Ohio's COVID-19 Populations Needs Assessment

Minimizing the Disparate Impact of the Pandemic and Building Foundations for Health Equity



This document contains excerpts from the full report, which can be found here: <u>https://go.osu.edu/inequitable-burdens-covid-19</u>



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Findings Relevant to the CDC's Public Health Strategies to Combat COVID-19

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Findings Relevant to the CDC's Public Health Strategies to Combat COVID-19

Introduction: The Continuum of Public Health Strategies to Minimize the Effects of COVID-19 on Ohio's Populations

The Centers for Disease Control and Prevention (CDC), along with the World Health Organization (WHO) and other public health agencies, recommend a set of evidencebased practices to protect individual and populations from COVID-19. These eight core strategies include social distancing, mask wearing and the use of personal protective equipment (PPE), a set of hygiene practices, COVID-19 testing, contact tracing, isolation of diagnosed individuals, self-quarantine of exposed individuals, and healthcare access as needed.

Hygiene (Topic A)

Basic hygiene practices are commonly recommended to prevent the spread of many infectious diseases. These practices include washing hands with soap and water for a minimum of 20 seconds, disinfecting frequently touched surfaces such as doorknobs, phones, or tables, and covering one's coughs and sneezes. The CDC recommends each of these practices to aid in preventing the spread of COVID-19 (CDC, 2020f). Numerous studies have demonstrated that individuals infected with COVID-19 can contaminate surfaces and objects. It has also been shown that COVID-19 can survive on surfaces and objects for differing periods of

time, ranging from hours to days depending on the type of surface (Chia et al., 2020; Guo et al., 2020; Ong et al., 2020; Pastorino et al., 2020; Zhou et al., 2020). Indirect transmission of COVID-19 can occur by touching surfaces or objects that have been contaminated, and then touching one's mouth, nose, or eyes. Hygiene practices such as hand washing and disinfecting frequently touched surfaces therefore constitute important approaches for limiting indirect transmission of COVID-19.

Social Distancing (Topic B)

The most common mechanism of COVID-19 transmission is airborne spread of the respiratory droplets of an infected person. Respiratory droplets are produced when an infected person coughs, sneezes, or talks (Chan et al., 2020; Ghinai et al., 2020; Hamner et al., 2020; Liu et al., 2020; Pung et al., 2020). These droplets can be inhaled or land in the mouths or noses of others. Respiratory droplets can also land on objects, surfaces, or hands around an infected person, and picked up by others who can then become infected when they touch their own eyes, nose, or mouth. Many studies have also demonstrated that infected individuals can infect others before they show symptoms themselves (Arons et al., 2020; Furukawa et al., 2020; Jang et al., 2020; Kimball et al., 2020; Tong et al., 2020; Wei et al., 2020).

Social distancing is therefore a critical strategy in preventing the spread of COVID-19. The CDC recommends that people stay at least 6 feet away from others who do not live in the same household, both indoors and outside (CDC, 2020d). Limiting close contact with others reduces the chances of contracting COVID-19 via contact with both respiratory droplets from infected individuals and contaminated surfaces and objects. The strategy of social distancing has been utilized since long before the COVID-19 pandemic, including during the Spanish Flu of 1918 and during the 2003 SARS outbreak (Bell, 2004; Tomes, 2010). Social distancing measures are also one of the CDC's community mitigation guidelines for the prevention of pandemic influenza (Qualls et al., 2017).

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Mask-Wearing and Personal Protective Equipment (PPE) (Topic C)

Public health authorities recommend that all members of the general population wear cloth face coverings in public settings and when around people who do not live within their household. This is especially recommended when social distancing strategies cannot be maintained (CDC, 2020e). There is growing evidence that cloth face coverings can effectively prevent the spread of COVID-19 by creating a barrier that blocks respiratory droplets from an infected person so they do not travel into the air (Aydin et al., 2020; Davies et al., 2013; Howard et al., 2020; Konda et al., 2020; Leung et al., 2020; Ma et al., 2020). Because we now know that COVID-19 can be spread by those who are pre-symptomatic or asymptomatic, it is important for all people to wear face coverings.

The evidence that wearing masks is effective in preventing the spread of COVID-19 has also been supported by reports of cases where symptomatic individuals wearing face coverings did not infect individuals with whom they came into close contact. In one case an asymptomatic but infected man wearing a mask took a 15-hour flight, and all 25 people who sat closest to him subsequently tested negative (Schwartz et al., 2020). In another case, two hair stylists had close contact with 140 clients while showing symptoms of COVID-19; these hair stylists wore masks and none of their clients tested positive (Frankel, 2020). In addition to this evidence, one study found that the COVID-19 growth rate slowed after states implemented a mask mandate (Lyu & Wehby, 2020), and another found that countries with cultural norms or government policies favoring mask wearing had lower death rates (Leffler et al., 2020).

Although mask wearing is an important strategy to prevent the spread of COVID-19, there are certain populations and situations in which mask-wearing is not recommended. Face coverings should not be worn by children younger than 2 years old, anyone who has trouble breathing, or anyone who is unconscious, incapacitated, or otherwise unable to remove the face covering on their own. There are also situations in which it may not be possible to wear a face covering due to safety concerns or physical or mental health conditions. Face coverings can be challenging to wear for deaf and hearing impaired people who lipread; people with intellectual or developmental disabilities, mental health conditions, or sensory sensitivities; young children; people engaging in high intensity activities; and people working in a setting where a face covering could increase the risk of heat-related illness. In these situations, the CDC recommends considering adaptations and alternatives to increase the feasibility of wearing a face covering. If it is not possible to wear one, it is important to make sure other measures are taken to reduce the risk of spreading COVID-19, such as social distancing, hand washing, and disinfecting (CDC, 2020e).

COVID-19 Testing (Topic D)

There are currently two types of tests associated with COVID-19: viral testing and antibody testing. Viral tests are used for diagnostic purposes. During viral tests, samples are taken from the respiratory system (most commonly using nasal swabs, but increasingly utilizing saliva samples instead) and checked to determine whether the virus that causes COVID-19 is present. Currently, the CDC recommends viral testing for all individuals with symptoms consistent with COVID-19, as well as all close contacts of persons with a COVID-19 infection (CDC, 2020g). People with COVID-19 have reported a wide range of symptoms ranging from mild to severe illness. The most common symptoms associated with COVID-19 are: fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, new loss of tase or smell, sore throat, congestion or runny nose, nausea or vomiting, and diarrhea (CDC, 2020h). Viral testing is an important strategy in preventing the spread of COVID-19 because other protective strategies such as contact tracing, isolation, and quarantine can properly take place once a specific individual is known to be infected with the virus. COVID-19 testing is also a key strategy for public health surveillance. Tests are used to identify

COVID-19 infections, thereby locating areas where COVID-19 is spreading; this allows public health agencies to track geographical and other trends in the distribution of disease, and to provide insights about the impact of COVID-19 over time and by location (CDC, 2020g). Antibody tests differ from viral tests in that they are used to determine if an individual was potentially previously infected with COVID-19. The CDC, however, does not recommend the use of antibody tests for diagnostic purposes and also does not recommend using antibody tests to make decisions about issues such as returning to work or grouping people in congregate settings (CDC, 2020i).

Contract Tracing, Isolation, and Quarantine (Topics E, F, G)

All the public health strategies here are interrelated; contact tracing, isolation, and quarantine are a particularly closely connected set of interventions. Contact tracing is the process of identifying close contacts of confirmed or probable COVID-19 patients, warning them that they may have been exposed, and providing them with information about how they should move forward - such as by getting tested or self-guarantining (CDC, 2020j). The strategy of contact tracing is not new to COVID-19, and has long been utilized by local and state health departments to help prevent the spread of infectious diseases such as tuberculosis. Contact tracing has been shown to be highly effective in controlling the spread of COVID-19 when completed quickly and thoroughly (Keeling et al., 2020).

Isolation refers to the separation of individuals infected with COVID-19 from those who are not infected. The CDC recommends that both individuals who are symptomatic and individuals who are asymptomatic but have tested positive should isolate. Isolation procedures include avoiding contact with other members of the household, staying in a separate room, using a separate bathroom, and not sharing items such as cups or towels. According to the CDC, isolation for those with symptoms can end after all three of these criteria are met: 1) at least ten days since symptoms first appeared, 2) at least 24 hours with no fever without medication, and 3) symptoms have improved. For those without symptoms but who have tested positive, isolation can end after ten days have passed since being tested (CDC, 2020k).

Quarantine is used to keep those who might have been exposed to COVID-19 away from others. The CDC recommends that anyone who has been in close contact with someone who has COVID-19 should selfguarantine. Individuals for whom guarantine is recommended are advised to stay home for 14 days after the last contact with a person infected with COVID-19. Because symptoms may take 2-14 days to appear, the CDC recommends these guarantined individuals remain in guarantine even if they test negative or feel healthy, until the 14 days are complete. In addition to staying home for 14 days, individuals who are guarantining should also monitor themselves for symptoms of COVID-19 such as a fever or cough, and if possible stay away from others (CDC, 2020I).

Although each of these strategies are important individually, contact tracing, isolation, and guarantine are most effective when utilized together. One study that examined the effectiveness of various combined isolation and contact tracing strategies estimated that transmissions of COVID-19 could be reduced by 64% by consistently utilizing self-isolation, household quarantine, and contact tracing of all contacts. This combination of strategies produced the greatest estimated reduction of COVID-19 transmission, and reduced transmission more effectively than isolation alone or isolation plus household quarantine (Kucharski et al., 2020).

Healthcare Access (Topic H)

Access to healthcare is always an important issue but holds especially crucial implications during a global pandemic such as COVID-19. Having a usual source of care and regular healthcare provider play important roles in the ability of individuals to receive preventive and screening services such as flu shots or clinical breast exams (Blewett, et al., 2008). Having access to primary care is particularly critical, because it is associated with many other determinants of health. These include enhanced access to healthcare services, lower rates of hospitalization, and less frequent emergency department visits; primary care is also associated with a range of improved health outcomes and helps counteract the negative impact of poor economic conditions on health (Shi, 2012). Having health insurance is also consistently found to be a key factor in improving both health and health care utilization (Freeman et al., 2008).

During the COVID-19 pandemic, access to healthcare is likely to be significantly impacted. When the first measures were implemented to reduce the spread of COVID-19, many hospitals and healthcare providers across the country limited nonessential services. We have also seen an unprecedented number of people lose their jobs due COVID-19: 41 million Americans newly applied for unemployment between the start of the outbreak in March 2020 and May 2020 (Rugaber, 2020). Because most health insurance coverage in the United States is gained through an employer, these significant job losses have also negatively impacted health insurance coverage. Although it is too soon to know the full extent of these impacts, one report estimates that nearly 27 million people may lose their employer-sponsored insurance due to job loss during COVID-19 (Garfield et al., 2020).

All of these factors are likely to have long term impacts on the utilization of preventative care due to interruptions in access and the financial difficulties many are facing. As a single example, a CDC report found that the rate of childhood vaccines has fallen during the COVID-19 pandemic despite CDC guidance emphasizing the importance of continuing routine well-child care and immunization during the pandemic (Santoli et al., 2020). In addition to preventative care, decreases in healthcare access due to COVID-19 have also negatively impacted treatment for chronic diseases such as cancer. Some patients with cancer have had surgeries delayed or are receiving less intense treatments to preserve clinical capacity for COVID-19 patients (Sharpless, 2020). Again, it is likely that we will not see the full effects of these decisions until further in the future. Continuing access to mental health and addiction services is also crucial during the pandemic, particularly since COVID-19 has already been shown to have negative mental health and substance use consequences. A recent poll found that 45% of adults in the U.S. reported that COVID-19 has negatively impacted their mental health (Kirzinger et al., 2020). It is likely this will only increase as the pandemic continues. Isolation, social distancing, and job loss, along with the general negative impact of the pandemic on mental health, are all potential triggers for the development, or relapse, of a substance use disorder. Those who are in the process of treatment for an addiction have been faced with the closing of private clinics and detox centers, and many undergoing rehabilitation programs have had interruptions in their medication supply as well as appointments with their therapists (Dubey et al., 2020).

One strategy that has been widely used as an attempt to preserve access to healthcare during COVID-19 is the use of telehealth or telemedicine. The Peterson-Kaiser Family Foundation Health System Tracker found that in 2018, only 2.4% of large employer health plan enrollees who had an outpatient office visit had at least one telemedicine visit (Rae et al., 2020). A recent National Tracking Poll, however, found that 23% of adults have used telehealth services since the beginning of the COVID-19 pandemic. The need for telehealth services created by COVID-19 has led to significant insurance and policy changes. A few examples of these changes include health insurance carriers increasing coverage for telehealth visits as well as the number of visits that can be paid for, the federal government waiving certain restrictions on Medicare coverage of telehealth services, and the U.S. Department of Health and Human Services waiving potential penalties for HIPAA violations against healthcare providers that serve patients in good faith – which allows accessible services such as FaceTime or Skype to be used for telehealth purposes (Weigel et al., 2020). Although telehealth services may increase access to care for some during this pandemic, telehealth itself creates its own unique access barriers. In 2017, one study showed that 26% of non-elderly adults with

Medicaid never used a computer, 25% did not use the Internet, and 40% did not use email (Garfield et al., 2019). There are likely additional issues among rural and elderly populations. In 2019, one study found that 21% of rural Americans reported problems with access to high-speed Internet (Harvard T.H. Chan School of Public Health, 2019), and another study found that 27% of U.S. adults aged 65+ reported not using the Internet in 2019 (Anderson et al., 2019).

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Hygiene (Topic A): Integrated Findings Across Population Groups

In the findings below, key Ohio population groups that repeatedly mentioned each item are indicated by the following abbreviations:

BA: Black and African American	AS: Asian and Asian American	RU: Rural
HL: Latino and Hispanic	IR: Immigrant & Refugee	DI: Living with Disabilities

Key Barriers to Using Hygiene

These categories represent the barriers that most commonly challenge the ability of key Ohio populations to utilize hygiene as a public health strategy to help minimize the impact of COVID-19.

Lack of access, availability, and cost

Hygiene products are generally difficult to obtain within all the populations studied; this includes cleaning and disinfecting supplies as well as masks (BA, AS, DI, HL, IR, RU). Some communities also lack access to laundry facilities and warm running water (BA, IR, RU). Hygiene products are often too expensive for low-income individuals to buy; their general un-affordability is also exacerbated by price gouging and by the fact that many individuals lack credit cards and therefore cannot purchase items online (BA, AS, DI, HL, IR, RU). Local stores often do not have these items in stock (BA, AS, HL, IR), and individuals don't always know where to look for them (BA).

Mistrust of government and healthcare systems

For several populations studied, mistrust of government, healthcare providers, and/or healthcare systems impede community members' ability to learn about or implement public health strategies to minimize the effects of COVID-19 (HL, IR, RU). The origins of this mistrust come from several directions, including histories of healthcare providers and researchers abusing Black and minority populations (BA, IR), fear that health and healthcare interactions might involve community members with law enforcement or immigration officials (IR, HL), and general distrust of government leaders and rules (RU). Additional elements exacerbate mistrust, including: lack of racial and ethnic diversity among healthcare providers to act in their patients' best interests (RU), and fear of being shamed by public officials or healthcare providers (e.g.: for only having one bathroom) (HL).

Barriers related to work and school

The need to work, and conditions at work, constitute significant barriers that affect the ability of individuals in all populations studied to practice protective hygiene (BA, AS, DI, HL, IR, RU). Many of these individuals work in low-wage jobs and must go to work to support themselves and their families (BA, AS, DI, HL, IR, RU). Many are essential workers in jobs that require considerable face-to-face contact with the public or other workers, and do not offer the option to work remotely or from home (BA, AS, DI, HL, IR, RU); in Asian communities these are often healthcare jobs (AS). Work attendance is often mandatory with little or no time off or sick time arrangements (BA, AS, DI, HL); staying home would risk job loss or loss of benefits (BA, HL, RU). Avoiding close contact is often impossible at work, and many workplaces do not enforce protective hygiene guidelines (BA, AS, DI, HL, IR); some jobs (e.g.: cashiers) make frequent handwashing or other hygiene practices impossible (DI, HL, IR, RU). Schools raise related issues including limitations on how often students can wash hands, children coming to school sick because their parents have to work, and students changing classrooms often throughout the high school day (BA).

Language and communication barriers

Language and communication barriers limit the ability of several Ohio communities to obtain hygiene-related information and resources (AS, HL, IR, DI). Information about protective hygiene practices and how to use them is usually presented only in English, which severely limits their benefit to non-English speakers and those with low English proficiency (AS, HL, IR). Professional translators and interpreters for individuals with disabilities are often unavailable when hygiene-related information is being shared; family members and children are limited in their availability and skill at translating information (AS, HL, HR, DI). In addition to large gaps in understanding of protective hygiene, confusion, misinterpretation, and fear may also result (AS).

Housing challenges

Within all the populations studied, housing conditions limit community members' ability to use protective hygiene practices (BA, AS, DI, HL, IR, RU). Housing units are often small and densely crowded (BA, AS, DI, HL, IR, RU), serving as homes to many people, several families, and/or multiple generations of a family (BA, AS, HL, IR). Sharing bathrooms, kitchens, bedrooms, and beds are particular challenges to hygiene and disinfection (BA, HL, IR, RU). These conditions are particularly true of low-income, immigrant, and refugee households (AS, IR). Many neighborhoods are also densely populated, making it difficult to avoid close contact with sick people and keep frequently touched surfaces disinfected (BA). Congregate housing arrangements impede protective disinfecting and avoiding close contact with sick people; these include apartments, public housing, shelters, halfway houses, and prisons (BA, DI, RU). Individuals in all communities studied lack access to alternate temporary housing or shelter for sick people or confirmed COVID-19 cases (BA, AS, DI, HL, IR, RU). Homelessness and housing instability also create lack of control over hygiene conditions (BA, DI, RU); migrant agricultural workers often live in camps and share bathrooms (HL). Necessary caregivers cannot avoid close contact with the individuals for whom they care (AS, DI).

Lack of personal transportation

Lack of personal transportation means that many members of the community rely on public transportation to get to work and move around the community, which impedes the use of protective hygiene practices and social distancing (BA, RU). The transportation that is available for shopping and moving around the community is sometimes too expensive to use (RU).

Cultural values and norms

For many of the populations studied, community norms and values inhibit the use of protective hygiene strategies that involve avoiding close contact and maintaining disinfected surfaces (AB, AS, HL, IR). Many cultures and communities emphasize collective and communal connections, creating the desire to maintain social functions, in-person contact, and physical touching (BA, AS, DI, HL, IR). Close contact is important in times of celebration, when offering support, and when engaging in religious life (BA, AS, HL, IR). Limiting normal social and physical contact can trigger feelings of isolation, rejection, and/or stigma (AS, DI, HL, IR), particularly for individuals and communities, many do not believe COVID-19 is a real problem, is a problem in their areas, or will affect them personally; many also resist listening to government advice and feel pressure not to.

Caregiving responsibilities

Family members often serve as caregivers for loved ones. Caregiving roles – including for disabled individuals, children, and the elderly – impede avoiding close contact and using protective hygiene practices (BA, AS, DI). These relationships also mean that caregivers are responsible for protecting both themselves and those for whom they care (DI).

Lack of health information

Some members of the populations studied lack up-to-date information about specific hygiene practices that offer protection from COVID-19 (BA, DI, HL, IR, RU). Low health literacy and low general levels of education exacerbate this challenge (RU).

Barriers specifically relevant for people with disabilities

Disabilities can create direct barriers to using protective hygiene practices (DI). Some individuals require touch to communicate, are unable to cover their coughs or sneezes, and/or habitually put hands to mouth or touch their eyes. Individuals with disabilities may also rely on others for help with handwashing, cleaning, personal care, activities of daily living, and more. Much of caregiving requires close proximity and physical touch. Reliance on caregivers means that caregivers must understand and follow protective guidelines.

Commonly Proposed Solutions to Facilitate Use of Hygiene

These categories represent our respondents' commonly proposed solutions to the barriers that impede use of COVID-related hygiene practices by Ohio populations.

Provide resources directly

Directly providing the resources and supplies to which communities lack access would improve the use of protective hygiene (BA, AS, DI, HL, IR, RU). Specifically, this could involve making masks, gloves, and cleaning products available free or at reduced cost (BA, AS, DI, HL, IR, RU). Direct financial supports – including unemployment, emergency pay, stimulus payments, increased funding for disability service providers – would facilitate community members' ability to purchase their own supplies (BA, DI, HL, IR, RU). In addition to making supplies more available at sites where they are normally found – such as grocery stores and neighborhood pantries — community organizations and public agencies could distribute supplies directly to homes or community sites (BA, AS, DI, HL, RU). Touchless hand sanitizer could be made widely available in public places (BA).

Partner with trusted community organizations and organizations

In order to most effectively address barriers to use of protective hygiene practices, services, information, and resources should be provided by trusted community members and sites (BA, AS, HL, DI, IR, RU). These might include community organizations and their leaders, religious leaders and organizations, community youth, and community health workers (BA, AS, HL, DI, IR, RU).

Improve employment policies

Improving workplace policies could make individuals safer; these could involve ensuring that workplaces are following hygiene guidelines and allowing employees to do so, and offering employees more penalty-free options for sick time or working from home (BA, IR). Caregivers for individuals with disabilities should be considered essential employees (DI).

Improve and create housing options

Improving housing options would allow for more systematic use of protective housing among some population groups (BA, HL, DI, IR). These steps could include identifying interim housing options where sick people could distance themselves from others they live with (BA, DI, HL, IR). Options for this might include hotels or motels, unfilled public housing units, convention centers, schools, and emergency evacuation locations. Direct financial assistance could also allow individuals to create these solutions for themselves (HL).

Increase and improve COVID-related education

High-quality, accessible education about hygiene practices would help several groups use these protective strategies (BA, AS, IR, RU). Community members would benefit from accessible educational information about proper handwashing, the importance of cleaning, and where/when/how to disinfect surfaces (BA, AS, HL, IR). The delivery of this information should be culturally relevant (BA, IR), available in multiple languages appropriate to each community (AS, HL, IR), comprehensible by individuals with limited literacy and/or health literacy (BA), and utilize terms and images that resonate with each community (BA, AS, IR). Many different modes can be used to deliver relevant information, including flyers, pamphlets, mailers, social media, community signage, YouTube videos, ethnic communication venues, discussion with individuals attending testing or healthcare sites, and special webinars or video events (BA, AS, HL, RU). Caregivers should receive education about how to use hygiene practices in their caregiving roles (DI).

Improve transportation options

Improvements to public transportation systems could help address hygiene barriers, both by making transportation itself safer, and by improving access to shopping and community resources. Improvements could include increasing the frequency of public transportation (BA), issuing free bus passes (BA), cleaning public transportation vehicles more often (BA), and adding plexiglass barriers in buses (BA).

Directly address disability-specific challenges

Directly involving people with disabilities in policy, planning, and educational efforts can help ensure that protective measures are designed or can be adapted for individuals with various disabilities (DI). Individuals caring for people with disabilities need specific training related to protective hygiene practices and educational resources (DI).

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Social Distancing (Topic B): Integrated Findings Across Population Groups

In the findings below, key Ohio population groups that repeatedly mentioned each item are indicated by the following abbreviations:

BA: Black and African American	AS: Asian and Asian American	RU: Rural
HL: Latino and Hispanic	IR: Immigrant & Refugee	DI: Living with Disabilities

Key Barriers to Using Social Distancing

These categories represent the barriers that most commonly challenge the ability of key Ohio populations to utilize social distancing as a public health strategy to help minimize the impact of COVID-19.

Housing challenges

For many individuals in all the populations studied, housing conditions make social distancing difficult (BA, AS, RU, IR, HL, DI). Many live in crowded situations, which often house many individuals, multiple families, and multiple generations (BA, AS, RU, IR, HL, DI). Many also live in densely populated neighborhoods or congregate housing arrangements - such as apartments, halfway houses, prisons, shelters, migrant camps, and public housing (BA, AS, RU, HL, DI). Low-income, immigrant, and refugee individuals frequently live in very close quarters where social distancing is not possible (BA, AS, RU, IR, HL).

Work-related challenges

Within all the populations studied, many individuals must go to work to provide for their families and maintain a basic income (BA, AS, RU, IR, HL, DI). Many are employed as essential, service, and/or healthcare workers and are frequently required to be in close contact with other workers, customers, and/or the public (BA, AS, RU, IR, HL, DI). Allowing, encouraging, or requiring social distancing is up to workplaces and supervisors (BA, AS, RU, IR, HL, DI).

Cultural norms, values, and beliefs

For many of the populations studied, cultural norms and values prioritize close connection of families and communities (BA, AS, IR, HL). These forms of connection include maintaining in-person contact, social support through physical touching, and attendance at large-group social events and religious services where social distancing is difficult (BA, RU, IR, HL). Social distancing may create feelings of isolation, trigger stigma, and/or challenge individuals' mental health (AS, IR, RU, HL). Some individuals (particularly men) may fear looking weak if they practice social distancing (BA). Many members of rural communities resist social distancing because they do not believe COVID-19 is real or will affect them personally, do not believe social distancing is necessary unless individuals are sick, have anti-science and antigovernment attitudes, and/or experience social pressures to reject public health advice (RU).

Lack of personal transportation

Within each of the populations studied, many individuals lack personal transportation (BA, AS, RU, IR, HL, DI). They therefore rely on public transportation and shared vehicles to get to work and move around the community; these methods of transportation impede the use of social distancing (BA, AS, RU, IR, HL, DI).

Lack of health information and limiting health beliefs

Many members of all the communities studied lack up-to-date health information relevant to COVID-19, resulting in lack of comprehension of when social distancing is needed and why it is important (BA, AS, RU, IR, HL, DI). Some individuals do not take the virus seriously (BA, RU) or believe they will contract it regardless of what they do (BA). Social distancing is further undermined by witnessing many people not respecting social distancing (BA, RU), by being exposed to misinformation and false news (AS, RU, IR), when community or religious leaders do not respect the need for social distancing (RU), and when information does not come from trusted, local sources (RU).

Language and cultural barriers to education

Information related to COVID-19 and social distancing is often available only in English, which severely limits its usefulness for individuals with limited English proficiency and literacy (IR, HL). In addition, education is often presented in ways that are not culturally appropriate (IR, HL).

Caregiving needs and responsibilities

Many members of the studied populations are caregivers to children, elderly individuals, or other family members, which makes social distancing difficult (BA, RU, IR). Many individuals with disabilities require close contact with caregivers and rely on them to follow protective guidelines (DI).

Lack of technology

Lack of access to smart phones, computers, Internet, broadband, and WiFi limits the ability of many individuals to utilize remote and virtual substitutes for normal activities (such as work, church, and medical appointments) (BA, DI).

Other barriers - relevant to specific populations

- Some individuals need to access social service agencies and other venues where social distancing is not in place (BA)
- Adequate social distance can be hard to judge (RU)
- Refugees who have survived other communicable diseases may feel COVID-19 is unlikely to be a threat (IR)

Commonly Proposed Solutions to Facilitate Use of Social Distancing

These categories represent our respondents' commonly proposed solutions to the barriers that impede use of social distancing by Ohio populations.

Provide direct supports to communities and families

In all the populations studied, alleviating poverty and providing direct financial supports (food, supplies, income) could improve individuals' ability to control the circumstances in which they work and spend time, and therefore to use social distancing and other protective measures (BA, AS, RU, IR, HL, DI). Offering new housing options – for free or at low cost – could offer individuals and families more space to allow distance between them (BA, RU, IR, HL, DI). Pauses in rent, utilities and other major expenses could help as well (BA, IR).

Increase and improve COVID-related education

High-quality education and information could increase the use of social distancing by several of the populations studied (BA, AS, RU, IR, DI). These educational efforts should cover topics such as the severity and real threat of COVID-19, the importance of social distancing, methods of social distancing within the home, and creative ideas for staying connected while distancing (BA, AS, IR, DI); other helpful topics would include how to stay on course for the long term (BA) and the fact that social distancing is not meant to limit anyone's rights (RU). Educational messages should be comprehensible by individuals with low education levels or low health literacy, and presented with lots of visual aids (BA, RU). Interpretation for individuals with disabilities should be provided (DI). Messaging should be presented in culturallyrelevant ways and represent diverse populations (BA, IR). Direct efforts should be made to dispel false information and misinformation (IR).

Address language barriers

Educational information should be provided in multiple languages and dialects appropriate for local populations (IR, HL). Updates and advice from the Governor's office should be translated promptly (IR). Individuals can be hired to translate or provide education in the languages of their communities (HL). General provision of English education would also help alleviate health-related language barriers in the long term (IR).

Enforce public and workplace policies

Ensuring that workplaces follow state and public health guidelines would help many individuals practice social distancing (BA, IR). This would include requiring and enforcing social distancing within businesses and organizations for both employees and customers (BA, IR). Making it mandatory for employers to allow employees to work from home without fear of retaliation or job loss would also facilitate social distancing (RU, IR). Social distancing guidelines should also be made mandatory in public spaces (AS). Large community events should be limited (RU). Stricter policies that keep businesses closed and require individuals to stay at home should stay in place until the state is truly ready to re-open safely (BA).

Partner with community organizations, leaders, and members

Outreach and education should be offered by, and facilitated through, trusted members and leaders of communities (IR, HL), and through community-based organizations (HL). Individuals who come from and look like the communities they serve can help disseminate information and build trust in public health interventions (IR, HL). In some cases, public health authorities must first earn the trust of community leaders (HL).

Improve access to technology

Improving free or low-cost access to technology would allow more individuals to use virtual and remote options for work, church, healthcare, and other social interaction (RU). Interpretive technologies would also increase access to information for individuals with disabilities (DI).

Improve transportation options

Creating public transportation options that allow for social distancing, and/ or offering vouchers or financial support could help individuals practice social distancing (BA).

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Masks & PPE (Topic C): Integrated Findings Across Population Groups

In the findings below, key Ohio population groups that repeatedly mentioned each item are indicated by the following abbreviations:

BA: Black and African American	AS: Asian and Asian American	RU: Rural
HL: Latino and Hispanic	IR: Immigrant & Refugee	DI: Living with Disabilities

Key Barriers to Using Masks and PPE

These categories represent the barriers that most commonly challenge the ability of key Ohio populations to utilize PPE as a public health strategy to help minimize the impact of COVID-19.

Lack of access, availability, and cost

Individuals in all populations studied lack access to masks and PPE, both because they can be too expensive (particularly for low-income individuals) and because they are often not available in stores (BA, AS, RU, IR, HL, DI). Access is further limited by several factors, including: individuals may not know where to go to get these items (BA, RU), many individuals lack affordable transportation and are therefore limited in their ability to shop for these items (RU, IR), hoarding and price gouging raise prices further (BA, AS, DI), and supplies cannot be purchased with food stamps (RU). The supply of PPE is limited even for medical workers, caregivers, and in workplaces in general (AS, RU, IR, DI). Many community members do not know how to make masks or PPE (AS, DI) or do not have access to materials to do so (HL).

Racism and immigration dynamics

Mask wearing exposes some communities to particular risks due to racism (BA, AS, IR). Black people fear being perceived as criminals when wearing a mask, and the related possibility of police brutality; these fears are particularly acute for men (BA, IR). Asians and Asian Americans have been targeted in the U.S. due to perceptions that they are spreading COVID-19; mask-wearers in particular have been targeted, making individuals less willing to wear them (AS). In addition to directly limiting the use of masks, these barriers take an emotional toll (BA, AS, IR).

Cultural norms, values, and beliefs

Most of the populations studied highly value community connection, special events, and family support (BA, AS, RU, IR, HL). Wearing masks can be difficult when it is experienced as putting distance between people during family or community events, or while participating in religious services (BA, AS, RU, IR, HL). In rural communities, many individuals do not believe COVID-19 is real or could affect them personally, or that masks and PPE are effective; these beliefs are grounded in anti-science attitudes, conservative ideologies, and social pressures (RU). In some communities it may be difficult to make masks/PPE compatible with traditional cultural or religious garb; cultural barriers may particularly impede men from wearing masks or PPE (IR). Some fear being mocked for wearing PPE (HL). Some communities also value conservation and may re-use supplies until they are dirty (AS, BA).

Mistrust of government and healthcare systems

Mistrust of health advice from government and healthcare leaders stems from mistreatment of Black people and other minorities in the United States (BA, IR, HL). In rural communities, many individuals distrust protective advice from government leaders in general (RU).

Challenges related to work

Many members of all the populations studied must go to work, because they are essential workers and/or because they must provide for their families and maintain a basic income (BA, AS, RU, IR, HL, DI). Individuals' ability to protect themselves at work depends on their employers' policies and practices. Many work environments do not enforce mask-wearing guidelines, provide masks, or provide sufficient PPE for their employees (BA, AS, RU, IR, HL, DI). Migrant workers live in camps and close quarters without protective supplies (HL).

Gaps in education and health information

Community members often lack up-to-date health information relevant to COVID-19. This can impede the use of protective hygiene practices, including wearing masks and using appropriate PPE (BA, RU, HL, DI). Inconsistent messages about COVID-19 (who is vulnerable, how it is transmitted), masks, and PPE contribute to this problem (BA). Many individuals lack understanding of the severity and significance of COVID-19 (IR), or do not understand what PPE is, why it is necessary, when or how to use it, or how to clean it (BA, IR, DI). Witnessing many people not wearing masks undermines messages about their importance (BA), as does misinformation and inconsistent information (RU).

Language and literacy barriers

Information is often available only in English, making it inaccessible to those with limited English proficiency and/or literacy (AS, IR, HL). Low health literacy and low general education levels also limit the ability of some individuals to understand educational information about COVID-19, mask-wearing, and PPE (AS, RU, IR, HL, DI).

Caregiving

Wearing masks or PPE can be difficult and/or feel rude when individuals are serving as caregivers to children or other family members (BA, AS, RU, HL).

Other barriers – relevant to specific populations

- For those who have experienced trauma, mask-wearing can be a trigger (IR)
- Some experience sensations of discomfort wearing a mask, not liking how they look (BA, RU)
- PPE and masks are difficult to use for some people with disabilities, specifically deaf individuals or those unable to communicate without facial cues, those with motor issues that impede use, those who have trouble speaking or sensory issues, those with serious lung conditions and related physical impairments (DI)
- Masks aren't safe for some groups, and can become quickly wet for people with some disabilities (DI)

Commonly Proposed Solutions to Facilitate Use of Masks and PPE

These categories represent our respondents' commonly proposed solutions to the barriers that impede use of masks and PPE by Ohio populations.

Provide masks and PPE directly

Members of all the populations studied would benefit from free or low-cost provision of masks and PPE to individuals and households (BA, AS, RU, IR, HL, DI). Direct financial support would also help low-income individuals procure their own masks and PPE (BA, AS, RU, IR, HL, DI). In addition, it would help to increase the availability of masks and PPE at stores, work, and community sites (BA, AS, RU, IR, HL, DI). Public authorities should ensure that healthcare workers, in-home caregivers, and other appropriate workers have sufficient PPE (AS, RU, DI). Related steps that would help communities access masks and PPE include: providing N95 masks to those who work directly with the public; employing community members to make masks; making sure that masks are provided in culturally appropriate and attractive designs; and providing PPE for family members who need to isolate or self-quarantine (AS, RU, IR, DI).

Address racism, harassment, and violence

Addressing racism, harassment, and violence would help members of multiple studied populations feel safe utilizing masks and PPE as appropriate (BA, AS). This could include public officials condemning racist attacks and derogatory language (AS), prosecuting unnecessary calls to the police on Black people (BA), and reducing racial profiling (BA). Making mask use mandatory in public spaces would help community members feel safe using them (AS, RU).

Partner with trusted community members, leaders, and organizations

Educational messages, masks, and PPE should be provided by trusted community members and organizations (BA, AS, RU, IR, HL), and developed with community input (RU, IR, DI). Community health workers who look and speak like their communities can help distribute supplies and increase their use (BA, RU, IR, HL). Government and public health authorities need to earn the trust of community leaders and members (HL).

Increase, improve, and diversify education and information

Clear, comprehensible, and widespread education about the severity and real threat of COVID-19, the efficacy of mask-wearing and PPE, how to wear masks and use PPE, and where and how to obtain these resources would help all studied populations increase mask and PPE use (BA, AS, RU, IR, HL, DI). Educational materials should be available in multiple languages and comprehensible to those with low literacy or limited English proficiency (BA, IR, HL). Promptly translating messages from the Governor's office would be helpful (IR). Messaging should be culturally relevant and feature visual representations of diverse populations (BA, IR). Easy directions for making masks/PPE should also be made available (RU).

Improve employment policies

Public officials should ensure that workplaces are following state and public health guidelines with respect to use of masks and PPE (BA, IR). Workplace policies should encourage or require the use of masks, and employers should supply masks and PPE as needed for their employees (BA, RU, IR). Masks and PPE should be provided to all migrant camp workers (HL).

Directly address disability-specific challenges

Direct steps to address specific barriers to mask and PPE use would help people with disabilities in all communities (DI). This could include providing transparent masks for deaf individuals (and others for whom visual communication is essential) as well as workers with whom they interact regularly; providing less restrictive face coverings (shields).

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COVID-19 Testing (Topic D): Integrated Findings Across Population Groups

In the findings below, key Ohio population groups that repeatedly mentioned each item are indicated by the following abbreviations:

BA: Black and African American	AS: Asian and Asian American	RU: Rural
HL: Latino and Hispanic	IR: Immigrant & Refugee	DI: Living with Disabilities

Key Barriers to Using COVID-19 Testing

These categories represent the barriers that most commonly challenge the ability of key Ohio populations to utilize COVID-19 testing as a public health strategy to help minimize the impact of COVID-19.

Limited availability, access, and cost

In general, the availability of COVID-19 testing is very limited (BA, HL, AS, RU, DI). Testing is particularly unavailable in the neighborhoods where our studied populations live, and in their local clinics (BA, IR, HL, RU). Rural populations also mentioned long waits for testing and results (RU). Testing is generally available without a doctor's referral, which is very difficult to get for those who don't have a source of healthcare (BA, HL, AS); this problem is exacerbated for those without health insurance and/or sufficient income to pay out-of-pocket (HL, AS). Testing is mostly available only through major healthcare providers, who will only test their own patients, and to whom some don't have access (IR, HL). Some respondents (BA in particular) noted being limited by the fact that medical professionals often refuse to test or recommend testing even when a patient has symptoms.

Lack of transportation

Many members of our studied populations do not have regular access to personal transportation, and public transportation often doesn't go to the locations where testing is available (BU, HL, AS, RU, DI). Drive-through testing is not usable for those who don't have a car (IR).

Limited information and limiting beliefs

Many respondents don't have accurate information about who can be tested and where to go (BA, IR, HL, RU); misinformation also exists in some communities (IR). Information about testing is also inconsistent, changes frequently, and can be confusing (BA, RU, DI). Rural residents may be particularly confused about what test results mean, may hold anti-science and conservative beliefs that stand in the way of testing, and may not believe that tests results are reliable (RU).

Racism and mistrust of public authorities and healthcare systems

The abusive history of experimental testing on minority and poor Americans, and the generally poor treatment of Black and African Americans by healthcare institutions, are significant barriers for some populations (BA, IR). Asians have experienced discrimination and been targeted specifically for "spreading COVID-19" and therefore avoid testing (AS). Some communities distrust government authorities in general, fearing that individuals who come in for testing might be reported to law enforcement or ICE, and/or face deportation (IR, AS), and that these consequences might extend to family and community members as well (IR). Some communities particularly distrust advice from government leaders (RU), worry that privacy and confidentiality will not be maintained (RU, DI), and/or fear the repercussions of a positive test (RU).

Language barriers

Information about testing is often available only in English even though many communities need to receive it in other languages (IR, HL, AS). Testing sites lack translation services and support for patients not proficient in English (IR, HL, AS, DI).

Stigma and fear

Some individuals fear the test itself (BA, IR, RU), or experience testing/COVID-19 stigma in their communities (IR).

Other barriers – relevant to specific populations

- Reluctance to test because it could mean losing work (AS)
- Some have resistant reactions that impede testing (DI)

Commonly Proposed Solutions to Facilitate Use of COVID-19 Testing

These categories represent our respondents' commonly proposed solutions to the barriers that impede use of COVID-19 testing by Ohio populations.

Improve availability of - and access to - COVID-19 testing

All communities studied would benefit from improved availability of COVID-19 testing (BA, HR, IR, AS, RU, DI), which should include loosening the criteria for testing in general (RU), allowing testing without a doctor's order (IR), and ensuring that both essential workers and family members of diagnosed individuals (AS) are able to be tested. Testing should be provided for free at community sites or through free clinics (BA, HL, IR, AS, RU, DI). Testing access could be improved by offering it at trusted community sites (e.g.: churches and community organizations), at work, and in mobile-van, walk-through, and drive-through sites (BA, HL, AS, RU, DI). Less expensive health insurance (AS, IR, DI) and testing in migrant health centers (HL) would help as well. Free transportation to testing would also remove important geographic access barriers (BA, IR, AS, RU).

Provide more information and education

Information about testing for the public should include why it is important, how it works, whether it hurts, and where to get a test (IR, RU, AS). Educational materials should be developed in multiple languages, and should be culturally relevant, include lots of visuals representing diverse communities (BA, IR). Many methods can be used to distribute this information, including webinars, video events, social media, posters and flyers available in community sites, and mailings. Testing staff should be educated about particular needs relevant to patients with disabilities (DI).

Partner with communities

Partnering with community members, leaders, and organizations can help improve use of COVID-19 testing for most of the communities studied (BA, HL, IR, AS, RU). Trusted community leaders, faith leaders, individuals hired from communities, local youth, and community organizations can help deliver educational information to these communities (BA, HL, IR, AS, RU). Community-based testing sites should be located where people are already comfortable going: churches, community events, grocery stores, and worship locations (BA, IR, RU, HL, AS). Trusted members and leaders of community should be involved in decision-making and help to shape policy.

Address language barriers

This includes providing educational information in multiple languages, and preferably in multiple dialects of Spanish (HL, IR, AS). Testing sites should have staff who speak multiple languages (HL, IR, AS).

Address immigration-related concerns

Public policies should ensure that getting tested or treated for COVID-19 will not involve any involvement of law enforcement or ICE, and will not affect immigration cases (HL, IR).

Ensure linkage to healthcare

Clear plans to ensure that individuals who test positive for COVID-19 can access medical treatment should be made and publicized (BA, AS).

Other recommendations - relevant to specific populations

- State, local, and OSU leaders should publicly condemn racism and anti-Asian violence (AS)
- Ensure and publicize the confidentiality of COVID-19 tests and results (RU)
- Testing sites should be aware of special needs associated with patients with disabilities, and allow trusted companions to accompany them for testing (DI)

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COVID-19 Contact Tracing (Topic E): Integrated Findings Across Population Groups

In the findings below, key Ohio population groups that repeatedly mentioned each item are indicated by the following abbreviations:

BA: Black and African American	AS: Asian and Asian American	RU: Rural
HL: Latino and Hispanic	IR: Immigrant & Refugee	DI: Living with Disabilities

Key Barriers to Using Contact Tracing

These categories represent the barriers that most commonly challenge the ability of key Ohio populations to utilize contact tracing as a public health strategy to prevent COVID-19 disease spread.

Racism and immigration dynamics

For several of the populations studied, discrimination and racism have led to a sense of fear that deters engagement with contact tracing and other COVID-19 protections (AS, BA, IR, HL). Asians are targeted for spreading COVID-19 and have experienced racial targeting and hate crimes (AS). Black and African American people have historically been mistreated during a crisis (BA). Many individuals fear being asked about immigration (AS, HL). There is significant fear among undocumented individuals of ICE involvement, immigration raids, imprisonment, or deportation if they engage, at all, in COVID-19 protections including contact tracing (AS, IR, HL, RU); individuals also fear exposing other families to immigration authorities or ICE (IR). Undocumented individuals may provide fake addresses (AS).

Mistrust of government, law enforcement, and healthcare systems

This history of racist public policy generates mistrust in the government (BA). Trust is foundational to providing personal information, especially to a stranger (BA, IR, RU). Many have concerns about privacy and how information will be used (BA, RU), distrust contact tracers or feel skeptical about their motives (HL, RU), and/or distrust the process of/science behind contact tracing (RU). Willingness to engage in contract tracing is impeded by personal and community histories of negative interactions with healthcare providers (HL), and fear of repercussions (BA, HL, IR, RU).

Language and communication barriers

Lack of information offered in appropriate languages limits understanding of the purpose of contact tracing and ability to engage in the process (AS, IR, HL). Interpreters and translation services are lacking in many situations, or not prompt if available (IR, HL). Low literacy or English proficiency impedes participation; some people may not answer their phones (IR, AS). Relying on family members and children may result in misinformation (AS, IR). Translation and interpretation provided through culturally incompetent services (including some for-profit services) may lead to confusion and misinterpretation (AS, IR). Language barriers cause fear (AS). Cognitive difficulties may prohibit a person from understanding the purpose of contact tracing, or being able to understand questions and provide answers (DI). Some may not be able to remember recent activities, impeding contact tracing (DI). Deaf/blind persons need touch to communicate, and this is essential for individuals with other disabilities as well (DI).

Housing & transportation challenges

Crowded, dense, or small housing units, densely populated neighborhoods, reliance on public transportation, homelessness and housing instability may make participating in naming recent contacts challenging (BA, IR).

Work-related challenges

Many individuals in the populations studied are employed in essential work positions which may involve close contact, little time off, contact with many unknown people (health workers (AS), first responders (AS), low-wage essential work (AS, IR)). Adequate social distancing is often impossible at work; this applies across a broad range of employment categories, both professional and working-class jobs (AS). Certain types of work and employers prevent working from home (AS). Low-income individuals often must work to support the household (AS, IR). Many worry about the impact on employment or job loss (BA, HL).

Insufficient and inappropriate education

Many individuals lack information about COVID-19 in general (AS, BA, DI), and have limited access to updated health information (BA). Members of many of the populations studied lack awareness that contact tracing exists, the purpose of contact tracing, or the importance of participating in contact tracing even when quarantining; this may be due to a lack of educational messaging or inconsistent and confusing messaging (AS, BA, DI, IR).

Lack of technology/technology limitations

Members of many of the populations studied lack access to cell phones, cell service, or digital communication devices and platforms, which limits participation in contact tracing (AS, BA, IR, DI, RU). Lack of Internet access is another substantial barrier (DI, RU). Amish people do not have phones or email (RU).

Cultural norms, attitudes, practices

Asian cultures are oriented towards privacy, which can inhibit participation in contact tracing (AS). Some rural residents believe contact tracing cannot be done correctly (RU). There is considerable variation in community members' beliefs about contracting COVID-19—some do not think they are susceptible while others feel it is inevitable that they will contract COVID-19 no matter what because of high risk and pre-existing conditions (BA). Refugees who have survived other communicable diseases may feel that COVID-19 is unlikely to be a significant threat (IR). Some fear stigma or ostracization if suspected or diagnosed with COVID-19 (AS, HL). Some cultures have the mindset that healthcare is appropriate when sick, not as a preventative measure (HL). People in some communities do not like to be told what to do (RU) or don't want to "rat people out" in small towns where everyone knows everyone (RU).

Commonly Proposed Solutions to Facilitate Use of Contact Tracing

These categories represent our respondents' commonly proposed solutions to the barriers that impede use of contact tracing by Ohio populations.

Partner with trusted community members and organizations, connect with community values

Partnering with community members, leaders, and culturally-specific organizations could improve use of contact tracing for all populations studied (AS, BA, DI, HL, IR, RU). Identify trusted community leaders who can help provide multilingual and community-tailored information and contact tracing services (AS, BA, HL, IR, RU). Use community health workers as a key link with communities (AS, IR, RU), and pay individuals who come from each community and speak the

native languages to work as contact tracers (DI, AS, HL, IR, RU). These steps could help create community buy-in for contact tracing (RU). Trusted community members who come from and look like the communities they serve can provide critical linkages between communities, information, and resources, and can include community leaders (BA, IR, HL, RU), religious leaders (BA, IR, HL, RU), and youth in the community (IR)). Train contact tracers in the needs of individuals with disabilities (DI). Relay information so that family members can talk to other family members, especially within multi-generational households (HL, RU).

Address language and communication barriers

Contact tracers must adapt to each person's mode of communication, and should use clear and simple language (AS, DI, IR). Hire multilingual, community-based contact tracers (AS, IR, HL). Offer culturally appropriate interpretation services when someone from the community is not available (AS, IR). Accommodate interpretation services and technologies (DI). Accommodate caregivers or assistants in contact tracing (DI). Promptly translate information from the Governor's office (IR). Make quality, faceto-face interpretation more widely available in contact tracing (IR, DI, RU). Contact tracers should plan for extra time and patience when interviewing individuals with disabilities (DI). Providing long-term English education will improve engagement with health information and health-promoting behavior in the long term (IR).

Create and improve multilingual, varied, culturally-appropriate COVIDrelated education

For all populations studied, it is important to explain how, why and when contact tracing is important, and to do this from the perspective of people within the community (AS, BA, DI, HL, IR, RU). Create visual aids for low literacy populations (IR). Create educational materials in multiple native languages of immigrant and refugee groups, including PSA (public service announcement) videos and commercials (HL, IR), social media content (HL, IR), radio broadcasts (HL), posters and signs at key community locations (HL), and mailed information (IR). Ensure caregivers have access to these educational resources (DI).

Emphasize privacy and confidentiality, and clarify how contact tracing information is used

Reassuring participants that information collected for contact tracing will be kept confidential, used only for that purpose, and not shared with other authorities would improve participation in contact tracing for several of the populations studied (RU, BA, HL, IR). Members of several of these populations distrust government and health authorities due to the history of racist mistreatment of minorities during health crises; these worries could be addressed by direct reassurance that contact tracing information will not be shared with other authorities (BA, HL, IR). This reassurance could also ease concerns about potential impacts on employment (BA), and about potential exposure to the police or immigration authorities/ICE (HL, IR).

Conduct in-person contact tracing in the home environment

For some of the populations studied, sending well-trained contact tracers to conduct these conversations at home would improve use of contact tracing (RU, BA, DI). This mode of delivery would allow individuals who do not have access to a landline, cell phone, and/or Internet to participate successfully in contact tracing (RU, BA). Seeing a contact tracer in person – particularly if that person is from one's own community – would help increase trust in the process and facilitate information sharing (RU, BA). For some individuals with disabilities, in-person conversations are critical to successful contact tracing because they allow the involvement of interpreters (DI). In addition, in-person contact tracing would allow contact to be made with people whose addresses but not phone numbers are known (BA).

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Isolation & Self-Quarantining (Topics F&G): Integrated Findings Across Population Groups

Integrated analyses of Topics F&G have been combined because the identified barriers and recommendations relevant to isolation and self-quarantining are very similar for all population groups.

In the findings below, key Ohio population groups that repeatedly mentioned each item are indicated by the following abbreviations:

BA: Black and African American**HL:** Latino and Hispanic

AS: Asian and Asian American **IR:** Immigrant & Refugee

RU: Rural **DI:** Living with Disabilities

Key Barriers to Using Isolation and Self-Quarantining

These categories represent the barriers that most commonly challenge the ability of key Ohio populations to utilize isolation and self-quarantining as public health strategies to help minimize the impact of COVID-19.

Housing challenges

In all of the populations studied, housing conditions make both isolation and selfquarantining very difficult (BA, AS, RU, IR, HL, DI). Many individuals live in small, densely occupied units that house many people, large families, multiple generations, and/or multiple families (BA, AS, RU, IR, HL, DI). Others live in congregate housing arrangements including apartment buildings, halfway houses, group homes, shelters, and migrant camps (BA, AS, HL, DI). These arrangements often require many people to share space, including bathrooms and bedrooms (BA, RU, IR, HL). In addition, caregivers cannot isolate from the person they care for (AS, DI). Alternate living situations are usually not available or affordable (RU, IR, HL, DI). Isolating or selfquarantining also requires someone else to supply groceries or supplies (RU, DI).

Need to work

Many members of all the populations studied must go to work – often in essential, healthcare, and/or low-wage jobs – to provide for their families and maintain a basic income (BA, AS, RU, IR, HL, DI). Attendance is often mandatory at their jobs, with no sick time, working from home, or time off allowed (BA, AS, RU, IR, HL, DI). Individuals fear losing jobs and/or benefits if they stay away from work while isolating or self-quarantining (BA, RU, IR, HL, DI).

Gaps in education, information, and understanding

Members of most of the populations studied lack up-to-date health information relevant to COVID-19, including information about when isolation or self-quarantine is necessary, and how to do it (AS, RU, IR, HL, DI). Low general levels of education and health literacy can exacerbate this problem (RU, IR, HL, DI). Information is commonly available only in English, which is inaccessible to those with limited English literacy or proficiency (IR, HL). Refugees who have survived other communicable diseases may also feel COVID-19 is unlikely to be a significant threat (IR).

Cultural norms, political beliefs, and attitudes

The values and norms of most of the populations studied make isolation and selfquarantining difficult (AS, RU, IR, HL, DI). Ties to family and community are essential parts of normal life and critical to mental health; self-quarantine and isolation are challenging because they separate individuals from their families and communities (AS, RU, IR, HL, DI). Distrust of government authorities limits information sharing and education about isolation and self-quarantining (RU, IR). Many members of rural communities also have political beliefs that can impede isolation and selfquarantining, including not believing that COVID-19 is real, anti-science attitudes, objecting to restraints on personal freedom, and social pressures to conform to these beliefs (RU). COVID-19 is stigmatized in some communities and the resulting fears may prevent engagement with public health advice (IR, HL).

Caregiving responsibilities and needs

Individuals with caregiving responsibilities for children or other family members often do not have anyone else to fill those roles, making isolating or selfquarantining very challenging (BA). Individuals with disabilities may not be able to isolate or self-quarantine without a caregiver (DI).

Commonly Proposed Solutions to Facilitate Use of Isolation and Self-Quarantining

These categories represent our respondents' commonly proposed solutions to the barriers that impede use of isolation and self-quarantining by Ohio populations.

Provide housing options and financial resources

Direct supports could help individuals in all the populations studied isolate or selfquarantine when necessary (BA, AS, RU, IR, HL, DI). This could include providing separate temporary housing for those who need to isolate or self-quarantine; creating temporary free housing options for sick or self-quarantining individuals; offering hotel vouchers or financial assistance to help individuals procure their own separate temporary housing; and creating options for isolation/quarantine within congregate living situations (BA, AS, RU, IR, HL, DI). Community health workers could develop isolation/quarantine plans for those living in different housing situations (BA).

Increase and improve COVID-related education

Increasing education and improving public understanding of COVID-19 in general, as well as isolation and self-quarantining specifically, would help increase use of these protective strategies (BA, AS, RU, HL, DI). Relevant topics for increased educational efforts include the severity and real threat of COVID-19, current public health guidelines, the difference between social distancing and isolation/quarantine, when and why isolation or quarantine are important, and practicalities of how to isolate/quarantine (BA, AS, RU, IR, HL, DI). Other relevant topics include how to stay connected with others during isolation/quarantine (BA), stigma around COVID-19 (IR), and public assistance for individuals who are isolated/quarantined (RU). Educational materials must be accessible in multiple languages and to individuals with low literacy levels (BA, AS, RU, IR, HL); they must include lots of visual aids and culturally relevant messaging with diverse graphics (BA, AS, RU, IR). They must also be sensitive to community norms and religious teachings (IR, HL).

Partner with community members and leaders

Directly involving community members, leaders, and organizations in providing education and support will help increase the use of isolation and self-quarantining (AS, IR, HL). Community health workers (AS, IR, HL) and individuals who speak the languages of communities are essential in this effort (AS, IR, HL). In some communities, it may be necessary for public health authorities to first earn the trust of community leaders (HL).

Provide support for those in isolation or self-quarantine

Direct support for individuals who are isolating or quarantining would make these strategies more widely usable (BA, IR, DI, RU). These support strategies could helpfully include allowing a family member or caregiver to isolate or quarantine with affected individuals (IR, DI), delivering groceries and meals (RU, DI), providing community health workers or other lay workers to make home visits (BA), and providing increased access to social and mental health services (IR).

Other recommendations – relevant to specific populations

Increase social pressure to use isolation and self-quarantining when appropriate (RU)

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Healthcare Access (Topic H): Integrated Findings Across Population Groups

In the findings below, key Ohio population groups that repeatedly mentioned each item are indicated by the following abbreviations:

BA: Black and African American	AS: Asian and Asian American	RU: Rural
HL: Latino and Hispanic	IR: Immigrant & Refugee	DI: Living with Disabilities

Key Barriers to Healthcare Access

These categories represent the barriers that most commonly challenge the ability of key Ohio populations to access primary healthcare, mental healthcare, and substance use treatment to help minimize the impact of COVID-19.

Lack of healthcare access

In all the populations studied, many individuals have no health insurance coverage, which severely limits their ability to access any healthcare (BA, AS, RU, HL, IR, DI). Many do not know where to get healthcare without insurance (BA, AS, HL) and cannot afford to do so (BA, AS, RU, HL, IR). In all the populations studied, many individuals do not have a primary care provider (BA, AS, RU, HL, IR, DI). Some communities and neighborhoods lack enough primary health providers, nurses, and mental health providers for the population (RU, DI), and the healthcare that does exist may be overbooked (RU). In rural areas, primary care providers and free clinics may struggle financially because they do not receive federal funding (RU). Some healthcare and mental health services have closed due to COVID-19 (RU, DI), and individuals who need care may not know which facilities are still operating (AS). Some insurance plans do not cover telehealth appointments (DI). Undocumented immigrants do not qualify for Medicaid or Medicare (HL).

Mistrust of healthcare systems and government

Many members of the populations studied do not trust the healthcare system, due to a history of structural racism, medical experimentation on minorities, and personal experience of poor treatment by providers (BA, AS, HL, IR, DI). Contemporary racism and direct targeting of minority populations in the COVID-19 crisis increases reluctance to use healthcare facilities (BA, AS, HL). Lack of racial and ethnic diversity among healthcare providers, as well as lack of cultural accommodation by healthcare providers, adds to these problems (IR). Undocumented individuals fear that accessing healthcare could expose them to immigration authorities, ICE, imprisonment, and deportation (AS, HL, IR), and could create difficulties for their family members and communities (HL, IR). Some individuals who are eligible for Medicaid do not apply because they do not want to be on a government list (HL). Many members of rural communities do not trust health advice from government leaders, don't believe COVID-19 is a serious issue, and have concerns about confidentiality (RU).

Lack of personal transportation

Members of most of the populations studied lack private means of transportation and can therefore access healthcare only when it is on a public transportation route (BA, AS, RU, HL, IR). Additionally, public transportation and ride-shares are sometimes unaffordable and/or unsafe (BA, AS, RU, IR, IR).

Lack of technology

Many Ohioans rely on telehealth as a substitute for in-person healthcare that is not available during the COVID-19 pandemic, but telehealth use is severely limited for members of the studied populations when they lack access to smart phones, computers, Internet, broadband, and WiFi (BA, RU, IR). Some individuals have no reliable access to a telephone at all (RU).

Language barriers

Language barriers limit the ability of some community members to utilize healthcare (AS, HL, IR). Many healthcare settings provide care only in English, with no access to translators or multilingual staff (AS, HL, IR). The need for care provision in the languages spoken by communities applies to physical healthcare, mental healthcare, and substance use treatment (HL). In addition to limiting the ability of patients and medical providers to communicate effectively, language barriers can create fear and anxiety (AS).

Gaps in education, information, and understanding

Lack of up-to-date health information about COVID-19 can impede appropriate use of healthcare (AS, IR). It can also be difficult for individuals with low general levels of education or low health literacy to understand the information provided (RU, HL, IR). Some community members are exposed to misinformation and false news (and misinformation spreads more easily because accurate information is inaccessible); this further limits their understanding of appropriate healthcare use both in general and relevant to COVID-19 (AS, RU, IR). Some communities lack understanding of how and where to seek care (RU, HL), or how to use telehealth services (HL, IR, DI). Inconsistent information from regulatory agencies and hospitals exacerbates these problems (RU, IR).

Cultural norms and attitudes

Members of many communities experience stigma around mental healthcare and around COVID-19 (AS, HL, IR). Some community members prefer to use alternative medicinal practices instead of Western healthcare (AS, IR).

Other barriers - relevant to specific populations

- Fear of being exposed to COVID-19 at the doctor's office (BA)
- Necessary providers, advocates, and caregivers may not be allowed at medical appointments during the pandemic (DI)
- The lack of providers trained to treat people with disabilities is more acute during the pandemic (DI)

Commonly Proposed Solutions to Facilitate Healthcare Access

These categories represent our respondents' commonly proposed solutions to the barriers that impede use of primary healthcare, mental healthcare, and substance use treatment by Ohio populations.

Provide access to healthcare directly

Increasing access to healthcare involves both reducing financial barriers and improving the availability of services (BA, RU, AS, HL, IR). For many of the studied populations, direct measures to provide free and widespread healthcare access would be most helpful (BA, RU, AS, HL, IR). This could include providing more free clinics in small and underserved communities (RU, AS), offering free access to existing health services (RU), making prescriptions free (RU), and creating lists of clinics and hospitals providing these services (HL). Universal health insurance or less expensive health insurance would help substantially (AS, RU), as would assistance finding and enrolling in insurance programs (RU). Many communities need additional healthcare sites that are open and accepting patients (RU, AS); mental health services are particularly sparse (RU). Many individuals would benefit from continued and expanded telehealth options through clinics and Federally Qualified Health Centers (FQHCs) (AS, IR, DI) and help scheduling telehealth appointments (AS). Re-opening in-person services, providing mobile treatment options, and providing services at home could also help (RU, HL, IR).

Improve transportation

Improving public transportation and providing additional transportation options would facilitate use of healthcare in several of the populations studied (RU, AS, IR, DI).

Partner with trusted community members, leaders, and organizations

Public health authorities should work directly with trusted community members, leaders, and organizations to improve healthcare access (RU, IR). This could include hiring community members as community health workers or health navigators to connect people to appropriate care and payment mechanisms (RU, AS, HL, IR). Local FQHCs are trusted by many communities and could be helpful partners for improving healthcare access (AS).

Improve access to technology

Widespread – and affordable or free – access to cell phones, broadband, and Internet services would increase individuals' access to telehealth (RU, DI).

Provide information and services in multiple languages

Providing health-related information and services in multiple languages – or translators in healthcare settings – would help improve healthcare access (HL, AS, IR). Members of local communities can be hired to do this work (HL, IR).

Other recommendations - relevant to specific populations

- Provide education about mental health and drug use issues (IR)
- Provide education about COVID-19 and relevant healthcare (DI)
- Increase disability-related competencies among healthcare professionals (DI)
- Increase the availability of interpreters or interpretation technology in healthcare facilities (DI)
- Allow caregivers or trusted companions to accompany people with disabilities to medical appointments (DI)