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# Policy Update: Centers for Disease Control and Prevention Isolation Directives for Patients Exposed to Severe Acute Respiratory Syndrome Coronavirus 2

Christopher W. Blackwell

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#### ABSTRACT

The Centers for Disease Control and Prevention recently updated its recommendations on isolation procedures for patients exposed to severe acute respiratory syndrome coronavirus 2. Updated directives are based on symptoms and febrile status. Specifically, patients should remain at home and avoid others until their symptoms are overall improving and they have been afebrile for at least 24 hours without use of antipyretics. After isolating, additional precautions should be observed for 5 days. Further considerations may be necessary for higher-risk patient populations.

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This is a short policy brief update that supplements a recent 2024 article published by Blackwell in *The Journal for Nurse Practitioners*. In March 2024, the Centers for Disease Control and Prevention (CDC) significantly altered its directives related to isolation of individuals exposed to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Prior direction from the organization supported a minimum isolation period of 5 days plus a period of precautions after isolation. However, updated CDC directives are based on patients' symptoms and febrile statuses. The CDC supported this modification because of the correlation between symptoms and viral shedding. As an infected person's symptoms (particularly fever) lessen, they are less likely to communicate the virus to others.<sup>2</sup>

The organization also rationalized its shift in direction as secondary to the health impacts of coronavirus disease 2019 (COVID-19) being similar to other respiratory virus-related diseases. Examples of other respiratory viruses with health impacts analogous to SARS-CoV-2 include influenza and respiratory syncytial virus (RSV).<sup>2</sup> Influenza, RSV, and SARS-CoV-2 share common characteristics, such as transmission routes, symptoms, and seasonal variation (with increased incidence in the fall and winter seasons). They also share common methods of communication prevention, including vaccination.<sup>2</sup> Although RSV and influenza can also carry long-term health sequelae, the prevalence and changing incidence of long COVID (Table)<sup>3</sup> makes infection with SARS-CoV-2 distinct.<sup>2</sup>

Other evidence provided by the CDC for justification in the change in policy included vaccinations reducing the risk of severe disease by 50% (>95% of hospitalized adults were out of date on

vaccination as of the Fall 2023), the wider availability of effective treatment (nirmatrelvir/ritonavir [Paxlovid, Pfizer] reduces the risk of hospitalization due to COVID-19 by >50% and risk of death by 75%), population immunity (98% of the United States population carries some protective immunity from vaccination, prior infection, or both), and fewer people becoming seriously ill, dying, or having long COVID.<sup>2</sup> The updated guidelines apply to community settings, including prisons and schools, but they do not apply to health care settings. Although beyond the scope of this brief policy update, additional information related to guidance for health care settings is available from the CDC.<sup>4</sup>

### **Updated CDC Directives For Community Settings**

Research suggests the mean pooled incubation period of SARS-CoV-2 is 6.57 days.<sup>5</sup> Although some patients remain asymptomatic carriers and can be unknown spreaders of SARS-CoV-2, <sup>6</sup> these data indicate that after most patients are exposed, symptoms of COVID-19 disease will develop within 1 week. Symptoms of COVID-19 disease include fever, chills, cough, dyspnea/shortness of breath, fatigue, myalgias, headache, anosmia, taste perversion, odynophagia, sinus congestion, rhinorrhea, nausea/vomiting, and diarrhea.<sup>7</sup> Current CDC directives support patients remaining at home until these symptoms begin improving. <sup>8</sup> Improvement means that:

A person is starting to feel better, and the body is returning to normal after an infection. Symptoms can be used as simple indicators to help people make decisions about prevention

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**Table**Long COVID: Definition, Clinical Background, and Symptoms<sup>3</sup>

- Long COVID definition:
- o Signs, symptoms, and conditions that continue after acute infection with SARS-CoV-2
- Clinical background:
  - o Can last weeks, months, or years
  - o Unvaccinated persons may be at higher risk for development of long COVID
  - o Each episode of acute infection or reinfection with SARS-CoV-2 is accompanied by risk of development of long COVID
  - o Some patients with long COVID have no knowledge of prior infection
  - o At least 4 weeks after infection is the initiation point where Long COVID can first be identified
- Symptoms:
  - o General
    - Fatiguability that interrupts daily living
    - Postexertional malaise
    - Postexertional malaise (eg, worsening symptoms after physical or mental exertion)
    - Fever
  - o Pulmonary and cardiac
    - Shortness of breath
    - Dyspnea on exertion
    - Cough
    - Chest pain
    - Tachycardia and/or palpitations
  - o Neurologic:
    - Cognitive impairment (difficulty in concentrating or thinking, "brain fog")
    - Headache
  - Disordered sleeping
  - Orthostatic dizziness
  - Paresthesia
  - Anosmia or taste/smell perversion
  - Anxiety or depression
  - o Gastrointestinal:
    - Diarrhea
  - Functional dyspepsia (stomachache)
  - o Miscellaneous:
    - Arthralgias or myalgias
    - Rash
    - Alterations in menstruation

 $COVID = coronavirus \ disease; \ SARS-CoV2 = severe \ acute \ respiratory \ syndrome \ coronavirus \ 2.$ 

strategies, such as how long to stay home or when to return to work or school. A respiratory virus infection can have many types of symptoms, some of which can last beyond when someone is infectious, such as a lingering cough. So having a single symptom or a combination of symptoms is not as important as the overall sense of feeling better and the ability to resume activities.<sup>2</sup> (section 8)

Fever has been identified as a major determinant of degree of communicability of SARS-CoV-2.<sup>2,9</sup> Consequently, in addition to showing symptomatic improvement, patients must also be afebrile for at least 24 hours without the use of antipyretics.<sup>2</sup> Patients with symptomatic improvement that remain afebrile for >24 hours can be counseled to return to normal activities while taking additional precautions for an additional 5 days. These precautions include exposure to cleaner air,<sup>10</sup> maintaining strict hygiene practices,<sup>11</sup> wearing masks,<sup>12</sup> physical distancing,<sup>13</sup> and testing when planning to be around others indoors.<sup>14</sup>

Nurse practitioners and other clinicians may need to contemplate additional considerations for high-risk populations.<sup>2</sup> These individuals include older adults, <sup>15</sup> young children, <sup>16</sup> those who are immunocompromised, <sup>17</sup> or with disabilities, <sup>18</sup> and pregnant women. <sup>19</sup>

#### Conclusion

Recent changes in isolation guidelines from the CDC specify that patients should remain at home and avoid others until their overall symptoms are improving *and* they have been afebrile for at least 24 hours, without the use of antipyretics.<sup>2</sup> Patients should take

additional precautions for 5 days after isolating, including exposing themselves to cleaner air, maintaining strict hygiene practices, wearing masks, physical distancing, and testing when planning to be around others indoors. <sup>10-14</sup> Additional considerations may be necessary for high-risk groups, including older adults, young children, those who are immunocompromised or with disabilities, and pregnant women. <sup>15-19</sup> Nurse practitioners and other clinicians should stay abreast of the dynamic nature of SARS-CoV-2 infection and resultant COVID-19 disease. These providers need to be resilient and to appreciate evolving prevention and care strategies and the interrelated impacts SARS-CoV-2 infection and resultant COVID-19 disease have on public health.

## **CRediT authorship contribution statement**

**Christopher W. Blackwell:** Writing — review & editing, Writing — original draft, Methodology, Investigation, Formal analysis, Conceptualization.

#### **Declaration of competing interest**

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#### References

- Blackwell C. Application of the Centers for Disease Control and Prevention's isolation directives for patients exposed to severe acute respiratory syndrome coronavirus 2. J Nurse Pract. 2024;20:1-4. https://doi.org/10.1016/ i.npra.2024.104962
- Centers for Disease Control and Prevention. Respiratory Virus Guidance Update FAQs. Updated March 25, 2024. Accessed April 1, 2024. https://www.cdc.gov/respiratory-viruses/guidance/faq.html
- Centers for Disease Control and Prevention. Long COVID or Post-COVID Conditions. Updated on March 14, 2024. Accessed May 13, 2024. https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects/index.html
- Centers for Disease Control and Prevention. Interim Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic. Updated March 18, 2024. Accessed April 1, 2024. https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html
- Wu Y, Liangyu K, Guo Z. Incubation period of COVID-19 caused by unique SARS-CoV-2 strains. JAMA Netw Open. 2022;5(8):e2228008. https://doi.org/ 10.1001/jamanetworkopen.2022.28008
- Syngtan G, Bista S, Dawadi P, et al. Asymptomatic carriers SARS-CoV-2 carriers: a systematic review and meta-analysis. Front Public Health. 2020;8:1-10. https://doi.org/10.3389/fpubh.2020.587374
- Centers for Disease Control and Prevention. Symptoms of COVID-19. Updated March 15, 2024. Accessed April 11, 2024. https://www.cdc.gov/coronavirus/ 2019-ncov/symptoms-testing/symptoms.html
- Centers for Disease Control and Prevention. Preventing Spread of Respiratory Viruses When You're Sick. Updated March 1, 2024. Accessed April 11, 2024. https://www.cdc.gov/respiratory-viruses/prevention/precautions-when-sick.html
- Goldberg SA, Lu S, Garcia-Knight M, et al. Viral determinants of acute COVID-19 symptoms in a nonhospitalized adult population in the pre-Omicron era. Open Forum Infect Dis. 2023;10(8):1-8. https://doi.org/10.1093/ofid/ofad396
- Centers for Disease Control and Prevention. Taking Steps for Cleaner Air for Respiratory Virus Prevention. Updated on March 1, 2024. Accessed April 11, 2024. https://www.cdc.gov/respiratory-viruses/prevention/air-quality.html

- 11. Centers for Disease Control and Prevention. Hygiene and Respiratory Virus Prevention. Updated on March 1, 2024. Accessed April 11, 2024. https://www.cdc.gov/respiratory-viruses/prevention/hygiene.html
- Centers for Disease Control and Prevention. Masks and Respiratory Viruses Prevention. Updated on March 1, 2024. Accessed April 11, 2024. https://www.cdc.gov/respiratory-viruses/prevention/masks.html
- Centers for Disease Control and Prevention. About Physical Distancing and Respiratory Viruses. Updated on March 1, 2024. Accessed April 11, 2024. https://www.cdc.gov/respiratory-viruses/prevention/physical-distancing.html
- Centers for Disease Control and Prevention. Testing and Respiratory Viruses. Updated on March 1, 2024. Accessed April 11, 2024. https://www.cdc.gov/respiratory-viruses/prevention/testing.html
- Centers for Disease Control and Prevention. Respiratory Viruses and Older Adults. Updated on March 1, 2024. Accessed April 11, 2024. https://www.cdc.gov/respiratory-viruses/risk-factors/older-adults.html
- Centers for Disease Control and Prevention. Respiratory Viruses and Young Children. Updated on March 1, 2024. Accessed April 11, 2024. https://www. cdc.gov/respiratory-viruses/risk-factors/young-children.html
- Centers for Disease Control and Prevention. Respiratory Viruses and People With Weakened Immune Systems. Updated on March 1, 2024. Accessed April 11, 2024. https://www.cdc.gov/respiratory-viruses/risk-factors/weakenedimmune-systems.html
- Centers for Disease Control and Prevention. Respiratory Viruses and People With Disabilities. Updated on March 1, 2024. Accessed April 11, 2024. https://www.cdc.gov/respiratory-viruses/risk-factors/people-with-disabilities. html
- Centers for Disease Control and Prevention. Respiratory Viruses and Pregnancy. Updated on March 1, 2024. Accessed April 11, 2024. https://www.cdc. gov/respiratory-viruses/risk-factors/pregnant-people.html

Christopher W. Blackwell, PhD, APRN, ANP-BC, AGACNP-BC, CNE, FAANP, FAAN, is an associate professor and director of Adult-Gerontology Acute Care Nurse Practitioner Programs, Academic Health Sciences Center, College of Nursing, University of Central Florida, Orlando, and can be contacted at <a href="mailto:christopher.blackwell@ucf.edu">christopher.blackwell@ucf.edu</a>.