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COMMENTARY

Slowed progression: The utility of Test to Treat initiatives in improving the neglected inequities of COVID-19 among racially/ethnically minoritized groups

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ABSTRACT

In the United States, coronavirus disease 2019 (COVID-19) has resulted in more than 95 million infections and 1 million deaths (as of September 2022), with individuals of racially/ethnically minoritized groups being disproportionately represented among these numbers. Despite the apparent pandemic fatigue in many communities, systemic and structural racism continue to place racially/ethnically minoritized groups at a disadvantage for overcoming the virus, especially as it relates to receiving vaccinations and COVID-19 targeted therapeutics. Test to Treat programs have the potential to mitigate these disparities by rapidly identifying the presence of a COVID-19 infection and readily offering treatment options. Nonetheless, Test to Treat programs must be optimized to adequately address the limitations to care within racially/ethnically minoritized communities.

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Since its declaration as a pandemic in March 2020, coronavirus disease 2019 (COVID-19) has resulted in more than 95 million infections and more than 1 million deaths in the United States as of September 2022.¹ Although the urgency of the pandemic seems to have subsided in many communities, racially/ethnically minoritized individuals have consistently been, and continue to be, disproportionately affected by COVID-19 with the risk of death being twice as likely compared with their white counterparts.^{1–3} Moreover, the rapid dissemination of highly virulent COVID-19 variant strains has further exposed the persistent disparities in COVID-19 mortality and morbidity rates across racially/ethnically minoritized groups.² Existing COVID-19 vaccines are poised to alter these inequities; however, health care mistrust and

resultant vaccine hesitancy are prevalent among racially/ethnically minoritized individuals owing to decades of mistreatment by the U.S. health care system.^{4–6} Furthermore, structural racism resulting in systemic barriers limits the accessibility of vaccinations within vulnerable minoritized communities.⁷ Collectively, these factors have contributed to lower vaccination rates across minoritized groups than their white counterparts.⁸

With increased infection rates resulting in severe illness and continued low vaccination uptake, the provision of alternative COVID-19 treatment options could improve the negative and disproportionate outcomes observed within minoritized communities throughout the pandemic. Thus, Test to Treat programs (as rolled out in March 2022), which allow for rapid detection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and expedite the availability of novel COVID-19 directed oral therapeutics for infected patients, are critical for decreasing infection and death rates within minoritized communities.^{3,9} Herein, we discuss the continued disparate COVID-19 outcomes present across minoritized groups and the impact of systemic racism on equitable access to COVID-19 therapeutics. Finally, we provide action points for consideration in the modification of Test to Treat programs to promote mitigation of health inequities observed across minoritized groups most notably affected by the COVID-19 pandemic.

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Key Points**Background:**

- Racially/ethnically minoritized individuals have continuously been disproportionately represented amongst COVID-19 related morbidities and mortalities.
- While the availability of COVID-19 vaccines and updated boosters are positioned to reverse the disproportionate impact, there are noted limitations in vaccine uptake across racially/ ethnically minoritized groups.
- Oral antivirals, active against SARs-COV-2 and available through the COVID-19 Test to Treat program, are an additional mechanism to in decreasing the number of COVID-19 related illnesses and deaths within racially/ ethnically minoritized communities.

Findings:

- Despite modifications to the COVID-19 Test to Treat program to include pharmacists as recognized providers, racially/ minoritized individuals are less likely to be recipients of the novel therapeutics.
- Intentional public health messaging, the engagement of the appropriate stakeholders, and advocacy for adequate support and appropriate reimbursement for all prescribing parties are key components in the equitable distribution of the oral antivirals.
- Ultimately, the federal and state governments must be intentional about specifically identifying marginalized individuals who are socially vulnerable and heavily affected by the pandemic now and in the future.

The impact of structural and systemic racism on the neglected inequities

Structural racism and downstream systemic health and social inequities remain the root causes of disparate COVID-19 outcomes.⁷ Minoritized individuals are often more likely to occupy essential worker roles, which places them in vulnerable positions for increased risk of COVID-19 transmission.¹⁰ Furthermore, in part owing to housing segregation, these communities are more likely to live in multigenerational, crowded settings,^{10,11} which creates substantial challenges for these individuals to implement recommendations set forth by the Centers for Disease Control and Prevention (CDC), such as physical distancing and timely quarantine when infected with SARS-CoV-2.^{7,12} These systemic barriers, among others, promote inequitable COVID-19 outcomes and greatly emphasize the reality that these challenges are not one-dimensional, as social identities (e.g., nationality, sexual orientation, religion) intersect and contribute to pronounced disparities between privilege and oppression among groups of people.¹³ Consequently, having one or more marginalized identity does not create a linear impact of burden.¹³ Rather, the burden often becomes

compounded as individuals with multiple marginalized identities navigate social, economic, and political systems nationally and globally.¹³

It is important to not only recognize inequities at the macrolevel of race and ethnicity but to also acknowledge that they exist at the intersections of larger social identity. For instance, Hispanic/Latinx persons not only face challenges amidst the COVID-19 pandemic on the pretext of race/ethnicity but also with nationality and citizenship.¹⁴ This is illuminated by the widespread transmission of COVID-19 within immigrant detention centers, where Hispanic/Latinx individuals are often uniquely targeted by antiimmigration policies.¹⁵ COVID-19 infection rates substantially increased in U.S. immigration centers in 2022, with individuals being severely affected by the rapid transmission of the Omicron variant.¹⁶ In addition, the pandemic has had profound impacts on individuals with disabilities, which is vastly amplified at the intersection of race.¹⁷ Racially/ethnically minoritized groups have the highest rates of disability, and the transition of many medical services to virtual platforms has significantly hindered their ability to receive optimal care.¹⁸⁻²⁰ Furthermore, individuals who identify as part of the lesbian, gay, bisexual, transgender/transsexual, queer/questioning, intersex, and allied/asexual/aromantic/agender (LGBTQIA+) community, especially people with human immunodeficiency virus (HIV), have been shown to be most vulnerable to the pandemic's harms. Persons living with HIV have been shown to have a higher rate of breakthrough COVID-19 infections, and non-Hispanic Black individuals are disproportionately represented among those numbers.^{21,22}

Inequitable access and distribution of COVID-19 vaccines and therapeutics

Although the availability of COVID-19 preventive medications and directed therapeutics are positioned to assist in overcoming the pandemic, inequitable access and allocation continue to place racially/ethnically minoritized individuals at a disadvantage.² Notably, throughout the pandemic, there has been a lower rate of non-Hispanic Black, Hispanic/Latinx, and Native American persons fully vaccinated against COVID-19 than white Americans.⁸ The common need for Internet or telephone access, digital literacy required to register for vaccine appointments, limited vaccination opportunities outside of essential working hours (i.e., 9 AM to 5 PM), and cessation of vaccination sites accessible by mass transit create substantial limitations to vaccine uptake within minoritized communities.³ Several successful strategies have been published describing innovative methods for overcoming these vaccination barriers, including the development of low-barrier vaccination clinics and COVID-19 immunization home visits, led by racially concordant health care workers.^{23,24} Nevertheless, the decline in targeted incentives and outreach in recent months has resulted in a major lull in vaccination rates. This decline is alarming amid the development of extremely transmissible COVID-19 variant strains and the proposed rollout of updated, bivalent COVID-19 booster immunizations.²⁵ To this, racially/ethnically minoritized individuals are less likely to be represented among those who have received the recommended booster doses of the COVID-19 vaccine.^{8,26}

COVID-19 targeted therapeutics, including oral medications PAXLOVID (nirmatrelvir-ritonavir; pfizer, New York, NY) and LAGEVRIO (molnupiravir; Merck and Ridgeback biotherapeutics, Miami, FL), have shown promising activity against the newest COVID-19 Omicron variant, therefore positioning them as an additional mitigating mechanism against severe presentations of the virus,^{2,27} yet, as recent CDC data reveal as of September 2022, individuals from a minoritized racial/ethnic group are not the usual recipients of these agents and are up to 58% less likely to be administered a monoclonal antibody.²⁷ Several state health departments have attempted to establish risk scores that incorporate race/ethnicity to support an equitable infrastructure for the dissemination of these agents.² Unfortunately, these strategies have been met with nationwide pushback, consequently challenging the adaptation and implementation of these efforts.^{2,3}

Addressing the gaps in the federal Test to Treat initiative

In March of 2022, the federal government attempted to rectify the observed inequities in the distribution of the COVID-19 oral therapeutics by establishing a nationwide Test to Treat initiative that allows for the rapid treatment of individuals who test positive for the virus.⁹ Given that the oral therapeutics have a narrow window for optimal efficacy (5 days after onset), prompt detection and subsequent treatment of COVID-19 are imperative within minoritized communities.^{28,29} Nonetheless, the expedited testing and treatment via the initiative were initially limited to federally qualified health centers (FQHCs) that had a physician or advanced practice provider (APP) on-site.⁹ In its original form, the initiative failed to engage pharmacists to assist in the equitable distribution of the therapeutics and relied heavily on the primarily minoritized patient base of FQHCs to address the observed therapeutic inequities, despite their sparse distribution across the country and inaccessibility to the minoritized individuals who would most benefit from their services.³⁰ Although pharmacists have since been granted prescribing authority, barriers to the equitable distribution of the therapeutics remain ever-present.³¹ Despite there being more than 30,000 pharmacies in the United States, more than 40% of U.S. counties are considered pharmacy deserts and these counties majorly comprised racially/ethnically minoritized individuals.³⁰ Interdisciplinary community clinics that take advantage of the unique skillsets of physicians, APPs, and pharmacists to promote dissemination of the therapeutics into these vulnerable areas could potentially address this limitation.³² Nevertheless, the allocation of funding for this service has gone unmentioned in the Test to Treat initiative. In addition, patients must present a positive COVID-19 test before treatment, thus requiring Internet access and transportation to testing sites that are able to rapidly provide a result and subsequent treatment.⁹ These challenges continue to highlight the pronounced widening of the resource gaps within minoritized communities. Furthermore, the course of the oral antivirals is currently available free of charge (nirmatrelvir-ritonavir costs \$530 per course and molnupiravir costs \$700 per course as of September 2022), yet the duration of the coverage of drug costs is unclear.³³ Moreover, this initiative does little to address the multifactorial aspects of

marginalization that exist within minoritized communities. There is an evident lack of foresight to ensure this initiative is applicable to all settings that provide health care to U.S. migrants, the LGBTQIA+ community, and jails and prisons that are heavily populated by minoritized individuals. Consequently, despite modifications to the Test to Treat initiative, it remains ineffectively designed to address the health care disparities that it was set out to resolve.

Actionable recommendations to optimize Test to Treat programs designed to address inequities within racially/ethnically minoritized communities

Pharmacoequity is described by Essien et al.³⁴ and Chalani et al.³⁵ as a goal that ensures that all people have equitable access to the medications needed to maintain their health regardless of individual sociodemographic factors. Therapeutic advances have not resulted in the reversal of inequities noted with COVID-19 infections, hospitalizations, and deaths. Irrespective of the placement of the nationwide Test to Treat program, COVID-19 oral therapies have largely gone unused, especially within high vulnerability zip codes, despite the capacity to provide the therapeutics within these areas.^{36,37} This could be attributed to the fact that there has been little done to effectively change the prioritization of socially vulnerable minoritized individuals as the primary recipients of these therapeutics. Thus, there is a need to re-evaluate the current approach to health equity and pharmacoequity amid the pandemic and beyond. We offer the following recommendations, as shown in Figure 1, for consideration during future modifications of the current Test to Treat program and the curation of similar efforts:

1. Prioritize public health messaging and include necessary stakeholders in federal task forces and initiatives designed to address health inequities in minoritized communities. Communication is integral to the management of infectious disease crises, and poor communication with the public can severely thwart well-intentioned response efforts.³⁸ Therefore, it is essential to position trained experts as the trustworthy messengers to disseminate disease related information.³⁸ This is particularly important for digital media, given that racially/ethnically minoritized individuals are reportedly more like to receive medical information from social media platforms.³⁹ Thus, it is imperative that messaging surrounding the Test to Treat programs, as well as the COVID-19 oral antivirals and their placement as treatment options, be tailored to adequately increase awareness and uptake among racially/ethnically minoritized individuals.

In addition, there is a need for transparency regarding the individuals appointed to the task forces established amid the pandemic, given that the work groups should be composed of all the necessary stakeholders required to ensure health equity. Stakeholders of interest would include physicians (who specialize in treating infectious diseases), pharmacists (who practice in community and inpatient settings), APPs such as nurse practitioners and physician assistants, and racially/ethnically minoritized community leaders. Currently, to the best of our knowledge, the White House Health Equity Task Force does not

Actions to Optimize Test-to-Treat Programs through a Lens of Pharmacoequity



Figure 1. Actions to optimize Test to Treat programs through a lens of pharmacoequity. Pictured in Figure 1 are recommended actions to promote the equitable distribution and uptake of COVID-19 oral therapeutics. Abbreviations used: COVID-19, coronavirus disease 2019; APP, advanced practice provider.

include infectious diseases trained physicians, pharmacists, APPs, or community members who represent each of the heavily affected racially/ethnically minoritized groups.⁴⁰ Including these individuals would offer optimal recommendations and strategies on how to successfully collaborate to close pharmacoequity gaps by guiding the equitable placement of COVID-19 therapeutics within minoritized communities. Moreover, the inclusion of these stakeholders will aid in creating sustainable communication mechanisms to engage racially/ethnically minoritized individuals in relief efforts for the COVID-19 pandemic and future public health emergencies.

2. Provide support and guidance for Medicare and Medicaid reimbursement for pharmacists who prescribe oral antivirals under the Test to Treat program. Although pharmacists have been granted the authority to prescribe the oral antivirals, the lack of reimbursement mechanisms for clinical assessment and counseling of patients is a substantial barrier in their provision of therapeutics, particularly within underserved communities where financial concerns may challenge feasibility.⁴¹ Thus, the Centers for Medicare and Medicaid Services should take immediate action to ensure that coverage for pharmacists' services is authorized under the appropriate insurance coverage mechanisms.⁴¹ It is also essential that nondiscrimination clauses be prioritized for pharmacists given that it is imperative for these clinicians to have the ability to order necessary laboratory tests, especially those that assess renal function, which can affect the safety and effectiveness of oral antiviral therapies.^{28,29} It is worth noting that implementing such a practice would likely require the development of a bidirectional communication tool for pharmacists and other health care providers (physicians, APPs) to rapidly communicate on emergent matters concerning patients treated with the oral antivirals.³ Finally, it is critical that the leadership of community pharmacies provide logistical support and incentive to pharmacists who are tasked with leading Test to Treat

sites. Community pharmacists have assumed many roles as integral members of the health care team during the pandemic. This increase in workload, coupled with the exodus of team members from the pharmacy workforce, may be an additional barrier to providing equitable access to oral COVID-19 therapeutics without proper support and planning from pharmacy leaders.

3. Strategically allocate COVID-19 therapeutics into minoritized communities. Currently, the Test to Treat program does not specifically state that the COVID-19 oral therapeutics will be placed in the most socially vulnerable areas, those defined as vaccine or therapeutic deserts. With growing health care provider shortages within areas of low socioeconomic status (SES), often minoritized communities, the likelihood of racially/ethnically minoritized individuals being the recipients of these therapeutics is dismal.³⁰ Thus, the program must also be specific in providing allocation guidelines of antivirals to target these vulnerable communities.

Notably, various ranking systems have been used by states to assist with the prioritization of COVID-19 testing and vaccination to reduce disparities.⁴² Thus, the indices may have utility in identifying ideal, vulnerable, minoritized communities that would most benefit from the placement of a Test to Treat program. Although the Social Vulnerability Index (SVI), which prioritizes racial/ethnic status, SES, education, employment, household composition, and housing, is commonly referenced and recognized as an appropriate measure of social disadvantage—the inclusion of race can have legal implications.⁴³ The Area Deprivation Index, which is similar to SVI but does not include race/ethnicity variables, can be applied in place of the SVI to uncover the most disadvantaged communities.⁴²

4. Provide federal funding for the continued development and placement of low-barrier mechanisms to equitably distribute COVID-19 therapeutics. In early 2022, the

Department of Human Health Services announced a probable cessation of funding to provide vaccinations at no cost to individuals who are uninsured.⁴⁴ The elimination of this program will inevitably have the most impact on individuals with low SES given that these individuals are the most likely to be uninsured, which is likely to target racially/ethnically minoritized communities by proxy.^{45,46} The federal government must ensure opportunities for racially/ethnically minoritized individuals to receive access to the novel COVID-19 oral therapies, given that these agents may be their only means of recovering from COVID-19. The development and placement of easily accessible community mobile/pop-up vaccination clinics may serve as a framework on how to effectively execute and ensure prompt access to antivirals.^{5,23} As shown with the COVID-19 vaccinations, the provision of education to advance health literacy and inform the community about the safety and efficacy of the therapeutics—provided in tandem with the clinics—may also increase the number of minoritized recipients. These low-barrier, easily accessible models for distributing COVID-19 therapeutics should also plan for mass transit needs and the digital gap that may hinder preregistration for testing and treatment. Leveraging relationships and partnerships between health professionals and faith and community leaders may help overcome the mentioned barriers to addressing COVID-19 therapeutics inequities within minoritized communities.²³

Conclusion

It is imperative to maintain a level of urgency around the often-neglected intersections of inequity that continue to exist among minoritized communities amid the pandemic. On an individual level, we must prioritize exploring how social determinants of health affect our patients. On a collective level, we must work to optimize programs designed to promote health equity. The Test to Treat program has the potential to ameliorate the inequities observed across minoritized groups. Intentional public health messaging, the engagement of the appropriate stakeholders, and advocacy for adequate support and appropriate reimbursement for all prescribing parties are of the utmost importance. Furthermore, the federal and state governments must be intentional about specifically identifying marginalized individuals who are socially vulnerable and heavily affected by the pandemic now and in the future given that the short- and long-term sequelae of COVID have the potential to adversely affect these communities the most.^{47,48} Finally, there must be a continued prioritization of funding and intention in developing low-barrier mechanisms to increase equitable access to and design of Test to Treat programs. It is imperative that we, as a country and as health professionals, continue to place pharmacoequity at the forefront of our efforts to overcome the COVID-19 pandemic.

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