

### THREE CURRENT HOPKINS CITATIONS DOWNLOADED

1. **AT-HOME TEST KITS** On April 19, Abbott announced that its BinaxNOW rapid antigen at-home test kit is available for purchase in the US. The test is available without a prescription and provides results in approximately 15 minutes. Initially, the test kits will be available through national chain pharmacies, including CVS, Walgreens, and Walmart. At less than US\$25 per kit—which includes 2 tests—they are likely still too expensive for routine daily testing. Over-the-counter (i.e., non-prescription) test kits provide a widely accessible at-home test that can be kept on hand or potentially obtained quickly for a variety of purposes, such as after an exposure to a known COVID-19 case or prior to travel. Abbott’s announcement indicates that it aims to produce “tens of millions” of tests per month, with the potential to increase capacity beyond that point, if necessary. The test kit received an Emergency Use Authorization from the US FDA in March 2021 for use in both symptomatic and asymptomatic individuals as young as 2 years old.
2. **BREAKTHROUGH INFECTIONS** With vaccination rates continuing to climb in the United States, many who are vaccinated are beginning to engage in more activities that could increase their exposure to SARS-CoV-2 infection. While the vaccines available under US FDA Emergency Use Authorizations are effective, there is still a chance that vaccinated persons can become infected with SARS-CoV-2. These “breakthrough” infections are considered rare events, with the CDC on April 19 reporting fewer than 6,000 cases out of 84 million vaccinated persons. The agency continues to monitor reports of breakthrough cases and launched a website with information for public health departments and laboratories to investigate and report such cases. The agency is monitoring the age, sex, type of vaccine, and underlying conditions from breakthrough cases, but no pattern among cases has been identified. When possible, monitoring also includes genomic sequencing to identify which virus lineage caused the infection.
3. **ROUTES OF TRANSMISSION** Scientific evidence increasingly supports the theory that the primary mode of SARS-CoV-2 transmission is through airborne infectious aerosols passed from person-to-person, according to some researchers. In three separate pieces published last week, experts outlined reasoning and evidence supporting SARS-CoV-2 transmission from both near-field and far-field aerosols. In a commentary published April 15 in *The Lancet*, researchers from the UK, US, and Canada present 10 reasons backing airborne transmission. In another piece published online in *JAMA* on April 16, experts from Harvard University and the University of Michigan describe the rationale for improving air circulation and filtration in indoor spaces to reduce far-field transmission of SARS-CoV-2 and other respiratory infectious diseases. While noting that airborne viral particles are a significant route of SARS-CoV-2 transmission and calling for improved air ventilation in indoor spaces, experts from the UK, US, and China in an editorial published April 14 in *The BMJ* also underline the significance of mask quality and fit.
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5. These pieces appeal to the public health community to take action to help improve indoor air quality, ventilation, and filtration, through policy and structural changes, particularly in healthcare, work, and educational settings. Such efforts could help reduce the number of COVID-19 cases as well as other airborne infectious diseases. The commentaries could be viewed as rebuttal to a systematic review funded by the WHO and published last month that says there is inconclusive evidence for airborne transmission. On April 19, a US CDC official said during a telephone briefing that the CDC has determined the risk of SARS-CoV-2 transmission via surfaces is low and secondary to transmission through direct contact with droplets and aerosolized particles. In light of the evidence, the CDC has updated its guidance for cleaning and disinfecting surfaces in community settings.