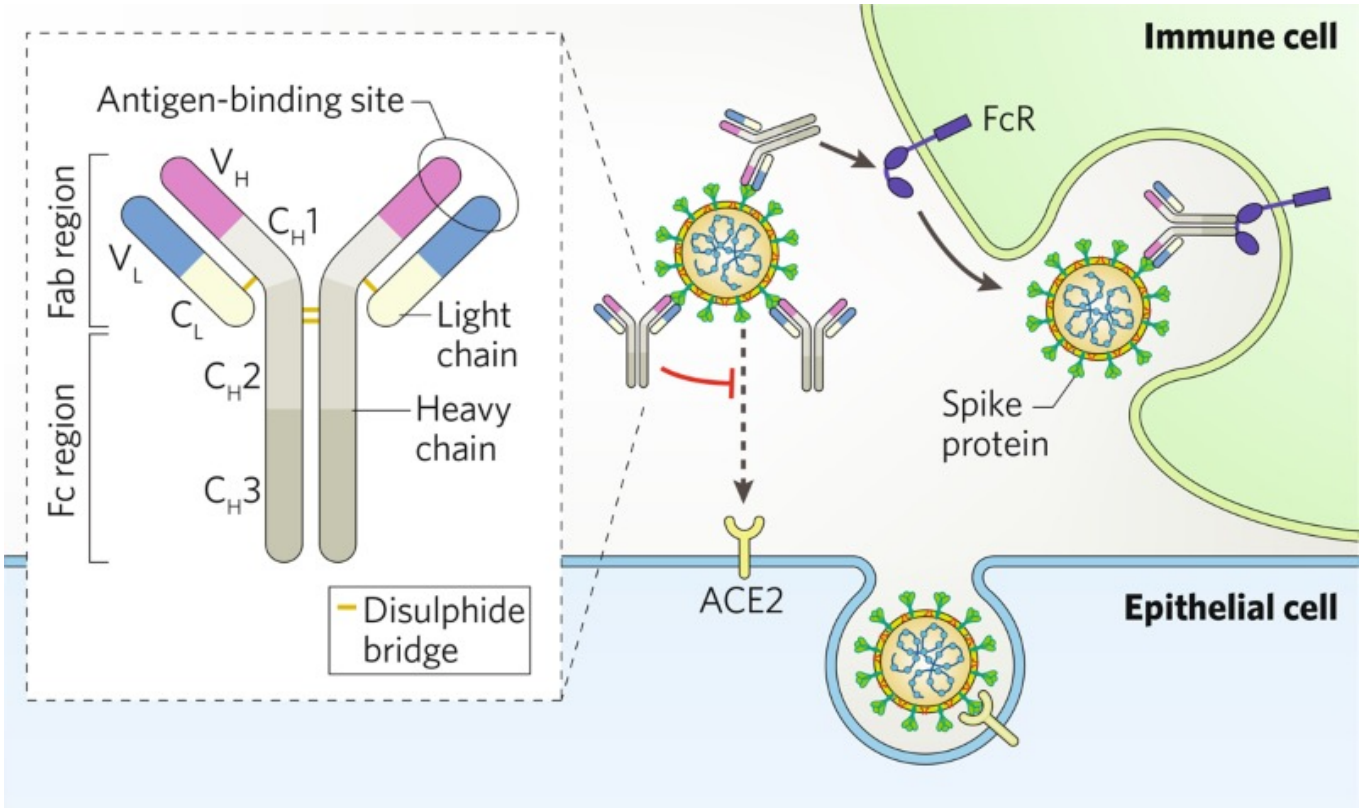
Prioritization of Limited Therapy

Table 1: NIH Risk Groups

Tier	Outpatient Treatment Prioritization Risk Group
1 (Scores ≥400)	Immunocompromised individuals not expected to mount an adequate immune response to COVID-19 vaccination or SARS-CoV-2 infection due to their underlying conditions (very specific groups), regardless of vaccine status; OR Unvaccinated individuals at the highest risk of severe disease (anyone aged ≥75 years or those aged ≥65 years with additional risk factors).
2 (Scores 300-399)	Unvaccinated individuals at risk of severe disease not included in Tier 1 (anyone aged ≥65 years or aged <65 years with clinical risk factors)
3 (Scores 200-299)	Vaccinated individuals at high risk of severe disease (anyone aged ≥75 years or individuals aged ≥65 years with clinical risk factors) - Prioritize unboosted
4 (Scores 100-199)	Vaccinated individuals at risk of severe disease (anyone aged ≥65 years or individuals aged <65 with clinical risk factors) - Prioritize unboosted


(no ACP docs)
Search
COVID-19 Vaccine: Unknown
COVID-19: Positive
Hannah L Kruger, M
Ref Provider (PCP)
Primary Cvg: United Healthcar...
Allergies: No Known Drug Allergies
8:40 AM 1.5HRIVCT
for IV Infusion
Wt Ht Dos Wt
— 1.778 m —
BMI BSA
24.54 kg/m² —
CrCl: None, 0.45 mg/dL (L)
LAST 10 VISITS
Fam Med (2), INFUSION THE, Internal Med (4), Lab, Pathology, Unknown
Micro (1)
COVID-19: Positive
COVID-19
Specimen information: Other
Added: 02/01/22 by Symptomatic COVID-19 and influenza A/B by PCR (Collected 01/31/22)
Onset date: 01/31/22
COVID-19 Testing (Last 90 days/Last 1 Result)
Collected
Procedure
01/31/2022 1414
Symptomatic COVID-19 and influenza A/B by PCR [568042943] ; Other (Abnormal)
Collected: 01/31/22 1414
Updated: 02/01/22 0630
Component
Value
COVID-19 Source
Nasopharyngeal Swab
COVID-19 by PCR
DETECTED !
Influenza virus A
Not Detected
Influenza virus B
Not Detected
Link to COVID-19 Status History
COVID-19 Status
COVID Treatment Risk Allocation Score
301 Total Score
300 Tier 2: Never vaccinated (age >=65, <65 years with risk factors)
1 Diabetes Mellitus

Monoclonal Antibodies



https://www.nature.com/articles/d43747-020-01115-y

Monoclonal Antibody Indications

Mild-moderate COVID-19 (positive test for COVID) age 12+ at high risk for progression to severe disease

- Age ≥ 65
- Obesity of overweight (BMI ≥ 25)
- Pregnancy
- CKD
- Diabetes
- Immunosuppressed
- CAD, HTN
- Chronic lung disease (asthma, COPD, CF, etc.)
- Sickle cell disease
- Neurodevelopmental disorders
- Conditions which confer medical complexity (congenital syndromes, etc.)
- Medical-related technological dependance (trach, etc.)
- Other stuff that may put them at increased risk

mAb Therapy Limitations and Warnings

Agents **NOT** recommended with Omicron

- Bamlanivimab plus etesevimab
- Casirivimab plus imdevimab

Not authorized

- Hospitalized due to COVID-19
- New or worsening O2 need

Warnings

- Hypersensitivity reactions could occur
- Infusion related reactions (<1%)
  - Can usually manage by slowing infusion

Sotrovimab

Pan-sarbecovirus neutralizing antibody originally isolated from a patient recovered from SARS-CoV-1

- Retains activity against major variants, including delta and omicron
- Fc modified to increase bioavailability in the respiratory mucosa and increase half-life

No data on prophylaxis

COMET-ICE

Primary Outcome: Hospitalization for >24 Hours or Death		
Outcome	Sotrovimab N=291	Placebo N=292
Hospitalization for any cause through day 29	3	21
Death from any cause through day 29	0	1

Adverse Events (Safety Analysis Population)		
Event	Sotrovimab N=430	Placebo N=438
Any adverse event	73	85
Any serious adverse event	7	26
Any infusion-related reaction	6	5

CONCLUSIONS

Among high-risk outpatients with mild-to-moderate Covid-19, a single infusion of the monoclonal antibody sotrovimab lowered the risk of disease progression without an increase in adverse events.

Gupta et al. NEJM 2021: 385; 1941-50

Bebtelovimab

Binds a rarely mutated region on spike protein

Active against all known variants

High potency means lower dose

Infused via IV over at least 30 seconds

EUA with same indications, uses, precautions as sotrovimab

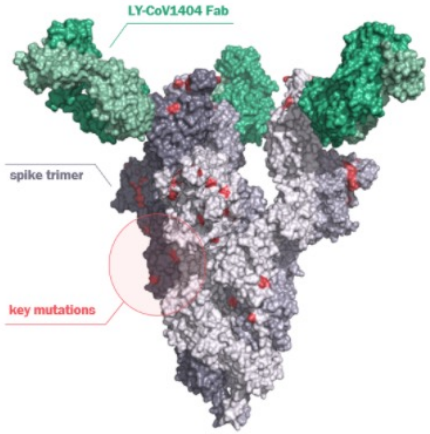
Less clinical data so all other therapies preferred

FDA NEWS RELEASE

Coronavirus (COVID-19) Update: FDA Authorizes New Monoclonal Antibody for Treatment of COVID-19 that Retains Activity Against Omicron Variant

Share Tweet Linkedin Email Print

For Immediate Release: February 11, 2022



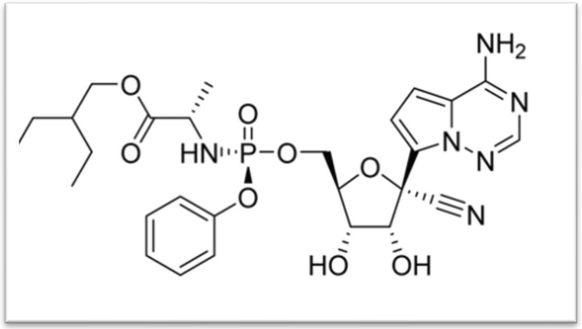
Remdesivir

Approved by FDA October 2020 (first FDA approved therapy) for age 12+

- EUA for use in children <12 years and >3.5kg

Broadly active anti-viral originally considered for Ebola treatment

Adenosine analog binds viral RNA-dependent RNA polymerase and inhibits viral replication by terminating RNA transcription



Inpatient Trial Data

ACCT-1 = RCT Remdesivir vs. placebo
- Shortened time to recovery (10d vs. 15d) but no difference in mortality
- Benefit greatest when started early

DisCoVeRy = Open label, adaptive RCT remdesivir vs. SOC
- Symptoms had been present >7 days
- No difference in clinical status at day 15 or mortality

WHO Solidarity = Open label, adaptive RCT remdesivir vs. SOC
- No difference in mortality or need for mechanical ventilation

GS-US-5774 = Open label RCT remdesivir (5d vs. 10d) vs. SOC
- 5-day had better clinical status at day 11
- 10-day numerically better but non-significant

Beigel, et al. *NEJM*. 2020;383:1813-26.
WHO Solidarity. *NEJM*. 2021;384:497-511.
Ader F, et al. *Lancet Infect Dis*. 2022;22:209-21.
Spinner CD, et al. *JAMA*. 2020;324:1048-57.

ASAP

PINETREE Study

Double-blind trial early short course remdesivir (3 days) vs. placebo

- Remdesivir 200mg day 1, 100mg Day 2 and 3

Inclusion → **All unvaccinated**

- Over 60 with no risk factors
- Over 12 with at least 1 risk factor
- Symptoms ≤ 7 days
- ≤ 4 days from PCR positive

Exclusion

- Need O2
- Previously hospitalized or treated for COVID

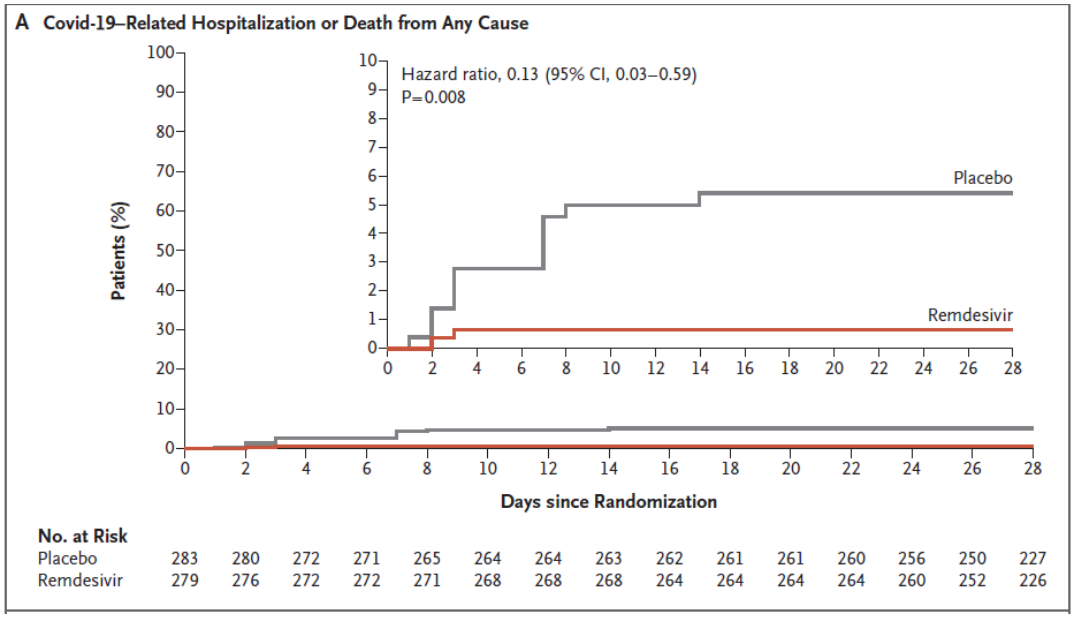
Gottlieb RL, et al. *NEJM*. 2022; DOI: 10.1056/NEJMoa2116846

PINETREE Study

Characteristic	Remdesivir (n = 279)	Placebo (n = 283)
Mean age (SD) – yr	50 (15)	51 (15)
Female sex – no. (%)	131 (47)	138 (48.8)
Body Mass Index (SD)	31.2 (6.7)	30.8 (5.8)
Median Sx (IQR) – days	5 (3-6)	5 (4-6)
Comorbidities – no. (%)		
Diabetes mellitus	173 (62)	173 (61.1)
Obesity	154 (55.2)	156 (55.1)
Hypertension	138 (49.5)	130 (45.9)
Chronic lung disease	67 (24)	68 (24)
Immunocompromise	14 (5)	9 (3.2)

Gottlieb RL, et al. *NEJM*. 2022; DOI: 10.1056/NEJMoa2116846

Outcomes



Primary Outcome Hospitalization due to COVID/Death due to any cause:

Remdesivir 0.7% vs. Placebo 5.3%
aHR.13 (95%CI 0.03-0.59; *P*=0.008)

	aHR (95% CI)
COVID related medical visit or death any cause	0.19 (0.07-0.56)
Hospitalization any cause	0.28 (0.10-0.75)
Change in viral load	0.07 (-0.10-0.24)
Alleviated COVID Symptoms	1.41 (0.73-2.69)

Gottlieb RL, et al. *NEJM*. 2022; DOI: 10.1056/NEJMoa2116846

Remdesivir

Inpatient 200mg IV once, then 100mg IV daily X 4 days
- 5 days is equivalent to 10 days in most patients

Outpatient 200mg IV once, then 100mg IV daily X 2 days

Adverse effects rare
- Nausea, increased PT without increased INR, rare hypersensitivity reactions
- Elevations in LFTs
  - Can often continue (stop if 10X normal or 5X normal with symptoms)

No renal adjustments

No drug-drug interactions

Should not be withheld in pregnancy if indicated

MoInupiravir

EUA for treatment of adults with mild-moderate COVID-19 at high risk of progression to severe disease

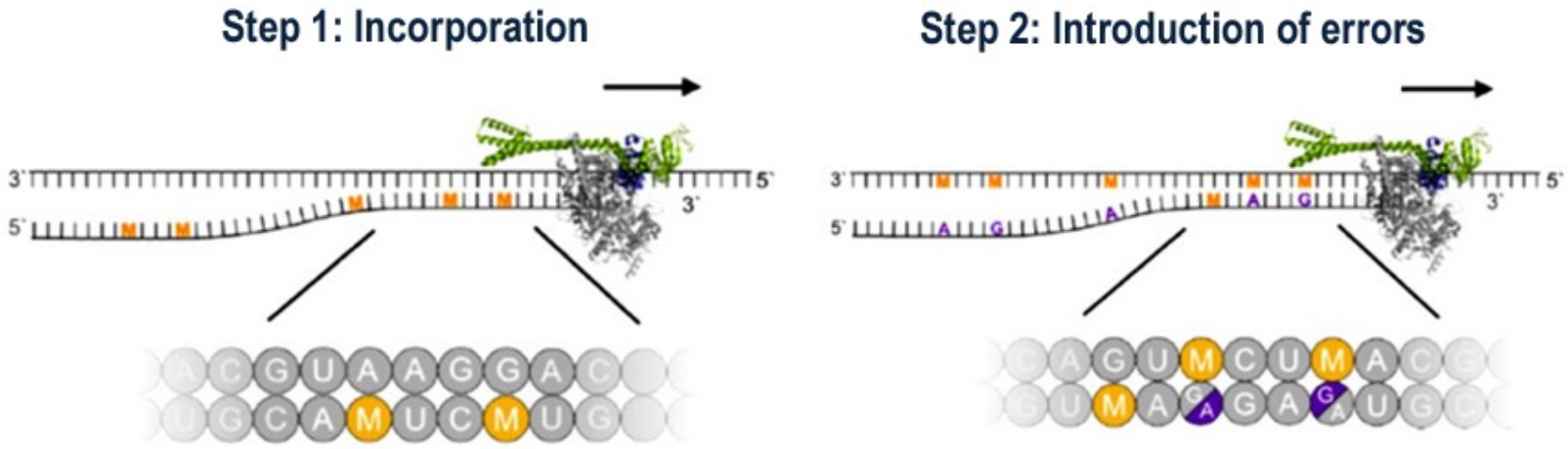
- Other therapies are not an option
- **Within 5 days symptom onset**
- Positive test for COVID-19

Do not use

- <18 years
- Pregnancy or breast feeding
- Patients hospitalized for COVID-19
  - If hospitalized after starting treatment can continue (but you might want to start something else)
- Pre- or post-exposure prophylaxis

Molnupiravir

- Nucleoside analogue which introduces mutations in SARS-CoV-2 DNA



Kabinger et al. *Nat Struc Mol Biol*. 2021;28(9):740-746

The NEW ENGLAND JOURNAL of MEDICINE

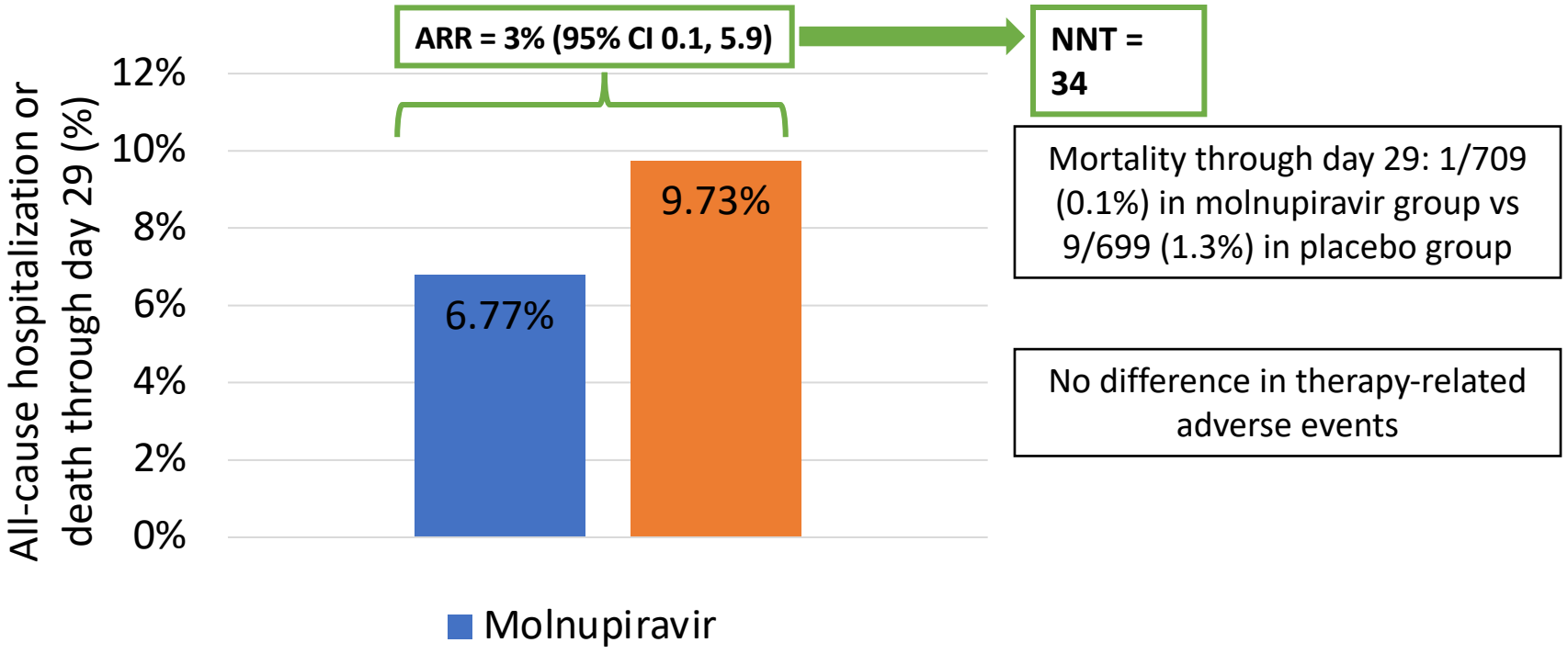
ESTABLISHED IN 1812 FEBRUARY 10, 2022 VOL. 386 NO. 6

Molnupiravir for Oral Treatment of Covid-19 in Nonhospitalized Patients

Jayk Bernal A, et al.

- Double-blind, RCT unvaccinated adults with COVID-19
  - Positive test and symptom onset within 5 days
  - At least one risk factor for severe disease (CAD, age >60, obesity, etc.)
  - Excluded ESRD, severe CKD, pregnancy, neutropenia, vaccinated
- 48% started within 3 days symptom onset
- Over half mild disease
- Delta most common variant
  - 20% with evidence previous infection

Results



Mortality through day 29: 1/709 (0.1%) in molnupiravir group vs 9/699 (1.3%) in placebo group

No difference in therapy-related adverse events

Molnupiravir

- Dosed 800mg PO BID X 5 days
  - No renal or hepatic dose adjustments
  - No medication interactions
  - With or without food
- Avoid in breast feeding (and for 4 days after)
- Avoid in pregnancy (potential fetal harm)
- Contraception recommended
  - Women for 4 days after
  - Men for 3 months after (no data but theoretical transmission mutated germ cells)

Nirmatrelvir/Ritonavir (Paxlovid)

EUA for treatment of persons age 12+ with mild-moderate COVID-19 at high risk of progression to severe disease

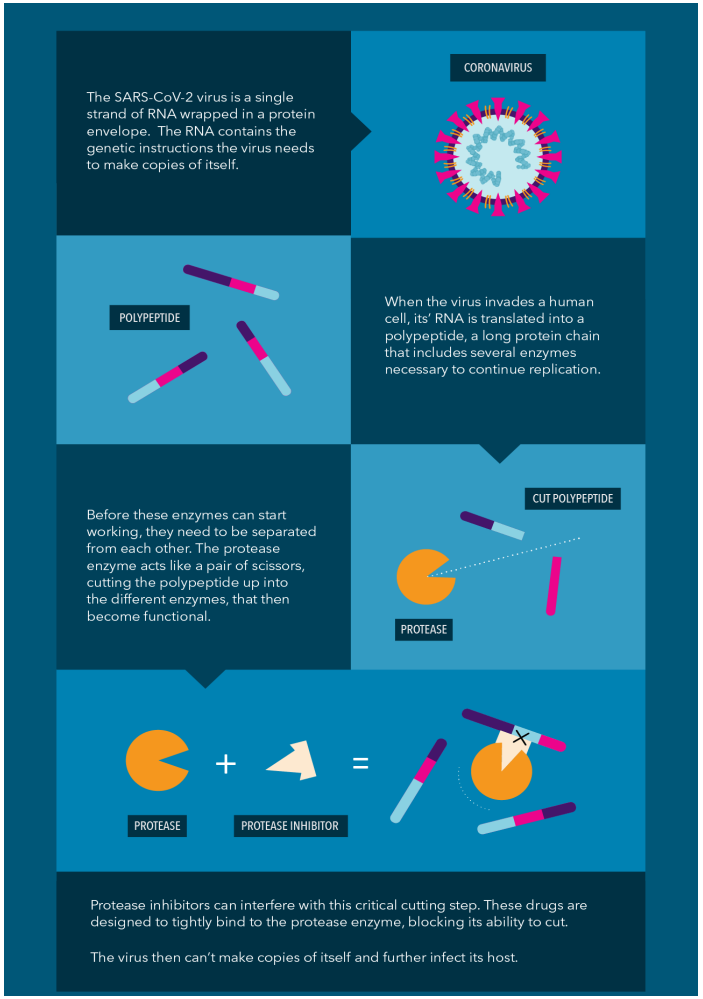
- **Within 5 days symptom onset**
- Positive test for COVID-19

Do not use

- Patients hospitalized for COVID-19
  - If hospitalized after starting treatment can continue (but you might want to start something else)
- Pre- or post-exposure prophylaxis

Nirmatrelvir/Ritonavir (Paxlovid)

- Nirmatrelvir is a protease inhibitor
- Ritonovir is a CYP3A inhibitor included to increase nirmatrelvir levels
  - No activity against SARS-CoV-2



https://www.pfizer.com/news/articles/foundations-science/protease-inhibitors-fight-covid-19-stopping-virus-life-cycle

EPIC-HR

RCT Nirmatrelvir+RTV BID X 5 days vs. placebo

- Confirmed COVID within 5 days
- Symptomatic with risk for severe disease
- Age 18+
- Unvaccinated

Excluded: previous COVID, lots of meds, CKD, liver disease, hypoxia

66% treated within 3 days of symptoms

53% had positive serology (previous infection)

98% Delta variant

EPIC-HR Outcome

Outcomes	Nirmatrelvir + RTV n=1039	Placebo n=1046	Reduction
COVID-19 related hospitalization or death through Day 28 (primary outcome)	8 (0.8%)	66 (6.3%)	88% RRR (95% CI 75-94%)
Death	0	12 (1.1%)	
SARS-CoV-2 viral load, day 5			10-fold
Adverse drug events (ADR)	23%	24%	
Serious ADR	1.6%	6.6%	
Discontinuation due to ADR	2.1%	4.2%	

- Adverse Drug Reactions
  - Dysgeusia 6%, diarrhea 3%, HTN 1%, myalgia 1%

Paxlovid Fact Sheet for Providers: https://www.covid19oralrx-hcp.com/files/Fact_Sheet_HCP.pdf

Nirmatrelvir/Ritonavir (Paxlovid)

- Nirmatrelvir 300 mg + ritonavir 100 mg PO BID x 5 days
  - Two tabs nirmatrelvir + one ritonavir BID
  - Provided in blister pack, one for each day
- Renal dose adjustment required
  - eGFR 30-60 = **nirmatrelvir 150mg (one tab)** + ritonavir 100mg BID
    - Pharmacy to remove tabs
  - eGFR <30 = not recommended
- Not recommended in severe hepatic impairment

Drug Interactions

Ritonovir is a potent CYP3A inhibitor and is included to boost nirmatrelvir levels

- Potentially life-threatening drug interactions can occur
- Always evaluate for drug interactions

Management of interactions based on magnitude of interaction and risk-benefit of agents

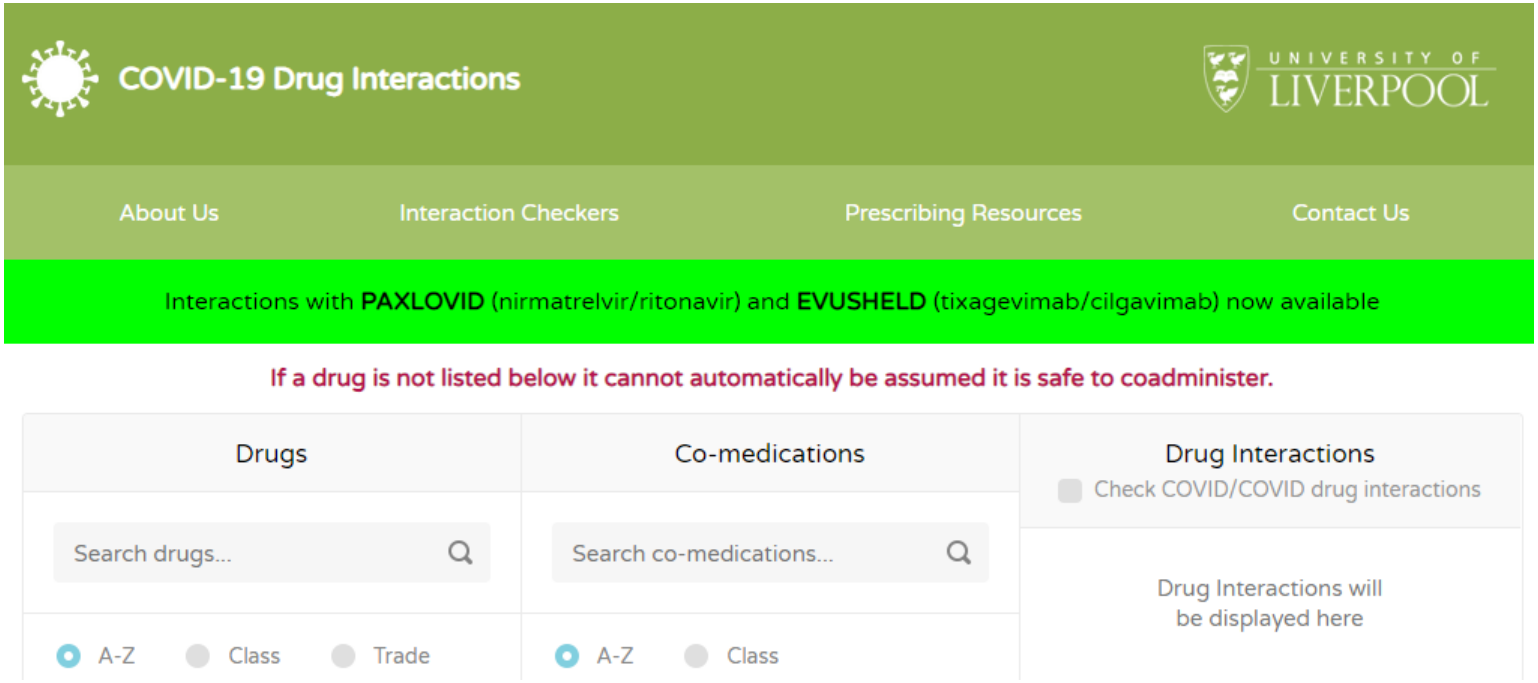
- Dose adjust or swap out medications
- Increase monitoring
- Temporarily withhold

Utilize strategy for 3-5 days after completing Paxlovid

Prescribe Alternative COVID-19 Therapy if on These Medications	Before Prescribing Paxlovid Determine if Withholding is Appropriate
• Amiodarone • Carbapmazepine • Clopidogrel • Clozapine • Dofetilide • Eplerenone • Flecainide • Mexiletine • Phenobarb • Phenytoin • Quinidine • Rifampin • Ranolazine • Rivaroxaban • Ticagrelor	• Atorvastatin, Lovastatin, Rosuvastatin, Simvistatin • Clonazepam • Codeine • Cyclosporine • Diazepam • Everolimus, Sirolimus, Tacrolimus • Oxycodone • Piroxicam • Salmeterol • Tadalafil • Tramadol • Vardenafil

University of Liverpool Interaction Checker

https://www.covid19-druginteractions.org/checker



Ongoing Trials

EPIC-SR

- Standard risk patients, 80% enrolled
- Interim results death or hospitalization
  - Paxlovid 0.7% vs placebo 2.4%

EPIC-PEP

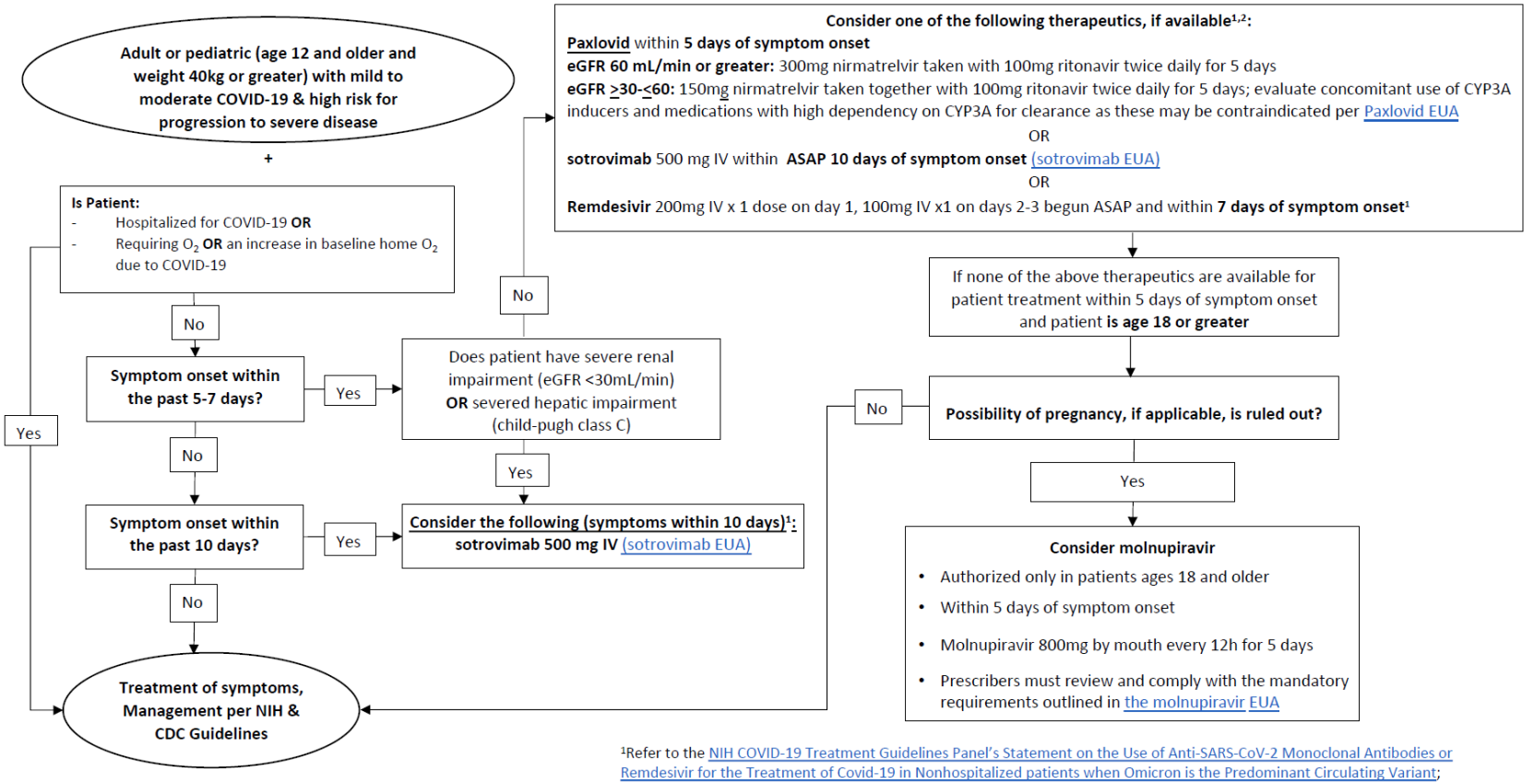
- Placebo vs. 5 days vs. 10 days
- Asymptomatic household contacts
- Outcome: development of symptomatic, PCR-confirmed SARS-CoV-2 infection

Choosing Therapy

	Nirmatrevlir/ritonavir (Paxlovid) PO	Sotrovimab IV	Remdesivir IV	Molnupiravir PO
Efficacy in Unvaccinated Populations	RRR: 88% Absolute risk: 6.3→0.8% NNT: 18	RRR: 85% Absolute risk: 7%→1% NNT: 17	RRR: 87% Absolute risk: 6.3→0.8% NNT: 18	RRR: 30% Absolute risk: 9.7%→6.5% NNT: 31
Age and Timing of Onset	Age ≥12 years and ≥40kg AND within 5 days of symptom onset	Age ≥12 years and ≥40kg AND within 10 days of symptom onset	Age ≥12 years and ≥40kg AND within 7 days of symptom onset	Age ≥18 years AND within 5 days of symptom onset
Clinical Considerations	Medication interactions Limited availability Renal issues	Need for IV infusion Limited availability	Need for IV infusion on multiple days Potential $$	Pregnancy, breastfeeding, contraception

https://dhhs.ne.gov/han%20Documents/UPDATE01042022.pdf

Current Therapeutic Options – Flow Diagram



Limited use of bamlanivimab/etesevimab and REGEN-COV as they are not expected to be active against the Omicron variant[1]

December 30, 2021

[1]Refer to the NIH COVID-19 Treatment Guidelines Panel's Statement on the Use of Anti-SARS-CoV-2 Monoclonal Antibodies or Remdesivir for the Treatment of Covid-19 in Nonhospitalized patients when Omicron is the Predominant Circulating Variant; Remdesivir is only approved for hospitalized individuals with COVID-19. Outpatient treatment is based on information from the literature (Dec 22, 2021 Early Remdesivir to Prevent Progression to Severe Covid-19 in Outpatients; DOI: 10.1056/NEJMoa2116846)

[2] COVID-19 convalescent plasma with high titers of anti-SARS-CoV-2 antibodies is authorized for the treatment of COVID-19 in patients with immunosuppressive disease in either the outpatient or inpatient setting (COVID-19 Convalescent Plasma EUA)

Request Process for COVID-19 Therapeutics for LTCF (SNF/ALF)

Andrew B. Watkins, PharmD, BCIDP
Pharmacy Coordinator, Nebraska ASAP

ASAP
Nebraska Antimicrobial Stewardship Assessment and Promotion Program

COVID-19 Treatment Available Through ASAP

Nirmatrelvir and Ritonavir (Paxlovid)

Paxlovid is available for the treatment of **mild-to-moderate** symptomatic COVID-19 in adults and pediatric patients (12 years of age and older weighing at least 40kg):

- With positive results of direct severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) viral testing
- Within 5 days of symptom onset and as soon as possible after diagnosis of COVID-19
- Who are at high-risk for progression to severe COVID-19 including hospitalization or death

Monoclonal Antibody Treatment (Sotrovimab)

Sotrovimab is available for the treatment of **mild to moderate** symptomatic COVID-19 in adults and pediatric patients:

- Within 10 days of symptom onset and preferably within 3 days of positive test result
- Who are at high risk for progressing to severe COVID-19 and/or hospitalization

Molnupiravir

Molnupiravir is available for the treatment of **mild-to-moderate** symptomatic COVID-19 in adults:

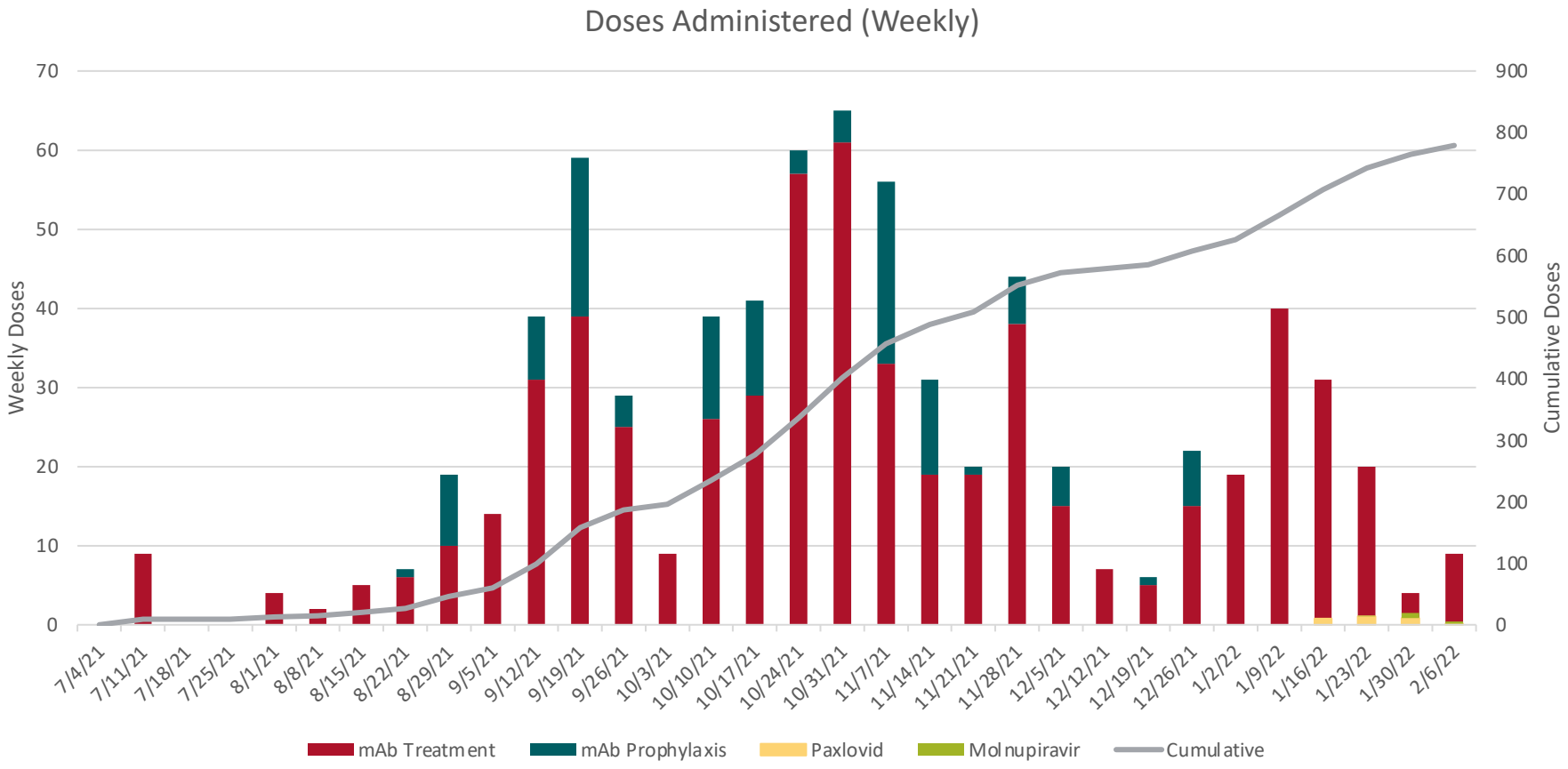
- With positive result of direct severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) viral testing
- Within 5 days of symptom onset and as soon as possible after diagnosis of COVID-19
- Who are at high-risk for progression to severe COVID-19 including, hospitalization or death
- For whom alternative COVID-19 treatment options authorized by FDA (e.g. Paxlovid, Sotrovimab and Remdesivir) are not accessible or clinically appropriate

Remdesivir

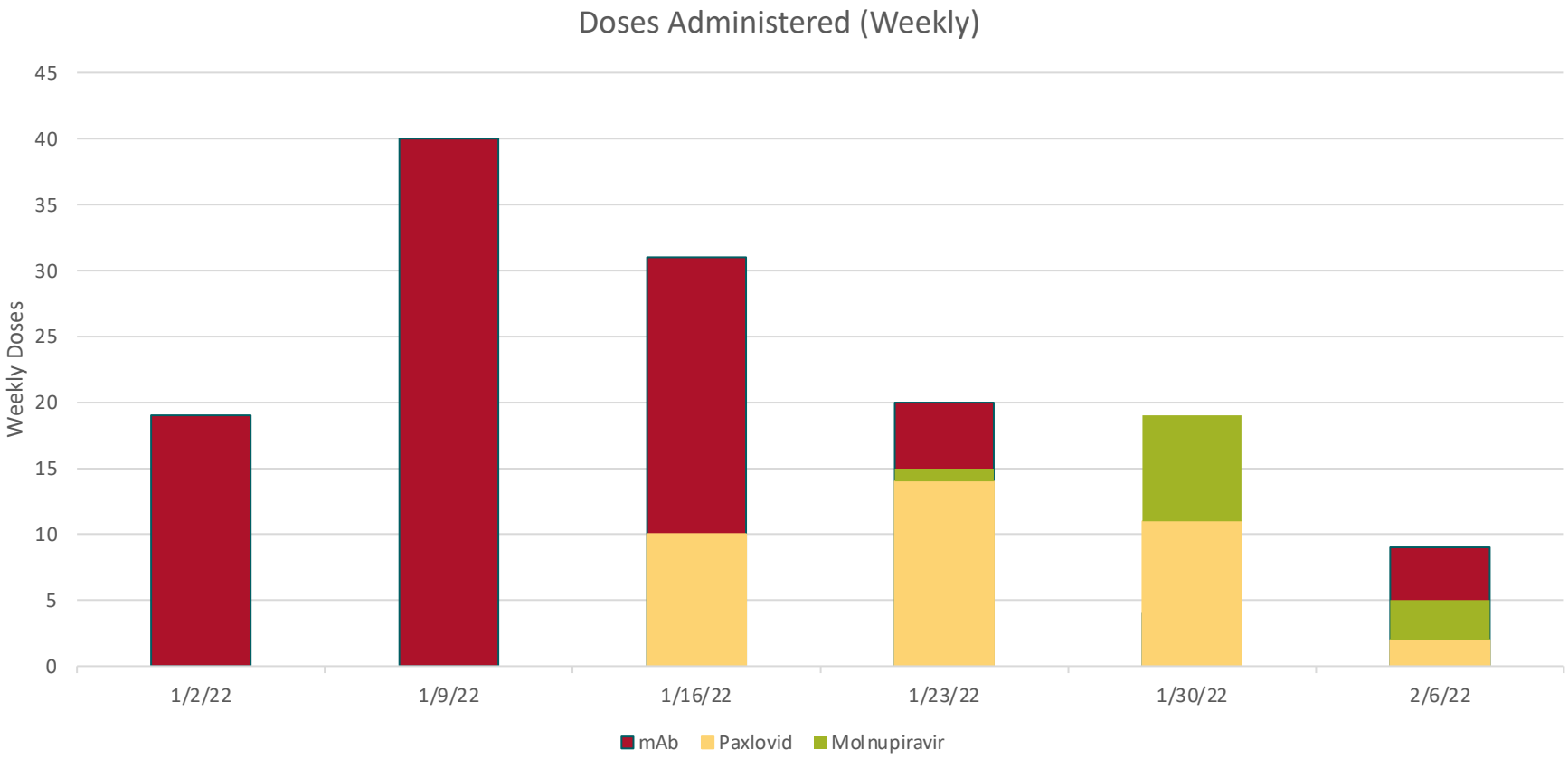
Not available through ASAP but may be available through local hospital/infusion centers

ASAP

Administration Trends Since 7/21



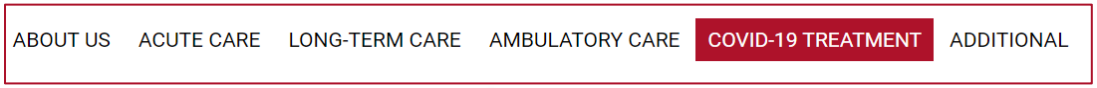
Administration Trends Since 1/22



How to Order

Go to **ASAP website** located here:
https://asap.nebraskamed.com/

On the ASAP home page, click on the "**COVID-19 Treatment**" header Or follow the page at this link
https://asap.nebraskamed.com/covid19-treatment/



Scroll down the page for the **COVID-19 Treatment order form** Or access **survey link** here
https://redcap.nebraskamed.com/surveys/?s=ATXH748HAD4C748E

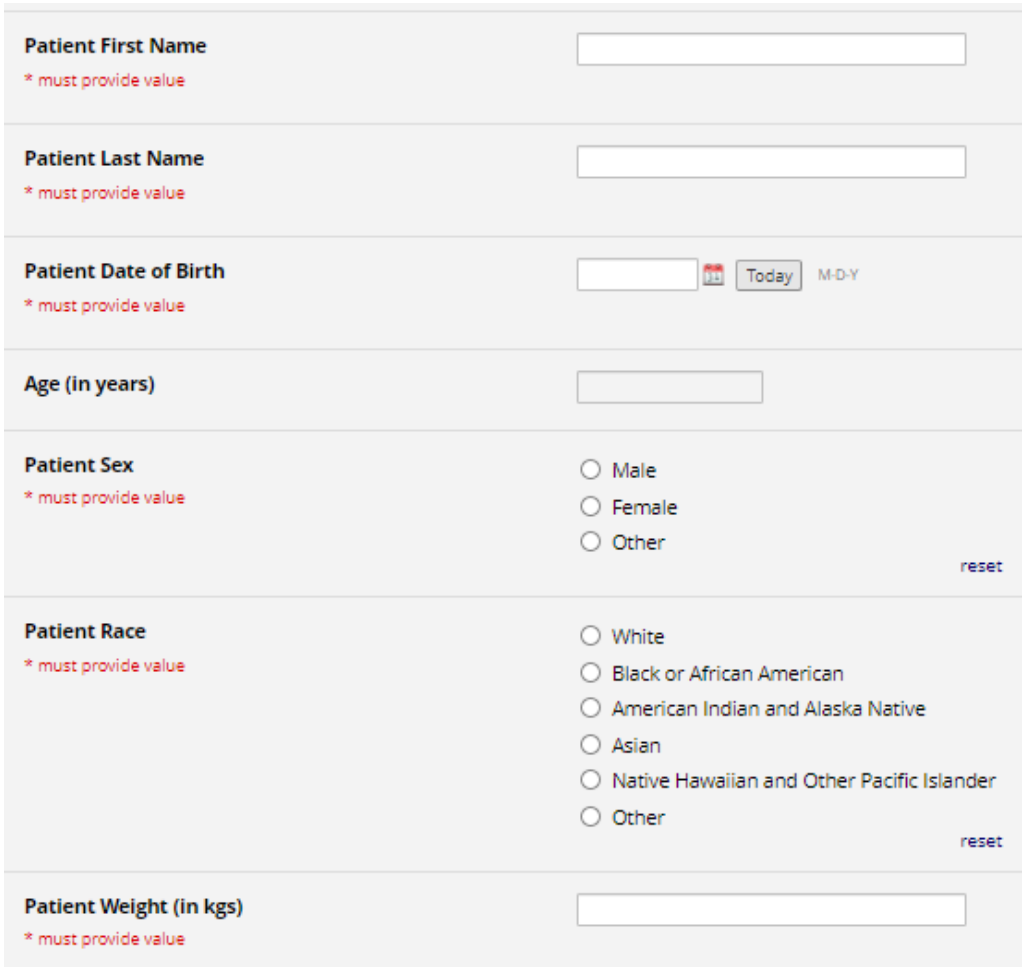
Click here to access the LTCF COVID-19 Treatment Order Survey Link

(Please Note–The survey link above is only for Nursing Home and Assisted Living Residents)

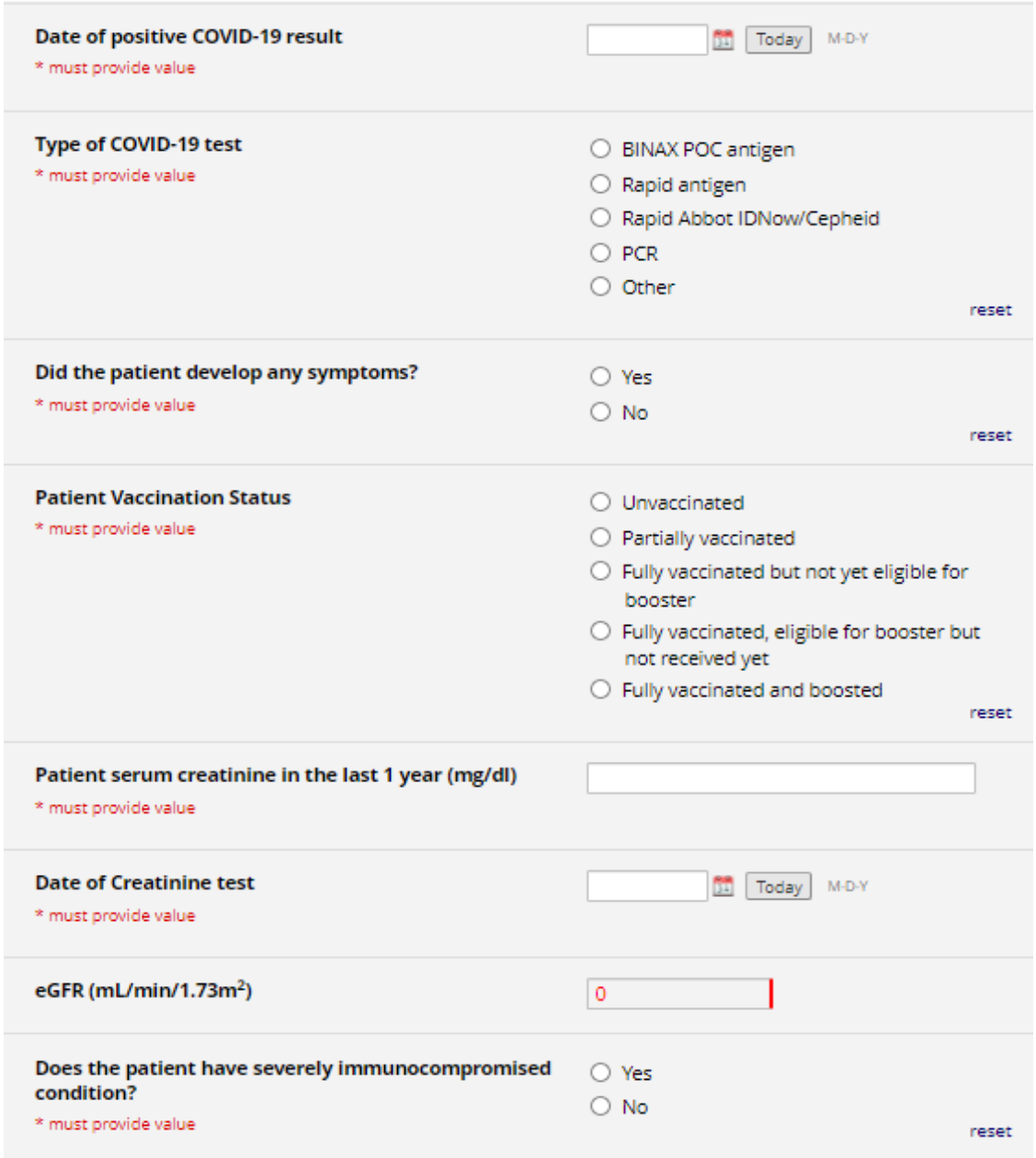
Survey Information

- Fill in the contact information of the facility and person completing the survey.
  - Survey can be completed by DON, Administrator, etc.
- Answer baseline questions
- Fill in the patient information (Age, sex, race, weight, serum creatinine in the last 1 year are important for auto-calculation of eGFR value)

Patient 1



Survey Information



Fill in patient test information, symptom status, vaccination status, immunocompromised status, and creatinine levels

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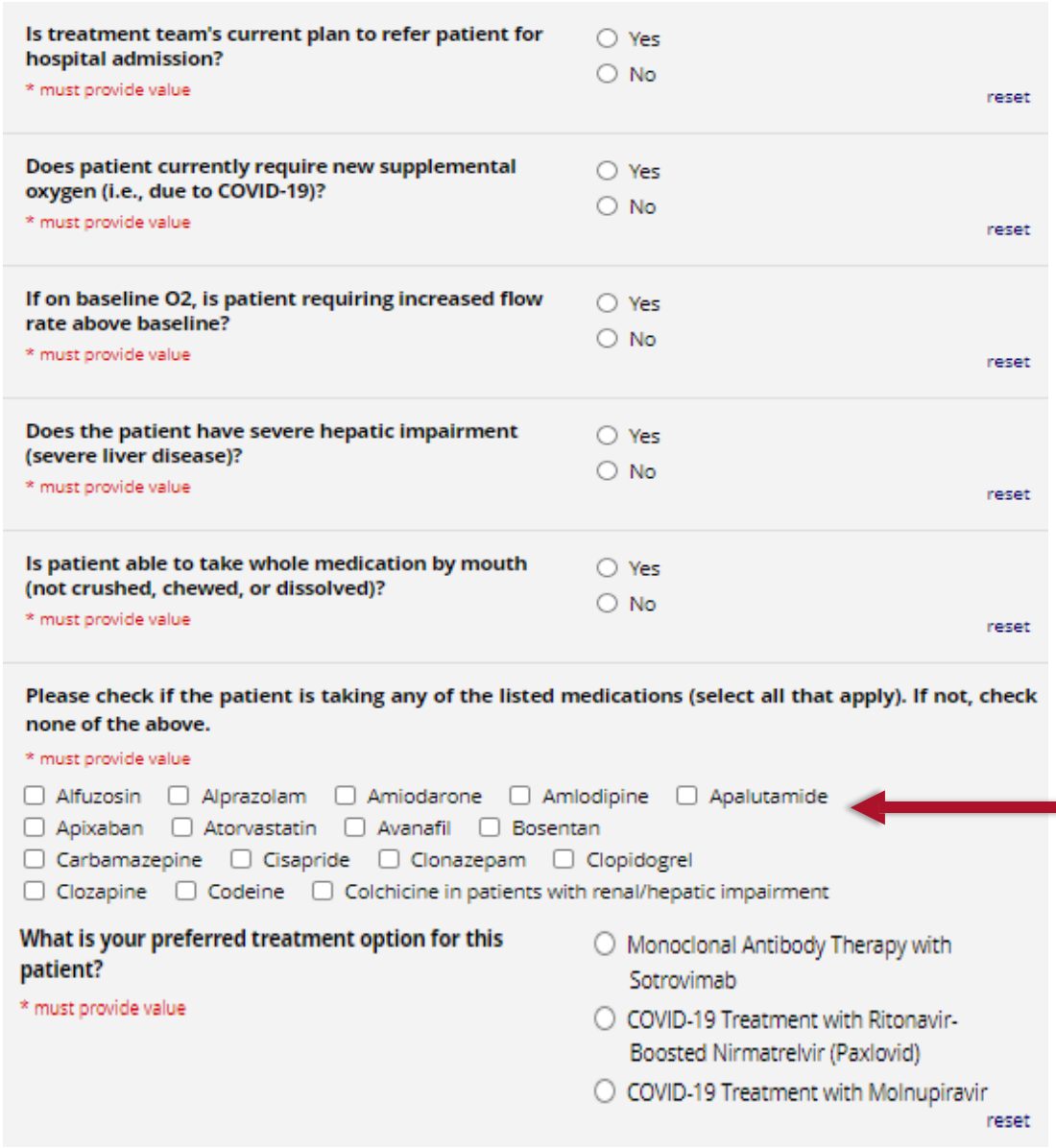
Survey Information



Fill in patient admission status, oxygen requirement, medication lists, and the ability to take medication by mouth.

Full Medication List on Next Slide

Indicate Patient Medications

Please check if the patient is taking any of the listed medications (select all that apply). If not, check none of the above.

* must provide value

- ☐ Alfuzosin ☐ Alprazolam ☐ Amiodarone ☐ Amlodipine ☐ Apalutamide
- ☐ Apixaban ☐ Atorvastatin ☐ Avanafil ☐ Bosentan
- ☐ Carbamazepine ☐ Cisapride ☐ Clonazepam ☐ Clopidogrel
- ☐ Clozapine ☐ Codeine ☐ Colchicine in patients with renal/hepatic impairment
- ☐ Cyclosporine[b] ☐ Dabigatran ☐ Diazepam ☐ Disopyramide
- ☐ Dofetilide ☐ Dronedarone ☐ Edoxaban ☐ Eplerenone
- ☐ Ergot derivatives ☐ Everolimus[b] ☐ Fentanyl ☐ Flecainide
- ☐ Flibanserin ☐ Glecaprevir/pibrentasvir ☐ Hydrocodone ☐ Ivabradine
- ☐ Lomitapide ☐ Lovastatin ☐ Lumateperone ☐ Lurasidone
- ☐ Meperidine (pethidine) ☐ Mexiletine ☐ Midazolam (oral) ☐ Oxycodone
- ☐ Phenobarbital ☐ Phenytoin ☐ Pimozide ☐ Primidone
- ☐ Piroxicam ☐ Propafenone ☐ Propoxyphene ☐ Quinidine ☐ Ranolazine
- ☐ Rifampin ☐ Rifapentine ☐ Rivaroxaban ☐ Rosuvastatin
- ☐ Salmeterol ☐ Sildenafil for erectile dysfunction ☐ Sildenafil for pulmonary hypertension
- ☐ Silodosin ☐ Simvastatin ☐ Sirolimus[b] ☐ St. John's wort
- ☐ Suvorexant ☐ Tacrolimus[b] ☐ Tadalafil for erectile dysfunction
- ☐ Tadalafil for pulmonary hypertension ☐ Tamsulosin ☐ Ticagrelor ☐ Tramadol
- ☐ Trazodone ☐ Triazolam ☐ Vardenafil ☐ Vorapaxar ☐ **None of the above**

*Paxlovid drug-to-drug interactions:

Liverpool COVID-19 Interactions (covid19-druginteractions.org)

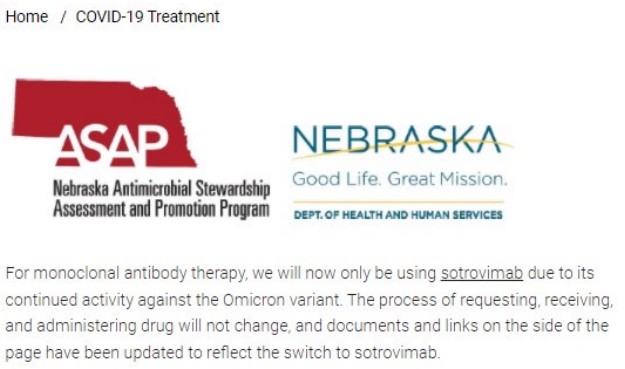
https://www.med.umich.edu/asp/pdf/outpatient_guidelines/Paxlovid-DDI.pdf

https://www.covid19treatmentguidelines.nih.gov/therapies/statement-on-paxlovid-drug-drug-interactions/

COVID-19 Treatment Resources

https://asap.nebraskamed.com/covid19-treatment/

- Treatment criteria and patient selection
- Treatment Order form
- Standing Order template
- Fact sheet for patients and caregivers
- Fact sheet for healthcare providers
- Drug-drug interactions



MONOCLONAL ANTIBODY RESOURCES → https://asap.nebraskamed.com/monoclonal-antibody-resources/

PAXLOVID RESOURCES → https://asap.nebraskamed.com/paxlovid-resources/

MOLNUPIRAVIR RESOURCES → Molnupiravir Resources - Antibiotic Stewardship Assessment & Promotion Program - Nebraska Medicine

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Order Forms

Monoclonal Antibody Standing Order – [Facility Name]

Date of symptom onset:		Date of positive SARS-CoV-2 test:	
☐ NO CHANGE IN BASELINE OXYGEN REQUIREMENTS		☐ CHANGE IN BASELINE OXYGEN REQUIREMENTS (EXPLAIN):	

Diagnosis: _____

Sotrovimab is available for the treatment of **mild to moderate** symptomatic COVID-19 (See Figure 2) in adults and pediatric patients:

- Within 10 days of symptom onset and preferably within 3 days of positive test result
- Who are at high risk for progressing to severe COVID-19 and/or hospitalization (Figure 1)

Figure 1: High-Risk Criteria (must meet at least 1)

- ☐ Older age (for example, age ≥65 years of age)
- ☐ Obesity or being overweight (for example, BMI >25 kg/m2, or if age 12-17, have BMI
- ☐ ≥85th percentile for their age and gender based on CDC growth charts)
- ☐ Pregnancy
- ☐ Chronic kidney disease
- ☐ Diabetes
- ☐ Immunosuppressive disease or immunosuppressive treatment
- ☐ Cardiovascular disease (including congenital heart disease) or hypertension
- ☐ Chronic lung diseases (for example, chronic obstructive pulmonary disease, asthma [moderate-to-severe], interstitial lung disease, cystic fibrosis and pulmonary hypertension)
- ☐ Sickle cell disease
- ☐ Neurodevelopmental disorders (for example, cerebral palsy) or other conditions that confer medical complexity (for example, genetic or metabolic syndromes and severe congenital anomalies)
- ☐ Having a medical-related technological dependence (for example, tracheostomy, gastrostomy, or positive pressure ventilation (not related to COVID 19))
- ☐ Other: _____

Figure 2

Severity of Illness	Criteria
Asymptomatic or Presymptomatic Infection	Individuals who test positive for SARS-CoV-2 using a virologic test (i.e., a nucleic acid amplification test or an antigen test), but who have no symptoms that are consistent with COVID-19.
Mild Illness ☐	Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain, nausea, vomiting, diarrhea, loss of taste and smell) but who do not have shortness of breath, dyspnea, or abnormal chest imaging.
Moderate Illness ☐	Individuals who show evidence of lower respiratory disease during clinical assessment or imaging and who have saturation of oxygen (SpO2) ≥94% on room air at sea level.
Severe Illness	Individuals who have SpO2 <94% on room air at sea level, a ratio of arterial partial pressure of oxygen to fraction of inspired oxygen (PaO2/FiO2) <300 mmHg, respiratory frequency >30 breaths per minute, or lung infiltrates >50%

Source: COVID-19 Treatment Guidelines Panel. Coronavirus Disease 2019 (COVID-19) Treatment Guidelines. National Institutes of Health. Available at https://www.covid19treatmentguidelines.nih.gov/. Accessed 18 Nov 2020.

Monoclonal Antibody Standing Order – [Facility Name]

The patient or caregiver must be informed about the information in the Fact Sheet for Patients and Caregivers for sotrovimab and must be given a printed copy of the fact sheet. This information must be documented in the patient's record,

☐ **Sotrovimab 500 mg administered as a single IV infusion given once peripherally over 30 minutes with a 0.2 micron polyethersulfone (PES) in-line filter.**

Stability

- IV: 6 hours at room temp and 24 hours refrigerated.

Monitoring: Required during the infusion and 1-hour post-infusion for any symptoms of anaphylaxis (Emergency box should be readily available) – Monitor and document vital signs every 15 minutes during this time. Document start and stop time of infusion.

- Signs and symptoms of infusion reaction can include fever, chills, nausea, headache, bronchospasm, hypotension, angioedema, throat irritation, rash including urticaria, pruritus, myalgia, dizziness

Equipment (Keep at the bedside during transfusion and monitoring):

- Non-rebreather with oxygen tank
- Backboard
- Vital sign machine
- Ambu bag
- Emergency response bag

Medications (Keep at the bedside during transfusion and monitoring):

- Benadryl 25mg-50mg and syringe for mild signs and symptoms of infusion reaction
- Epinephrine 0.2-0.5 ml 1:1,000 and syringe IV or IM for severe signs and symptoms of anaphylaxis every 15 minutes as needed. If administered, call 911.

Reporting:
Mandatory reporting of all medication errors and serious adverse events within 7 calendar days from onset of event. Submit to FDA MedWatch.

Medical Director signature: _____ Date: _____

Medical Director name (Please print): _____

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After Request Submission

- Once submitted, we confirm eligibility and then inform the facility and Community Pharmacy about approval.
  - If requested drug is not an option due to drug interactions, renal dysfunction, etc., alternate agents are recommended by pharmacist
- Facility staff (or prescriber) can then send the order form to Community Pharmacy directly (Fax: 844-596-1448).
- Entire process is usually completed within 24 hours.
- Guidance is available to facilities throughout the process.

For any questions regarding monoclonal antibodies, Paxlovid, molnupiravir, or the request process, please contact Andrew Watkins at Anwatkins@nebraskamed.com or Mounica Soma at msoma@nebraskamed.com

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