Ensuring Widespread and Equitable Access to Treatments for COVID-19

As the COVID-19 pandemic has evolved into its third year, it is important to assess the medical interventions and public health approaches that have been developed. Given the potential effects of waning immunity, low vaccine booster uptake, the significant proportion of people in the US who remain unvaccinated, and the potential emergence of new variants, a defining measure of this current phase of the pandemic will be the ability to deliver outpatient treatments to prevent serious illness and death. New outpatient therapeutics, notably the oral antivirals, are highly effective.

The EPIC-HR trial (Evaluation of Protease Inhibition for Covid-19 in High-Risk Patients) included 2246 adults at higher risk for severe disease with no prior immunity (ie, unvaccinated and no prior infection) and with mild to moderate COVID-19 symptoms who received nirmatrelvir plus ritonavir (Paxlovid) or placebo. The final analysis of 1379 patients who received treatment within 3 days of symptom onset showed that the incidence of COVID-19–related hospitalization or death by day 28 was lower in the nirmatrelvir plus ritonavir group than in the placebo group (incidence of 0.72% vs 6.53%; relative risk reduction, 88.9%)\(^1\); the data also suggested that for every 18 people who were treated with nirmatrelvir plus ritonavir, one hospitalization was prevented. A study by Najjar-Debbiny et al\(^2\) that included 4737 high-risk outpatients in Israel who received nirmatrelvir plus ritonavir during the circulation of the Omicron variants found that use of nirmatrelvir plus ritonavir, compared with no use, was associated with a significantly reduced risk of the composite outcome of severe COVID-19 or mortality (crude incidence rate of 5.6 vs 10.4 per 1000 person-months, respectively; adjusted hazard ratio, 0.54 [95% CI, 0.39-0.75]).

Despite these benefits, there have been many systemic obstacles to accessing outpatient treatments, including lack of public awareness, insufficient clinician education, limited well-defined pathways for clinical evaluation prior to treatment, and logistical challenges in dispensing the medications in the US. Surmounting these obstacles is especially critical given the racial and socioeconomic inequities in hospitalizations that have become apparent throughout the COVID-19 pandemic\(^3,4\). Experience with a comprehensive approach to outpatient COVID-19 treatment in New York City may provide lessons that could help other jurisdictions formulate their own treatment strategies.

As of July 1, 2022, more than 82,700 individuals in New York City have been treated with nirmatrelvir plus ritonavir, with a use rate of 977 courses per 100,000 population vs the US rate of 653 per 100,000 population.\(^5\) Despite an exponential increase in COVID-19 cases in New York City during the latest Omicron waves, the percentage of individuals hospitalized for COVID-19 and, especially, admitted to the intensive care unit subsequently decreased compared with prior waves. Importantly, a trend emerged whereby a smaller proportion of hospitalized patients with COVID-19 were in the intensive care unit in the most recent wave driven by BA.2. During May 2022, the 49 New York City hospitals had an average daily total census of 696 patients with COVID-19 vs an average daily total census of 5208 patients during the first Omicron wave in January 2022 and 782 patients during the Delta wave in September 2021; the corresponding average daily total census of patients with COVID-19 in intensive care units during those times was 76, 680, and 190, respectively.\(^6\) This decrease in hospitalizations and intensive care unit admissions was accomplished, in part, by having established a citywide comprehensive system to facilitate testing and rapid access to treatment, especially oral antiviral medications (eFigure in the Supplement). During these testing and vaccination campaigns, the keys to solving distribution have been ensuring access, awareness, and acceptance.

Access begins by ensuring broadly available, barrier-free COVID-19 testing. No-cost polymerase chain reaction testing has been widespread in New York City and available to everyone regardless of risk or exposure since June 2020, with more recent and substantial investment in at-home test distribution. As of July 1, 2022, more than 35 million tests have been distributed through more than 850 community-based organizations and houses of worship, as well as cultural institutions, libraries, and schools. Once a person tests positive for COVID-19, they must have easy access to a clinician who can conduct a clinical evaluation, assess for eligibility, and prescribe the appropriate treatment. Although it is preferred that patients see their own primary care clinician, this has proven to be a challenge across the US, especially in areas with health care workforce shortages and higher rates of uninsured or underinsured people.
with limited access to routine care. Through the New York City public health care system, a virtual urgent care service was created for all New Yorkers that can be accessed from the main New York City COVID-19 telephone hotline. This service helps ensure access to a clinician, either through a phone consultation or telehealth visit, 24 hours per day and 7 days per week with no out-of-pocket costs. As a result, this service has been an essential resource; 12% of the New Yorkers who have received COVID-19 antiviral prescriptions to date were served through this program.

To ensure equitable distribution of oral antivirals and given that the efficacy of these medications depends on administration as soon as possible after symptom onset, a system for home delivery was developed for these medications that were initially in short supply. New York City partnered with an online pharmacy to coordinate same- or next-day home delivery of oral antivirals to any New York City address at no cost to the patient. In a phased approach, additional local pharmacies have been enrolled as supplies have allowed, supplementing federal therapeutics programs. Through this approach, New York City residents can readily access oral treatment either through home delivery or from a local pharmacy, regardless of their ability to pay. Home delivery is also essential in ensuring that people who test positive can stay home and avoid further potential transmission to others while riding the subway or bus or in crowded health care settings. Through June 2022, 46% (38 400 courses) of the distributed doses of nirmatrelvir plus ritonavir was delivered through this service, reaching 99.4% of residential zip codes; 33% of the courses delivered were for New Yorkers aged 65 years or older.

In late June 2022, a new place-based approach was launched to further help address the persistent inequities that have persisted in accessing oral antiviral treatment.7 New York City established the first mobile Test to Treat program in which rapid testing, clinical evaluation, and instant access to oral antivirals can be done in one place using a fleet of 30 mobile units that will be positioned in disproportionately affected neighborhoods.8 Expanding access in this way could enable people with limited technological proficiency, a lack of knowledge about treatment, or with other miscellaneous barriers to better access oral antivirals. The goal (by connecting people with positive home tests to the COVID-19 hotline for treatment, including delivery and the Test to Treat program) is to offer a variety of ways to access timely treatment to enhance equity.

Several lessons have been learned from the outpatient COVID-19 treatment rollout in New York City. First, access is especially important for early adoption of new therapeutics. However, as with testing and vaccines, the difficult next step is ensuring clinician and patient awareness about the treatments and engaging the many individuals with hesitation about treatment safety and efficacy. To achieve equity and success in treatment uptake, it is not enough to only provide access to care and medication across a range of communities; it is crucial to also facilitate widespread acceptance. Some approaches to address these issues have included direct work with community-based organizations and other trusted messengers; use of extensive print, billboard, and social media campaigns8; and placement of outbounding calls by nurses to COVID-19–positive individuals aged 65 years or older with direct connection to a telemedicine consultation for patients interested in receiving treatment.

Second, improved data sharing and mandatory reporting are important for ensuring that therapeutics are reaching communities with the greatest need. Data sharing and reporting should be a US requirement for pharmacies and clinicians and health centers that receive medications through the federal COVID-19 therapeutics program as they are for pharmacies participating in the vaccines program. Better collection of race and ethnicity and other sociodemographic data are essential to ensuring equitable access to therapeutics and other essential resources and services to address health disparities.10

Third, because this will not be the last wave of COVID-19, outpatient treatment will continue to be a defining issue of this transitional phase of the pandemic. The primary goals in managing COVID-19 until the advent of treatment had been preventing severe disease through population-wide prevention strategies including masking, physical distancing, isolation, and vaccination. Now, the focus must expand to using treatment as a tool to advance equity and reduce the effect of COVID-19 on population health by reducing severe disease leading to hospitalizations and death.

To maintain continued focus on access and equity moving forward, sustained federal funding is needed that covers COVID-19-related services and treatments for uninsured and underinsured individuals. Federal support for these and similar lifesaving programs should be classified as an essential public good, a key to greater health equity and protecting the public’s health, and an investment in the future.