

# JHMI Clinical Guidance for Use of REGEN-COV as COVID-19 Post-Exposure Prophylaxis

Updated 9/15/2021 and replaces the version of 8/25/2021; COVID-19 Treatment Guidance Writing Group of Johns Hopkins University and The Johns Hopkins Hospital COVID-19 Treatment Guidance Working Group

## Contents

I. Purpose.....	1
II. Current Writing Group Recommendations .....	1
❑ Polyclonal Neutralizing Antibodies .....	1
III. Development of This Guidance .....	3

## I. Purpose

The purpose of this document is to provide clinicians in outpatient settings in the Johns Hopkins Health System (JHHS) with guidance for administering REGEN-COV as post-exposure prophylaxis to prevent COVID-19 disease in patients exposed to SARS-CoV-2 who are at high risk of developing severe disease, including hospitalization and death.

## II. Current Writing Group Recommendations

### Box 1: JHMI Recommendations for Administration of REGEN-COV as Post-Exposure Prophylaxis (PEP) to Prevent COVID-19

- Clinicians should offer COVID-19 post-exposure prophylaxis with casirivimab and imdevimab (REGEN-COV) to individuals who report a possible exposure to SARS-CoV2 and are not fully vaccinated or not expected to mount an adequate immune response to complete SARS-CoV-2 vaccination\* and meet the [U.S. Food and Drug Administration's \(FDA\) Emergency Use Authorization \(EUA\)](#) criteria for being at high risk for severe COVID-19 disease (see below).

#### Notes:

- If capacity at JHMI or elsewhere limits the administration of REGEN-COV as PEP, priority should be given to patients who have received solid organ transplants or stem cell transplants, who have B-cell disorders that limit vaccine antibody responses, or who are receiving anti-metabolite treatment such as mycophenolate mofetil or azathioprine.
- COVID-19 PEP is not recommended for individuals who are fully vaccinated and expected to mount a normal immune response.

### ❑ Polyclonal Neutralizing Antibodies

Polyclonal antibodies (pAbs) are synthetic neutralizing antibodies that target the SARS-CoV-2 spike protein.

**Casirivimab and imdevimab (REGEN-COV):** A placebo-controlled randomized clinical trial of REGEN-COV demonstrated reduced SARS-CoV-2 in the active agent arm.<sup>1</sup> The study included household contacts of a person with a positive SARS-CoV-2 RNA test result. Participants were healthy individuals  $\geq 12$  years old who were SARS-CoV-2 negative. On day 1, participants were randomized to receive either 1,200 mg subcutaneous injection of REGEN-COV or placebo. Participants were tested weekly using a SARS-CoV-2 RNA test. The primary endpoint was symptomatic COVID-19 within 28 days of randomization.

The 1,505 participants had a mean age of 42.9 years, 45.9% were male, 9.3% were Black, and 30.5% had any Centers for Disease and Prevention (CDC)-defined risk factor for severe COVID-19. Symptomatic COVID-19 developed in 1.5% (11) of the participants in the active arm and 7.8% (59) of participants in the placebo arm (relative risk reduction 81.4%,  $p < 0.001$ ). Symptomatic or asymptomatic SARS-CoV-2 infection occurred among 4.8% of the active arm participants and 14.2% of placebo arm participants. Adverse events were similar between groups.

**Outpatient administration for post-exposure prophylaxis:** Per the [FDA's July 30, 2021, EUA](#) REGEN-COV (casirivimab and imdevimab co-formulated or as individual vials of medication) is authorized for use as post-exposure prophylaxis for adults and pediatric patients over age 12 years who weigh at least 40 kg and meet the following criteria:

- Not fully vaccinated *or* not expected to mount an adequate immune response to complete vaccination *and*
- Exposed to a close contact infected with SARS-CoV-2 (i.e., [being within 6 feet for 15 or more minutes over 24 hours to someone diagnosed with COVID-19](#)) *or*
- At high risk of exposure due to known cases in the same institutional setting (e.g., nursing homes or prisons) *and*
- Are at high risk for developing severe COVID-19 due to the following medical conditions or factors:
  - Age  $\geq 65$  years
  - Obesity or being overweight (BMI  $> 25$ )
  - Pregnancy
  - Chronic kidney disease (chronic eGFR  $< 60$  ml/min)
  - Diabetes
  - Immunosuppressive disease or immunosuppressive treatment
  - Cardiovascular disease or hypertension
  - Chronic lung disease
  - Sickle cell disease
  - Smoking, current or former
  - Substance use disorder
  - Down syndrome
  - Cancer
  - Liver disease
  - Neurodevelopmental disorders
  - Having a tracheostomy, gastrostomy, or positive pressure ventilation dependence
  - Other medical conditions or factors that may increase the risk for severe COVID-19 (e.g., race or ethnicity)

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<sup>1</sup> O'Brien MP, Forleo-Neto E, Musser BJ, et al. Subcutaneous REGEN-COV Antibody Combination to Prevent Covid-19. *N Engl J Med.* 2021 Aug 4. Epub ahead of print. [PMID: 34347950.](#)

**Dosing and administration:** Casirivimab 600 mg and imdevimab 600 mg may be administered once via subcutaneous (SQ) injection or intravenous (IV) infusion. A coformulated preparation or separate vials of the 2 medications may be used for SQ injection; the 2 drugs should be combined for IV infusion.

Repeat administration is appropriate for patients who remain at high risk of ongoing exposure and are not expected to mount an adequate immune response to vaccination. The repeat dosing schedule is casirivimab 300 mg and imdevimab 300 mg every 4 weeks (following the initial dose of casirivimab 600 mg and imdevimab 600 mg) until the risk of ongoing exposure declines sufficiently. Post-exposure prophylaxis with REGEN-COV is not intended as a substitute for vaccination against COVID-19.

Administration, whether through IV infusion or SQ injection, must be performed in a staffed setting that is equipped to monitor patients for 1 hour post-infusion and manage severe infusion reactions, such as anaphylaxis.

**Current JHMI availability:** At this time, availability at JHMI for post-exposure prophylaxis is limited, and priority at these sites may be given to the treatment of known COVID-19 positive non-hospitalized patients at high risk for severe COVID-19. Sites for administration include the JHH ED, BVMC ED and the JHH Oncology Center for current oncology patients, and Hopkins Home Care (contact [pq-infusion-intake@lists.johnshopkins.edu](mailto:pq-infusion-intake@lists.johnshopkins.edu)).

**Availability outside of the Hopkins Health System:** As soon as it is available, a complete listing of sites in the region for PEP (and treatment with monoclonal antibodies) will be added. Also, see [Maryland Referral Form: Ambulatory Monoclonal Antibody Infusion Treatment for COVID-19](#) referral information and locations (listed on page 3).

### III. Development of This Guidance

**Process:** Paul Auwaerter, MD, Clinical Director of Johns Hopkins Medicine Division of Infectious Diseases, convened a working group of Johns Hopkins clinical experts in infectious diseases, pulmonary and critical care medicine, clinical pharmacology, and pharmacy to review and weigh the available evidence regarding treatment of COVID-19.

#### Box 2: COVID-19 Pharmacologic Treatment Guidance Writing Group

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**Box 2: COVID-19 Pharmacologic Treatment Guidance Writing Group**

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From the larger working group, a smaller writing group was convened to develop guidance. The group meets regularly by conference call to define the evolving scope of the guidance, review evidence as it becomes available, review draft documents, and ensure consensus.

**Guiding principle:** Guidance is based on expert opinion, and when available, randomized, controlled clinical trials. The body of available clinical data is expanding rapidly, and randomized clinical trials with strong study design and adequate sample size are considered the best possible source of data on which to base specific recommendations. The writing group is committed to updating guidance regularly as new evidence or experience is available.

**Ongoing updates:** New information and experience are reviewed regularly, and the guidance is updated as needed. The JHHS community should feel free to provide comments to [C19Workgrp@jhu.edu](mailto:C19Workgrp@jhu.edu).

**Clinical trial participation:** The writing group strongly recommends that patients who meet inclusion criteria participate in [clinical trials](#) when possible. See [Johns Hopkins Institute for Clinical and Translational Research: Current Approved Therapeutic Protocols for COVID-19](#)