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Closing the Health Disparity Gap in U.S. Immigrant Communities in the Era of COVID-19: A Narrative Review

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In April 2020, the University at Albany was asked by Gov. Andrew Cuomo to research why communities of color in New York have been disproportionately impacted by COVID-19. The goal of this research, carried out in partnership with the New York State Department of Health and Northwell Health, is to add to the existing well of knowledge about health disparities in New York State by identifying the environmental, socioeconomic and occupational factors that explain why COVID-19 has disproportionately harmed Black and Hispanic New Yorkers and to propose practical intervention strategies to eliminate these disparities and save lives.
For additional information about this project please see: www.albany.edu/mhd or contact Theresa Pardo, Special Assistant to the President and Project Director for this initiative at tpardo@ctg.albany.edu.

Closing the Health Disparity Gap in U.S. Immigrant Communities in the Era of COVID-19: A Narrative Review[1]

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Closing the Health Disparity Gap in U.S. Immigrant Communities in the Era of COVID-19: A Narrative Review

Abstract

The COVID-19 pandemic continues to have significant impacts on social determinants of health. Immigrant communities often bear a disproportionate burden of the crisis because of the immigration experience, which serves as an additional social determinant of health. Evidence suggests that these communities are hard hit by economic instability, food insecurities, isolation, lack of safe housing and safe neighborhoods, environmental dynamics that cut them off from systems of support, lack of sufficient access to educational tools that have become critical in remote and digital learning, limited access to health and healthcare resources, low health literacy, and restricted access to culturally and linguistically competent services. In this review we (a) synthesize literature on structural and community level causes of health disparities in immigrant communities; (b) summarize evidence-based interventions that increase collective efficacy in managing social determinants of health in immigrant communities; and (c) recommend strengths and resiliency-based approaches that focus on increasing community capacity to eliminate COVID-19 health disparities.

Keywords: Community; COVID-19; Health disparity; Immigrants; Interventions; Social determinants of health

Closing the Health Disparity Gap in U.S. Immigrant Communities in the Era of COVID-19: A Narrative Review

Introduction and Background

The COVID-19 pandemic continues to have significant impacts on social determinants of health for many population groups who bear a disproportionate burden of the crisis in the United States (U.S.). Immigrants often share socio-economic challenges with their native-born racialized counterparts that predict their health and wellbeing, including living in areas with high concentrations of poverty, ethnic, racial and spatial segregation, poor air quality, unsafe housing, low human capital, and food deserts [1].

We use the terms immigrants and foreign-born interchangeably to refer to residents who were born outside the U.S. We recognize that legally, foreign-born residents shed their immigrant designation once they naturalize. However, our definition of "immigrant" includes all foreign-born residents regardless of immigration status. Despite the commonality of moving across borders, there is significant diversity and heterogeneity in immigrant populations. The immigration experience itself is a social determinant of health; however, such experience varies greatly depending on a wide range of forces including pre-migration conditions, country of origin, productive assets, English proficiency, human capital, immigration status, and demographic factors (including but not limited to race, ethnicity, ability, gender, and class). These forces interact with U.S. social, political, and economic institutions and environments to determine health outcomes. The magnitude of health disparities is a function of the living conditions shaped by individual, interpersonal, community, and institutional challenges and opportunities that immigrants encounter.

According to the U.S. Census Bureau American Community Survey [2], the U.S. foreign-born population reached a record 44.9 million in 2019, which was estimated at 13.7% of the U.S. population. Whites comprise 17% of the foreign-born population, while Blacks make up 10% and Asians make up 27%. Forty-four percent of the Foreign-born are of Hispanic or Latino origin. The share of naturalized citizens is 51.6%, while that of noncitizens is 48.4%. There are an estimated 10.5 million unauthorized immigrants. Reducing health disparities for immigrant populations mandates changing the structural conditions where people live and using social, economic, and political drivers to shape positive health behavior and reinforce protective factors in communities [3].

COVID-19 as a Health, Economic, and Social Crisis for Immigrant Populations

Exposure, Rates of Infections, and Probability of Receiving a Test

Many immigrants are essential service workers on the frontline of the COVID-19 response and face elevated risk of exposure [4]. Immigrants are overrepresented in the healthcare system nationally (see Table 1) [5].

In the Bronx, for instance, immigrants experience a disproportionate burden from COVID-19, and the healthcare system is unable to respond to their unique needs [4]. Using data from the NYC Department of Health and Mental Hygiene, a recent study [6] reports that while individuals who live in primarily immigrant and poorer neighborhoods are tested less often, they are more likely to test positive where communities are larger and have notable Black or immigrant populations.

Foreign-born New Yorkers experienced a disproportionate burden of unemployment and loss of income under the SARS-CoV2 pandemic [7]. Table 2 shows unemployment rates by gender and nativity status for January and April 2020. Foreign-born women in particular

experience the highest rates of unemployment. The economic hardships are exacerbated by the fact that non-citizens have restricted access to safety net programs.

Social Determinants of Health and Structural Causes of Immigrant Vulnerability

The immigration experience itself often serves as an additional Social Determinant of Health (SDOH) [8]. Lack of access to systems that effectively address linguistic isolation and low language proficiency, separation from systems of support, lack of sufficient access to linguistically-appropriate educational resources and services, low health literacy and structural barriers to positive health outcomes predict health outcomes for foreign-born populations and intensify vulnerability. According to the American Community Survey [2], more than forty-six percent (46.4%) of the foreign-born population reported speaking English less than very well. Batalova and Zong [9] reported that the State of California had the highest share of Limited English Proficient (LEP) residents in the U.S. In 2015, approximately 49.0% of immigrants (21 million) were LEP, compared to 1.8% of the U.S.-born population. Compared to the English-proficient population, the overall LEP population (immigrant and U.S. born) was less educated and more likely to live in poverty. The Bureau of Labor Statistics revealed that foreign-born males' labor force participation is 78.0% while that of foreign-born females' is 57.9% [10].

Existing research documented the association of poor communication and cultural non-concordance in healthcare with lack of access to preventive care, delays in and misunderstanding of treatment, receipt of the wrong treatment, denial of treatment, errors in diagnosis, ethical compromises, costly and unnecessary diagnostic tests, difficulty obtaining informed consent, malpractice, negligence, legal liabilities, poor decision making, and increased healthcare costs [11–14].

Comparing recent and non-recent immigrants, Chi and Handcock [15] found significant disparities facing the former's access to and utilization of healthcare primarily due to the intersection of limited English proficiency with poverty, lack of health insurance, inadequate access to linguistically appropriate services, and insufficient public assistance. While limited English proficiency is often associated with low health and digital literacy [16–17]; English proficiency and increased educational levels are associated with online health information seeking behavior [18]. Immigrants with higher levels of health literacy reported better quality of care beyond factors such as education, income, English proficiency, health insurance coverage and having a regular place of care [19]. The lack of culturally and linguistically responsive health care systems intensifies LEP patients' disparities and leads to poor health outcomes and lack of patient satisfaction. For example, research [20] shows that LEP patients in intensive care units and their families have less frequent communications with clinicians, impaired ability to understand decision making concepts and greater tendency to perceive treatment options as culturally and religiously inappropriate. Clinicians are less able to understand and assess the needs of LEP patients and their families and unable to build a productive relationship or understand styles of decision making. Communication barriers, timeliness of interpreter services, and availability of resources in preferred languages result in low satisfaction of LEP patients and their caregivers, lack of a usual place for care, lack of access to regular checkups, and unmet healthcare needs [21–22].

Furthermore, undocumented immigrants face multiple social vulnerabilities arising from low labor access and occupational protections. They are affected by deportations, detentions, and family separations and report poor mental health outcomes, pointing to the effects of governance and legislation [23]. This narrative review becomes critically important in light of the Trump

administration's policies and 400 executive actions on immigration issues which have proven detrimental to immigrant health and wellbeing. These policies included border and interior enforcement, detention and deportations, immigration courts, asylum restrictions, restrictions on 400 executive actions on immigration, including enforcement of border control, deportations of immigrants who do not hold documentations, restrictions on refugee resettlement and the asylum system, as well as the Deferred Action for Childhood Arrivals (DACA), changing the immigration courts, and vetting and visa processes. The previous administrations' policies had a chilling effect on immigrants. A stark example is the Public Charge Rule which deterred many eligible immigrants from accessing social and safety net benefits for fear of losing their bid for documentation if considered a "public charge." Although many of these rules were halted with the advent of the new administration, the fallout will be long lasting, considering the magnitude of these policies and how it permeated the entire system. Hence, proactive approaches to addressing social determinants of health affecting many immigrants, are needed [24].

The SARS-CoV2 pandemic has highlighted many of the health disparities and inequities affecting immigrants in the U.S. One year into the pandemic, it is certainly important to reassess that state of such disparities and inequities and efforts to address them. In addition, we are currently engaged in a national reassessment of the position and treatment of immigrants broadly in the U.S. For all of these reasons, this review represents an important effort at evaluation of the state of the literature and interventions to address such disparities. In this review, our primary research question is, what are evidence-based practices that have been proven effective in alleviating health disparities experienced by immigrants who face a set of vulnerabilities produced by interactions of individual level factors with those at the interpersonal, community, institutional and societal levels?

We synthesize literature on structural and community level causes of health disparities in immigrant communities and we summarize evidence-based interventions that increase collective efficacy in managing social determinants of health in immigrant communities. We conclude by advocating for coordinating strengths and resiliency-based approaches that focus on increasing community capacity to fight against COVID-19 health disparities.

Method

To conduct this review, we adopted a traditional narrative review process, which consists of discussing and summarizing the findings of prior studies [25]. This less stringent approach allowed us to perform a comprehensive synthesis of previously published information, spanning a wide range of theoretical and empirical work [26–27], making room for combining reported findings from works that used varying methods and approaches to examine an array of distinct questions [25].

For this narrative review, we performed a literature search in three databases, Pub-Med, JSTOR, and Google Scholar, using the keywords: immigrant, migrant, foreign born, health disparity, social determinants of health, and intervention. We excluded publications that were not in English and did not have full text. We employed a structural framework that takes into consideration how health outcomes are shaped by macro-level social forces. We focused on interventions that address contextual social, economic, and political factors that moderate and mediate individual level behaviors and cultural practices. Such practices include accessing healthy food, transportation, fair labor systems, safe housing, and poverty alleviating services. In the review, we highlight structural health and non-health related policies and institutional practices and interventions that address access to preventive care, labor protections and inequities, distrust of governmental systems, neighborhood safety, security from stress, anxiety

and invisibility induced by fear of immigration enforced detention and family separation, and provision of linguistically and culturally sensitive systems of care.

In the following sections, we present a synthesis of the literature on structural and community level causes of health disparities in immigrant communities followed by a summary of evidence-based interventions that increase collective efficacy in managing social determinants of health in immigrant communities. We conclude by arguing for coordinating strengths and resiliency-based approaches that focus on increasing community capacity to reduce COVID-19 health disparities.

Results

Causes of Health Disparities in Immigrant Communities

Lack of Linguistically Appropriate Services

Lack of access to linguistically and culturally appropriate information on COVID-19 and lack of inclusive messaging often compels LEP patients to resort to information online and on social media that is less reliable [4]. Linguistically isolated households (where no person under or over 14 years of age speaks English well) can be cut off from healthcare services if information about testing and care is not available in their language. When accessing services, social and physical distancing protocols make in-person interpreter use difficult and telemedicine may not be accessible for LEP immigrants because of lack of access to videoconferencing and/or lack of language and technical proficiency [28]. Miscommunication and the increase in misinformation due to linguistic barriers can impair wellbeing and access to appropriate healthcare [29].

Poverty and Neighborhood Context

Living in high poverty leads to “concentration effects.” It intensifies the impacts and severity of deprivation levels and opportunity structures. Where one resides in the post migration phase defines the opportunity structure. Poverty is a strong social determinant of health. Poverty is

generational and reproduces itself with every generation. Being raised in poverty increases the likelihood of staying in poverty as adults [30]. Poverty is structural. Living in high poverty neighborhoods determines the quality of education one receives as well as one's educational attainment. Resources available to public schools are determined by the local tax base, and high poverty neighborhoods are caught in an endless cycle of deprivation and scarcity [31–32]. The formation of high poverty neighborhoods is a function of racial disparities and racial segregation [33]. Poverty affects high school and college graduation rates [34]. Racially segregated poor neighborhoods fuel racial inequalities and negatively affect economic outcomes. Poverty has staying power through the lifetime [35]. Many immigrants live in multigenerational housing conditions where crowded housing interferes with the ability to isolate or adhere to social distancing [4].

Documentation Status

Policies at the federal level have been detrimental to immigrants who do not have documentation status. These policies have exacerbated the distrust and fear of government authorities and have complicated access to healthcare and other public benefits. The Affordable Care Act excludes undocumented immigrants from health insurance coverage. With the SARS-CoV2 pandemic reducing access to emergency departments, there is no alternate site of care for many unauthorized immigrants who do not have access to healthcare coverage or primary care clinicians.

Undocumented immigrants and those in mixed status families are excluded from the CARES Act cash relief. In the absence of federal relief, the gap is currently being filled by state, local, and private funds. California dedicated $75 million to provide one-time disaster relief emergency funds to undocumented families. Other localities such as Austin, Chicago,

Minneapolis, Seattle, St. Paul, Washington, DC, and Montgomery County, Maryland allocated funds to help low-income families, especially restricting from receiving federal relief. High rates of poverty and income loss intensify vulnerability and compromise health and wellbeing. Cash assistance can soften the consequences of deprivation [36–37] but many immigrants were not eligible for relief funds. Raids by U.S. Immigration and Customs Enforcement (ICE) as well as policies that restrict access to asylum, and threats to the Deferred Action Childhood Arrival (DACA) program caused anxiety and adverse mental health effects. The Trump administration exploited the pandemic to further restrict immigration in the name of controlling the virus and continued to enact executive orders, proclamations, technical adjustments and policy guidance designed to restrict social protections. Such policies exacerbated the social determinants of health for immigrants and their families by intensifying restricting access to public benefits that were intended to shield individuals from the adverse impacts of the pandemic.

Many low-income parents of native-born children are disenrolling their children from the Supplemental Nutrition Assistance Program (SNAP) out of fear that they may be considered public charges. In such cases, their children's enrollment will jeopardize their ability to obtain legal status in the U.S. or result in their deportation [38]. Although the Federal government subsequently encouraged all immigrants to seek testing and medical treatment and access prevention services and ICE stated that the public charge rule will not affect status negatively, fear of accessing public benefits persists. It is estimated that 8.3 million people live in households with at least one non-citizen adult and are at risk of losing their Medicaid or Children's Health Insurance (CHIP) [38].

Evidence-Based Interventions that Address Social Determinants of Health

The National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Health Care (known as the National CLAS Standards) mandate "effective, equitable, understandable, and respectful quality care and services that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy, and other communication needs." [39]. A study conducted by the authors [40], which gauged the perspectives of healthcare professionals on serving Culturally and Linguistically diverse patients during COVID-19, revealed that CLAS standards including the mandate to provide language interpretations were not implemented in many healthcare institutions. The pressure placed on the healthcare system from the pandemic has rendered CLAS unnecessary. As healthcare providers struggled to provide care to COVID-19 affected patients, providing language assistance "fell through the cracks," revealing that these standards were not fully integrated into the strategic and operational system of care.

Structural interventions must address the causes of vulnerabilities that lead to negative health behaviors and use leverage points to strengthen protective factors. They must engage multiple sectors, such as criminal justice, education, transportation, housing, business, and other social services, in addition to the health care system [3]. Interventions also need to use a multi-level approach that includes targeting immigrant populations through proactive and deliberate programs and mainstreaming the unique needs of immigrants into all policies across sectors.

Community Partnership, Collaboration, and Coordination

There are numerous examples of cross-sector collaborations that implement a comprehensive approach to meeting the multiple health and non-health needs of immigrants. A successful example is the Changing Culture Project [41]. The project uses partnerships between health,

education, and resettlement sectors to respond to vocational issues facing refugee young people using a mental health framework. The project provided language, literacy and basic education while integrating workforce development and mental health to improve determinants of wellbeing for this population. Similarly, Henize and colleagues [42] showcased successful community collaborations that engage a wide range of stakeholders from different sectors including legal and medical services. They posit that a socially based community approach that considers non-medical services as "key to a high performing health promoting system" is the ideal to addressing social determinants of health (p. 2). Collaborations must have clearly defined goals, roles, and expectations, strong leadership, seamless communication, resource alignment, and sustainability plans [42]. For cross-sector partnerships to be successful, they must be mutually beneficial and must advance the capacity of all partners to advance their mission more effectively [42].

Linguistically and Culturally Responsive Healthcare Organizations

CLAS underscore the fact that in order to advance health equity, there is a need for healthcare organizations to integrate language access models into their operating systems through the following elements:

A) Clear language access goals and measurable objectives integrated into organizational strategic plans. By establishing goals and measurable objectives for linguistically and culturally sensitive services, leadership is able to reinforce staff accountability through performance evaluations; integrate language access in audits, quality improvement programs and patient satisfaction surveys, and by default includes language access in budgets so that interpretation and translations are covered.

B) Operational policies and protocols that direct planning and actions, set priorities and guide day-to-day activities. These policies and procedures must mandate processes for identification and provision of language access. They should be widely used, accepted, and periodically evaluated and updated. Communication and monitoring strategies must ensure that staff understands and consistently implements them.

C) Human resource policies that diversify staff to reflect the communities served. Staff concordance with patients' ethnic and racial background inspires trust.

D) Data and information systems. Staff should record provision of language services during each visit; patients' decision to decline or refuse an interpreter, patients' satisfaction, and patients' health outcomes. Language preference and use data must not only be captured but analyzed and used to implement corrective actions.

E) Linkages with the external health economy. Healthcare organizations must proactively engage their communities. Community partnerships leverage resources and enable the provision of holistic and comprehensive services to hard-to-reach communities through trusted cultural and linguistic brokers.

F) Consistent cultural competency staff development. Healthcare institutions can increase capacity to provide language services by hiring multilingual staff and assessing their linguistic competence [43–44].

Hence CLAS drive home the fact that to advance health equity for Culturally and Linguistically Diverse populations, institutions need to transform their operational and strategic systems so that elements of linguistic and cultural access are core elements of their systems, rather than add-on or afterthought considerations. However, a survey of healthcare professionals during the pandemic conducted by the authors [45] revealed that there is a lack of large-scale

institutionalization in many healthcare institutions. Many providers who responded to the survey indicated that they view language and cultural assistance through the narrow lens of providing language interpretation to assist with the communication between provider and patient. Many indicated that during the pandemic it became difficult to provide interpretation as institutions struggled to meet patient demands. Language assistance was rendered a luxury that could not be afforded logistically or fiscally and fell by the wayside under the weight of the pandemic because of the absence of complete institutionalization of CLAS.

Other best practices reported in the research and practice literature include; creating a professional career ladder for staff interpreters which was associated with satisfaction with language services and the number of language services related complaints [46]. Training of dual role bilingual staff on aspects of medical care including diabetes management was also associated with improved attitudes, knowledge and skills of staff [47]. Also, providing an interpreter training program on medical terminology increases knowledge [4]. Culturally and linguistically competent organizations institute accountability mechanisms, continuous measurement and quality improvement, systematic collection of data on language needs, needs assessment of the community to plan for services, community partnerships to design and implement services, institution of a complaint and grievance process, and public communication of progress. Hudelson and colleagues [49] effectively tested the feasibility of introducing the collection of data on language needs. Lion and colleagues [50] tested a quality improvement intervention that instituted targeted education messaging and Electronic Medical Records alert system that has been proven effective in improvement of interpreter use, and reduction of language related delays.

Moreover, cultural sensitivity training of providers and clinical staff is an evidence-based intervention that has been proven to increase cultural awareness, open mindedness and multicultural knowledge of concepts of ethnicity and race, and lead to better communications between providers and patients as well as greater patient satisfaction [51–54]. Other interventions have tested the impact of introducing a medical interpreter training program on increased interpreter knowledge and self-reported comfort with medical terminologies and knowledge base.

Other effective system-level practices include organizing multidisciplinary teams to ensure a collaborative approach to (a) screen patient for preferred language; (b) provide patient with language assistance from qualified interpreters; (c) decrease patient wait time; (d) maximize interpreter utilization; and (e) reduce interpreter delay time 552]. Similarly, [56] documented the impact of an initiative focused on screening patients for language needs and the association of providing language assistance with decreased disparities of health outcomes between LEP and their English-speaking counterparts.

CLAS emphasizes that the use of qualified and trained medical interpreters is critical [57–58]. Providing professional interpreter services is associated with increased clinical service usage, including increased visits and number of prescriptions written [59]. Similarly, providing telephonic interpreter services through dual handle phones in patients' rooms is associated with enhanced patient-provider communication, patient post discharge reported outcomes and adequate informed consent [9, 60]. Dowbor and colleagues [48] tested the use of phone interpreting on patients' and providers' perspectives of the quality of engagement and communication. In-person interpretations were associated with use of clinical services, increase

in the number of office visits and phone calls, as well as increase in the number of prescriptions written and filled and increased use of preventive services [59].

Assessment of Social Determinants of Health

Responsive healthcare organizations also understand the impacts of social forces on health and wellbeing, assess social determinants of health and strive to help patients alleviate negative determinants through referrals and partnerships with immigrant-serving community-based organizations in particular and other community institutions in general. Healthcare organizations administer risk assessments to patients to identify social determinants in patients' lives. There are several social determinants' risk assessments including the Protocol for Responding to and Assessing Patients' Assets, Risks and Experiences (PRAPARE) that contains national core and optional community priorities [61].

Assessment of Health Literacy

Providers need to assess health literacy and introduce interventions that tackle issues of low literacy and low health literacy, which are more prevalent among immigrant patients [62]. Immigrants as health vulnerable populations are also communication vulnerable people for having little to no English proficiency [62–63]. In order to better serve communication vulnerable patients, there is a need to create, apply, and assess culturally and linguistically appropriate approaches to patient-centered care [64]. Developing and implementing effective communication strategies is an important intervention to reduce health disparities related to health literacy skill and one that should address health literacy development at three levels: consumer and patient (e.g., creating culturally tailored health information), healthcare provider (e.g., patient-centered communication, plain language communication techniques), and

healthcare systems/organization (e.g., emphasizing cultural diversity within health professional education, creating shame-free environments).

Some interventions that have been successful at enhancing health literacy skills of marginalized and immigrant populations have designed interactive pictorial educational intervention to fit the learning patterns and psychomotor skills of old, adults [65]; used the teach back method for ESL seniors to enhance their understanding of colon cancer prevention information [66]; as well as systematically integrated health literacy knowledge and skills within the Patient Centered Medical Home model of care (PCMH) to "address health literacy challenges across the continuum of care, increasing uptake that includes safety net clinics and community settings, incentives that help organizations prioritize communication improvement, and team-based solutions that better connect practitioners with each other and the patients that they serve," (p. 592) as postulated by Ridpath and colleagues [64].

Health Navigators, Community Health Workers and Home Visiting programs

These model programs essentially take the intervention directly to the clients. There are a number of variations to this mode where culturally and linguistically competent, trained workers deliver information to clients and work with them and their families to facilitate access to services, including health insurance enrollment, educational tutoring, parental classes, home health assistance. The key to the model's effectiveness is delivery of the intervention through trusted cultural brokers who proactively reach out to and serve immigrants where they live. Martijn and colleagues [67] tested the outcome of an AIDS prevention program delivered by lay health advisors for migrants in the Netherlands and by professional health providers. Both had positive impacts on attitude change and knowledge, but programs by lay health advisors led to a stronger intention to discuss AIDS with children. They found these programs to be stronger and

more successful in inducing internally motivated intentions to practice safe sex. Similarly, Torres and colleagues [68] posit that community health workers hold the key to providing culturally responsive access to healthcare and other social services for immigrants and refugees and to bridging the equity gap.

Outreach conducted by Community health workers to increase use of cancer screening including mammography and pap smears [69–72], tuberculosis screening for migrant workers [73], self-management of chronic disease [74–78] were proven effective in increasing knowledge and changing behaviors. Some interventions resulted in increase in screening tests, increased utilization of healthcare services, self-efficacy, reduction of depressions scores, patient satisfaction and improvement in patient outcomes such as reduction in AC1 scores [79].

Community health workers were utilized to improve patients' engagement and follow up. For example, Krieger and colleagues [80] tested the efficacy of an enhanced referral tracking and follow up system on patients' utilization of services and follow up. Workers helped patients with setting appointments, reminded them of appointments, followed up after the appointment and referred them to community resources such as transportation and childcare. Community health workers provide individualized counseling sessions, patient tracking and referral system [81], facilitation of educational interventions using faith-based group education [77], and short skits [73]. Such interventions are proven to yield improvements on utilization of healthcare and positive health outcomes.

Similarly, engagement of key stakeholders in the design, delivery and evaluation of any community-based intervention is a proven best practice that ensures community-buy in. Graigg-Saito and colleagues [82] developed outreach plans with the Cambodian Elder Council where community leaders refined the plans, organized events, considered literacy levels, integrated

health promotion on diabetes and cardiovascular disease with socialization relying on the Buddhist temples and utilizing local Khmer language media. The global fight against the HIV/AIDS epidemic provides valuable lessons for combating COVID-19 health disparities. The insistence of communities affected by HIV/AIDS on the full involvement in the design, development, implementation of prevention, and treatment services led to successful adoption of interventions.

Furthermore, interventions involving the use of items such as multi-media/multilingual materials and signage provide outreach materials such as bilingual booklets, educational videos and printed resources to LEP to improve prevention and management of diseases. For example, [83] tested the impact of these materials on increased knowledge about prevention of diabetes and about risk factors. Similarly, Jenkins and colleagues [84] tested the effect of an educational media campaign using posters, pamphlets, booklets, billboard advertisement, ethnic newspapers, videos and printed materials on awareness raising and increased cancer screening.

Conclusions

In the present review, we synthesized literature on structural and community level causes of health disparities in immigrant communities. We summarized interventions that address social determinants of health in foreign-born communities (i.e., economic stability; neighborhood and built environment, health and healthcare systems, social and community context and educational outreach). Specifically, we underscored evidence-based interventions that increase collective efficacy in managing social determinants of health in immigrant and other underserved communities and for coordinating individual, community, and systems under other public health crisis including HIV/AIDS.

Outreach to immigrant communities needs to rely on strengths and resiliency-based approaches that focus on increasing community capacity to productively shape health outcomes. Engaging with community leaders, immigrant community-based, faith-based and service institutions can lead to the design, implementation and adoption of successful interventions. The motto “Nothing about us, without us” is adopted as an empowerment framework including disabilities, substance abuse, and poverty reduction. Accordingly, we advocate for coordinating strengths and resiliency-based approaches that focus on increasing community capacity to fight against COVID-19 health disparities.

References

1. Chung, I. (2010). Changes in the sociocultural reality of Chinese immigrants: Challenges and opportunities in help-seeking behaviour. *International Journal of Social Psychiatry*, *56*(4), 436-447. doi:10.1177/0020764009105647
2. United States Census Bureau. (2019). *American Community Survey, 2019 ACS 1-Year Estimates Subject Tables, S0502*. Retrieved from https://data.census.gov/cedsci/.
3. Brown, A., Ma, G., Miranda, J., Eng, E., Castille, D., Brockie, T., & Jones, P. (2019). Structural interventions to reduce and eliminate health disparities. *American Journal of Public Health*, *109*(S1), S72-S78. DOI: 10.2105/AJPH.2018.304844
4. Ross, J., Diaz, C., Starrels, J. (2020). The disproportionate burden of COVID-19 for immigrants in the Bronx, New York. *American Medical Association, 180*(8),1043-1044. doi:10.1001/jamainternmed.2020.2131
5. Batalova, J. (2020) *Immigrant health-care workers in the United States*, Migration Policy Institute. Retrieved from https://www.migrationpolicy.org/article/immigrant-health-care-workers-united-states
6. Borjas G. (2020). *Demographic determinants of testing incidence and COVID-19 infections in New York city neighborhoods*. National Bureau of Economic Research. doi:10.3386/w26952
7. Capps, R., Batalova, J., & Gelatt, J. (2020). Fact Sheet: *COVID-19 and Unemployment Assessing the Early Fallout for Immigrants and Other U.S. Workers.* Migration Policy Institute. Retrieved from https://www.migrationpolicy.org/research/covid-19-unemployment-immigrants-other-us-workers
8. Castañeda, H., Holmes, S. M., Madrigal, D. S., Young, M. E., Beyeler, N., & Quesada, J. (2015). Immigration as a social determinant of health. *Annual review of public health*, *36*, 375–392. https://doi.org/10.1146/annurev-publhealth-032013-182419
9. Batalova, J., & Zong, J. (2016, November 10). *Language Diversity and English Proficiency in the United States*. Migration Policy Institute website. Retrieved from https://www.migrationpolicy.org/article/language-diversity-and-english-proficiency-united-states-2015.
10. United States Department of Labor. (2020). *Foreign-born workers: Labor force characteristics — 2019.* https://www.bls.gov/news.release/pdf/forbrn.pdf
11. Derose, K. P., & Baker, D. W. (2000). Limited English proficiency and Latinos' use of physician services. *Medical Care Research and Review*, *57*(1), 76–91. https://doi.org/10.1177/107755870005700105
12. Diamond, L., Izquierdo, K., & Canfield, D. (2019). A systematic review of the impact of patient-physician non-English language concordance on quality of care and outcomes. *Journal of General Internal Medicine*, 34(8) 1591-1606. doi:10.1007/s11606-019-04847-5
13. Lee, J., Perez-Stable, E., & Gregorich, S. (2017). Increased access to professional interpreters in the hospital improves informed consent for patients with Limited English Proficiency. *Journal of General Internal Medicine*. 32(8), 863-870. doi:10.1007/s11606-017-3983-4
14. Youdelman, M. (2003). Providing language access in healthcare settings. Presented at the working together to increase immigrant women's access to reproductive healthcare. Retrieved from www.albany.edu/womeningov/publications
15. Chi, J., and Handcock, M. (2014). Identifying sources of healthcare underutilization among California's immigrants. *Journal of Racial and Ethnic Health Disparities*, 1(3), 207-218.

doi:10.1007/s40615-014-0028-0
16. Becerra, B., Arias, D., & Becerra, M. (2017). Low literacy among immigrant Hispanics. *Journal of Racial and Ethnic Health Disparities*, 4(3), 480-483. doi:10.1007/s40615-016-0249-5
17. Pérez-Stable, E. J., & El-Toukhy, S. (2018). Communicating with diverse patients: How patient and clinician factors affect disparities. *Patient Education and Counseling*, *101*(12), 2186–2194. https://doi.org/10.1016/j.pec.2018.08.021
18. Nguyen, A., Mosadeghi, S., & Almario, C. (2017). Persistent digital divide in access to and use of the Internet as a resource for health information: Results from a California population-based study. *International Journal of Medicine Informatics*. 103, 49-54. doi:10.1016/j.ijmedinf.2017.04.008
19. Calvo, R. (2016). Health literacy and quality of care among Latino immigrants in the United States. *Health & Social Work*, 41(1), e44-e51. doi:10.1093/hsw/hlv076
20. Barwise, A., Nyquist, C., Suarez, N., Jaramillo, C., Thorsteinsdottir, B., Gajic, O., & Wilson, M. (2019). End of life decision making for ICU patients with Limited English Proficiency: A qualitative study of healthcare team insights. *Critical Care Medicine*, 47(10), 1380-1387. doi:10.1097/CCM.0000000000003920
21. Jang, Y., & Miyong, T. (2019). Limited English Proficiency and health service use in Asian Americans. *Journal of Immigrant and Minority Health*, 21(2), 264-270. doi:10.1007/s10903-018-0763-0
22. Santos Malavé, C., Diggs, D., & Sampayo, E. M. (2019). Spanish-speaking caregivers' experience with an emergency department pediatric asthma-care bundle quality initiative. *Journal of Racial and Ethnic Health Disparities*, *6*(4), 660–667. doi:10.1007/s40615-019-00564-1
23. Hacker, K., Chu, J., Arsenault, L., & Marlin, R. (2012). Provider's perspectives on the impact of Immigration and Customs Enforcement (ICE) activity on immigrant health. *Journal of Health Care of the Poor and Underserved*, 23(2): 651–665. doi:10.1353/hpu.2012.0052
24. Pierce, S., and Bolter,J. (2020) *Dismantling and Reconstructing the U.S. Immigration System: A Catalog of Changes Under the Trump Presidency*. Migration Policy Institute. Retrieved from https://www.migrationpolicy.org/sites/default/files/publications/MPI_US-Immigration-Trump-Presidency-Final.pdf
25. Baumeister, R. F. (2003) Writing a literature review. In M. J. Prinstein & M. D. Patterson (eds.) *The portable mentor* (p. 58). Springer, Boston, MA. https://doi.org/10.1007/978-1-4615-0099-5_5
26. Ferrari R. (2015). Writing narrative style literature reviews. *Medical Writing*, *24*(4), 230-235. DOI: 10.1179/2047480615Z.000000000329
27. Green, B. N., Johnson, C. D., & Adams, A. (2006). Writing narrative literature reviews for peer-reviewed journals: Secrets of the trade. *Journal of Chiropractic Medicine*, *5*(3), 101-117. https://doi.org/10.1016/S0899-3467(07)60142-6
28. Endale, T., St. Jean, N., & Birman, D. (2020). COVID-19 and refugee and immigrant youth: A community-based mental health perspective. *Psychological Trauma: Theory, Research, Practice and Policy, 12*(S1), S225-S227. DOI: 10.1037/tra0000875

29. Mesa Vieira, C., Franco, O. H., Gómez Restrepo, C., & Abel, T. (2020). COVID-19: The forgotten priorities of the pandemic. *Maturitas*, *136*, 38–41. https://doi.org/10.1016/j.maturitas.2020.04.004
30. Borjas G. J. (2011). Poverty and program participation among immigrant children. *The Future of children*, *21*(1), 247–266. https://doi.org/10.1353/foc.2011.0006
31. Crane, J. (1991). Effects of neighbohoods on dropping out of school and teenage childbearing. In Jencks C., & Peterson P. E. (Eds.), *The urban underclass* (pp. 299–320). Brookings; Washington, D.C.
32. Wilson, W. J. (1987.) *The truly disadvantaged: The inner city, the underclass, and public policy*. Chicago: The University of Chicago Press.
33. Massey, D. S. (1990). American apartheid: Segregation and the making of the underclass. *American Journal of Sociology 96*(2), 329–57. https://doi.org/10.1086/229532
34. Quillian, L. (2014). Does segregation create winners and losers? Residential segregation and inequality in educational attainment, *Social Problems, 61*(3), 402–426. https://doi.org/10.1525/sp.2014.12193
35. Swisher, R. R., Kuhl, D. C., & Chavez, J. M. (2013). Racial and ethnic differences in neighborhood attainments in the transition to adulthood. *Social Forces; A Scientific Medium of Social Study and Interpretation*, *91*(4), 1399–1428. https://doi.org/10.1093/sf/sot008
36. California Department of Social Services. (2020). Retrieved from https://www.cdss.ca.gov/inforesources/immigration/covid-19-drai.
37. Chishti, M, & Bolter, J. (2020). Vulnerable to COVID-19 and in frontline jobs, Immigrants are mostly shut out of U.S. relief. Migration Policy Institute website. Retrieved from https://www.migrationpolicy.org/article/covid19-immigrants-shut-out-federal-relief.
38. Page, K. R., Venkataramani, M., Beyrer, C., & Polk, S. (2020). Undocumented U.S. Immigrants and Covid-19. *The New England journal of medicine*, *382*(21), e62. https://doi.org/10.1056/NEJMp2005953
39. The National CLAS Standards. (2018). Office of Minority Health, U.S. Department of Health and Human Services. Retrieved from https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=2&lvlid=53.
40. Ahmed, R., Refki, D., Altarriba, J., Sa, E., Avery, M., & Abdelkarim, S. (2021a). Exploring the role of information sources in vaccine decision-making among four culturally and linguistically diverse communities in the U.S. [Manuscript submitted for publication and under review].
41. Bond, L., Giddens, A., Cosentino, A., Cook, M., Hoban, P., Haynes, A., Scaffidi, L., Dimovski, M., Cini, E., & Glover, S. (2007). Changing cultures: enhancing mental health and wellbeing of refugee young people through education and training. *Promotion & education*, *14*(3), 143–149. https://doi.org/10.1177/175797590701400302
42. Henize, A. W., Beck, A. F., Klein, M. D., Adams, M., & Kahn, R. S. (2015). A road map to address the social determinants of health through community collaboration. *Pediatrics*, *136*(4), e993–e1001. https://doi.org/10.1542/peds.2015-0549.
43. Moreno, M. R., Otero-Sabogal, R., & Newman, J. (2007). Assessing dual-role staff-interpreter linguistic competency in an integrated healthcare system. *Journal of General Internal Medicine*, *22 Suppl 2*(Suppl 2), 331–335. doi:10.1007/s11606-007-0344-8
44. Nunez de Jaimes, F., Batts, F., Noguera, C., Guerrero, L., & Moreno, G. (2013). Implementation of language assessments for staff interpreters in community health

centers. *Journal of Health Care for the Poor and Underserved*, *24*(3), 1002–1009. doi:10.1353/hpu.2013.0149

45. Ahmed, R., Refki, D., Altarriba, J., & Sa, E. (2021b). Understanding frontline healthcare and social service providers' experiences serving limited English proficient patients during COVID-19. [Manuscript submitted for publication and under review].
46. Marshall, J., Booth, T., Devane, N., Galliers, J., & Greenwood, H, Hilari, K., Talbot, R., Wilson, S., & Woolf, C. (2016) Evaluating the benefits of Aphasia Intervention delivered in virtual reality: Results of a quasi-randomised study. *PLOS ONE 11*(8), e0160381. https://doi.org/10.1371/journal.pone.0160381
47. McCabe J. A. (2006). An assignment for building an awareness of the intersection of health literacy and cultural competence skills. *Journal of the Medical Library Association*, *94*(4), 458–461.
48. Dowbor, T., Zerger, S., Pedersen, C., Devotta, K., Solomon, R., Dobbin, K., & O'Campo, P. (2015). Shrinking the language accessibility gap: a mixed methods evaluation of telephone interpretation services in a large, diverse urban health care system. *International Journal for Equity in Health*, *14*, 83. doi:10.1186/s12939-015-0212-9
49. Henderson, S., Kendall, E., & See, L. (2011). The effectiveness of culturally appropriate interventions to manage or prevent chronic disease in culturally and linguistically diverse communities: a systematic literature review. *Health & Social Care in the community*, *19*(3), 225–249. doi:10.1111/j.1365-2524.2010.00972.x
50. Lion, K. C., & Raphael, J. L. (2015). Partnering health disparities research with quality improvement science in pediatrics. *Pediatrics*, *135*(2), 354–361. DOI: 10.1542/peds.2014-2982
51. Bischoff, A., Perneger, T. V., Bovier, P. A., Loutan, L., & Stalder, H. (2003). Improving communication between physicians and patients who speak a foreign language. *The British Journal of General Practice*, *53*(492), 541–546.
52. Chevannes M. (2002). Issues in educating health professionals to meet the diverse needs of patients and other service users from ethnic minority groups. *Journal of Advanced Nursing*, *39*(3), 290–298. doi:10.1046/j.1365-2648.2002.02276.x
53. Majumdar, B., Browne, G., Roberts, J., & Carpio, B. (2004). Effects of cultural sensitivity training on health care provider attitudes and patient outcomes. *Journal of Nursing Scholarship*, *36*(2), 161–166. doi:10.1111/j.1547-5069.2004.04029.x
54. Schim, S. M., Doorenbos, A. Z., & Borse, N. N. (2006). Enhancing cultural competence among hospice staff. *The American Journal of Hospice & Palliative Care*, *23*(5), 404–411. https://doi.org/10.1177/1049909106292246
55. Regenstein, M., Huang, J., West, C., Trott, J., Mead, H., & Andres, E. (2012). Improving the quality of language services delivery: findings from a hospital quality improvement initiative. *Journal for Healthcare Quality*, *34*(2), 53–63. DOI: 10.1111/j.1945-1474.2011.00190.x
56. Standiford, C. J., Nolan, E., Harris, M., & Bernstein, S. J. (2009). Improving the provision of language services at an academic medical center: ensuring high-quality health communication for limited-English-proficient patients. *Academic Nedicine*, *84*(12), 1693–1697. DOI: 10.1097/ACM.0b013e3181bf4659
57. Ginde, A. A., Sullivan, A. F., Corel, B., Caceres, J. A., & Camargo, C. A., Jr (2010). Reevaluation of the effect of mandatory interpreter legislation on use of professional

interpreters for ED patients with language barriers. *Patient Education and Counseling*, *81*(2), 204–206. DOI: 10.1016/j.pec.2010.01.023

58. Novak-Zezula, S., Boltzmann, L., Sculze, B., Karl-Trummer, U., Krajic, K., & Pelikan, J. (2005). Improving interpreting in clinical communication: Models of feasible practice from the European project Migrant-friendly Hospitals. *Diversity in Health and Social Care,* 2, 23-32.
59. Jacobs, E. A., Lauderdale, D. S., Meltzer, D., Shorey, J. M., Levinson, W., & Thisted, R. A. (2001). Impact of interpreter services on delivery of health care to limited-English-proficient patients. *Journal of General Internal Medicine*, *16*(7), 468–474. DOI: 10.1046/j.1525-1497.2001.016007468.x
60. Lee, J. S., Pérez-Stable, E. J., Gregorich, S. E., Crawford, M. H., Green, A., Livaudais-Toman, J., & Karliner, L. S. (2017). Increased access to professional interpreters in the hospital improves informed consent for patients with limited English proficiency. *Journal of General Internal Medicine*, *32*(8), 863–870. doi:10.1007/s11606-017-3983-4
61. National Association of Community Health Centers. (2019). *Protocols for Responding to, Assessing Patients' Risks, Assets and Experiences*. Retrieved from http://www.nachc.org/research-and-data/prapare/about-the-prapare-assessment-tool/
62. Hoffman-Goetz L, Donelle, L. Ahmed R. (2014). *Health literacy in Canada: A primer for students*. Toronto: Canadian Scholars' Press Inc.
63. American Medical Association. (2006). *Improving communication—Improving care*. Retrieved from https://idainstitute.com/fileadmin/user_upload/documents/PCC_Resources/PCC_Definitions/AMA_Improving_Communication_Improving_Care_01.pdf
64. Ridpath, J. R., Larson, E. B., & Greene, S. M. (2012). Can integrating health literacy into the patient-centered medical home help us weather the perfect storm? *Journal of General Internal Medicine*, *27*(5), 588–594. DOI: 10.1007/s11606-011-1964-6
65. Park, M. (2011). Effects of interactive pictorial education on community dwelling older adult's self-efficacy and knowledge for safe medication. *Journal of Korean Academic Nursing*, *41*(6), 795–804. doi:10.4040/jkan.2011.41.6.795
66. McWhirter, J., Todd, L., & Hoffman-Goetz, L. (2011). Comparing written and oral measures of comprehension of cancer information by English-as-a-Second-Language Chinese immigrant women. *Journal of Cancer Education*, *26*(3), 484–489. doi:10.1007/s13187-011-0219-x
67. Martijn, C., de Vries, N. K., Voorham, T., Brandsma, J., Meis, M., & Hospers, H. J. (2004). The effects of AIDS prevention programs by lay health advisors for migrants in The Netherlands. *Patient Education and Counseling*, *53*(2), 157–165. doi:10.1016/S0738-3991(03)00125-3
68. Torres, S., Labonté, R., Spitzer, D. L., Andrew, C., & Amaratunga, C. (2014). Improving health equity: the promising role of community health workers in Canada. *Healthcare Policy/ Politiques de Sante*, *10*(1), 73–85.
69. Bird, J. A., McPhee, S. J., Ha, N. T., Le, B., Davis, T., & Jenkins, C. N. (1998). Opening pathways to cancer screening for Vietnamese-American women: lay health workers hold a key. *Preventive Medicine*, *27*(6), 821–829. https://doi.org/10.1006/pmed.1998.0365
70. Giarratano, G., Bustamante-Forest, R., & Carter, C. (2005). A multicultural and multilingual outreach program for cervical and breast cancer screening. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, *34*(3), 395–402. doi:10.1177/0884217505276059

71. Lam, T. K., McPhee, S. J., Mock, J., Wong, C., Doan, H. T., Nguyen, T., Lai, K. Q., Ha-Iaconis, T., & Luong, T. N. (2003). Encouraging Vietnamese-American women to obtain Pap tests through lay health worker outreach and media education. *Journal of General Internal Medicine, 18*(7), 516–524. doi:10.1046/j.1525-1497.2003.21043.x
72. Yu, M. Y., Song, L., Seetoo, A., Cai, C., Smith, G., & Oakley, D. (2007). Culturally competent training program: a key to training lay health advisors for promoting breast cancer screening. *Health Education & Behavior, 34*(6), 928–941. doi:10.1177/1090198107304577
73. Poss, J. E., & Rangel, R. (1997). A tuberculosis screening and treatment program for migrant farmworker families. *Journal of Health Care for the Poor and Underserved, 8*(2), 133–140. DOI: 10.1353/hpu.2010.0496
74. Griffin, J. A., Gilliland, S. S., Perez, G., Helitzer, D., & Carter, J. S. (1999). Participant satisfaction with a culturally appropriate diabetes education program: the Native American Diabetes Project. *The Diabetes Educator, 25*(3), 351–363. doi:10.1177/014572179902500306
75. Griffiths, C., Motlib, J., Azad, A., Ramsay, J., Eldridge, S., Feder, G., Khanam, R., Munni, R., Garrett, M., Turner, A., & Barlow, J. (2005). Randomised controlled trial of a lay-led self-management programme for Bangladeshi patients with chronic disease. *The British journal of general practice: The Journal of the Royal College of General Practitioners, 55*(520), 831–837.
76. Lorig, K., & González, V. M. (2000). Community-based diabetes self-management education: Definition and case study. *Diabetes Spectrum,13*(4), 234.
77. Lujan, J., Ostwald, S. K., & Ortiz, M. (2007). Promotora diabetes intervention for Mexican Americans. *The Diabetes Educator, 33*(4), 660–670. doi:10.1177/0145721707304080
78. Si, D., Bailie, R. S., Togni, S. J., d'Abbs, P. H., & Robinson, G. W. (2006). Aboriginal health workers and diabetes care in remote community health centres: A mixed method analysis. *The Medical Journal of Australia, 185*(1), 40–45. https://doi.org/10.5694/j.1326-5377.2006.tb00451.x
79. Corkery, E., Palmer, C., Foley, M. E., Schechter, C. B., Frisher, L., & Roman, S. H. (1997). Effect of a bicultural community health worker on completion of diabetes education in a Hispanic population. *Diabetes Care, 20*(3), 254–257. https://doi.org/10.2337/diacare.20.3.254
80. Krieger, J., Collier, C., Song, L., & Martin, D. (1999). Linking community-based blood pressure measurement to clinical care: a randomized controlled trial of outreach and tracking by community health workers. *American Journal of Public Health*, *89*(6), 856–861. doi:10.2105/ajph.89.6.856
81. Morisky, D. E., Lees, N. B., Sharif, B. A., Liu, K. Y., & Ward, H. J. (2002). Reducing disparities in hypertension control: A Community-Based Hypertension Control Project (CHIP) for an ethnically diverse population. *Health Promotion Practice*, *3*(2), 264–275. doi:10.1177/152483990200300221
82. Grigg-Saito, D., Och, S., Liang, S., Toof, R., & Silka, L. (2008). Building on the strengths of a Cambodian refugee community through community-based outreach. *Health Promotion Practice*, *9*(4), 415–425. doi:10.1177/1524839906292176
83. Alcalay, R., Alvarado, M., Balcazar, H., Newman, E., & Huerta, E. (1999). Salud para su Corazón: a community-based Latino cardiovascular disease prevention and outreach model. *Journal of Community Health*, *24*(5), 359–379. doi:10.1023/a:1018734303968

84. Jenkins, C. N., McPhee, S. J., Bird, J. A., Pham, G. Q., Nguyen, B. H., Nguyen, T., Lai, K. Q., Wong, C., & Davis, T. B. (1999). Effect of a media-led education campaign on breast and cervical cancer screening among Vietnamese-American women. *Preventive Medicine, 28*(4), 395–406. doi:10.1006/pmed.1998.0444

Table 1. Immigrant share of the workforce in the U.S. in 2018

All Workers	17.4%
All Healthcare Workers	17.9%
All Healthcare Practitioners and Technical Occupations	15.6%
Physicians and Surgeons	28.0%
Registered Nurses (RNs)	15.5%
All Healthcare Support Occupations	22.4%
Home Health Aides	37.9%
Personal Care Aides	26.0%
Nursing Assistants	22.4%

Source: Batalova, J. (2020) *Immigrant health-care workers in the United States*, Migration Policy Institute. Retrieved from https://www.migrationpolicy.org/article/immigrant-health-care-workers-united-states

Table 2: Unemployment rates by gender and nativity status for January and April 2020

Unemployment Rates	January 2020	April 2020
Foreign-Born Women	4.5%	18.0%
Foreign Born Men	3.6%	15.3%
Native Born Women	3.6%	15.3%
Native Born Men	4.3%	12.8%

Sources: United States Census Bureau. (2019). *American Community Survey, 2019 ACS 1-Year Estimates Subject Tables, S0502*. Retrieved from https://data.census.gov/cedsci/.
United States Department of Labor. (2020). *Foreign-born workers: Labor force characteristics — 2019.* https://www.bls.gov/news.release/pdf/forbrn.pdf
Migration Policy Institute. (2020). *U.S. unemployment trends by nativity, gender, industry, & more, before and during pandemic*. Retrieved from https://www.migrationpolicy.org/programs/migration-data-hub/us-unemployment-trends-during-pandemic