MAPPING SPATIAL INEQUALITY

A BIMI Report
Mapping Spatial Inequality
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The National Science Foundation under grant #2017044, Haas Institute for a Fair and Inclusive Society, Othering and Belonging Institute, Berkeley Collegium Grant Program, D-Lab, and CITRIS and the Banatao Institute.
BIMI is a partnership of migration experts at UC Berkeley who investigate the social, political, legal, and economic dynamics of migration globally as well as locally. Our vision is to become the go-to place for migrants, students, researchers, academics, journalists, policymakers, non-profits, corporations, and community members seeking credible and evidence-based information on migration.

We study human mobility and the precarity that migrants face in their host country. We strive to be a resource for all migrants and especially the vulnerable migrants (undocumented, refugees, DACA, and forced migrants among others). BIMI's researchers will help policy-makers lower the barriers that these migrants face.

We embrace new data-gathering technologies as well as embedded, on-the-ground fieldwork, drawing from the interdisciplinary expertise of faculty, students, and the communities with which we engage. Bringing together research, training, and public engagement, BIMI aspires to inform, educate and transform knowledge to improve the well-being of migrants and the communities they live in.

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FROM THE DIRECTOR'S DESK

I am the faculty director of Berkeley Interdisciplinary Migration Initiative (BIMI). This report is the result of three years of work on the NSF grant ‘Understanding Organizational Inequality in Immigrant-serving Nonprofits’. I am grateful to NSF for funding the project and all the students and staff who worked on it (for a detailed list, see the acknowledgements!). I hope that you enjoy learning about the project, its key activities, and the products we created and that are available for public use.

Our Project Questions and Goals:

This project investigated inequities in the nonprofit sector, specifically those tied to the ongoing demographic diversification of the country via immigration. The project asked:

- To what extent do inequities in nonprofit immigrant services exist? And
- What drives inequalities across place and types of immigrant communities?

The main goal of this project was to study immigrant services at the organizational level and map service provision in three areas:

- health care,
- immigration legal assistance, and
- refugee resettlement in over 80 counties in the U.S. Southwest.

Researchers who study nonprofit organizations and the welfare state underscore the explosion of a public–private partnership model in the United States: social and human services are increasingly provided by nonprofit organizations. Nonprofit services are not, however, universally or broadly available. A small literature spotlights geographic inequities in nonprofit services in rural areas and suburbs, especially as low-income residents move into suburban communities. We know little, however, about nonprofit service provision to immigrant communities, in particular, and how the presence of community-based organizations maps onto particular needs (e.g., for services in specific languages, or for particular health and legal needs), nor how well services cover different geographical areas.

This project had a number of specific research goals to help answer these questions:

- to build an original dataset of immigrant-serving nonprofits in Arizona, Nevada, and 49 California counties;
- to develop a service accessibility index to identify civic inequality through the mismatch between the demand and supply of nonprofit immigrant services;
- to test “demand” theories of the nonprofit sector using demographic data from the American Community Survey about foreign birth, noncitizenship, poverty, lack of health insurance, and language proficiency at the census tract level (or smallest available geographic area)
- to investigate “supply” explanations of the nonprofit sector by using contextual data on the availability of resources; and
- to investigate alternate explanations of service accessibility by considering the political legitimacy and mobilization of immigrant communities.
FROM THE DIRECTOR’S DESK

Student Engagement and Training

Beyond the scientific and real-world importance of our research, this project also served to provide dozens of graduate and undergraduate students with transformational training and professional development.

Student researchers:
- Built skills in the extraction and manipulation of census data in small geographies.
- Gained advanced methodological expertise in statistical methods and index calculations.
- Learned to write thorough research logs for clear data gathering and to allow for replication of data collection and analysis.
- Received training in writing research reports, research articles, and research papers and practiced presenting findings at conferences and workshops.
- Deepened their knowledge of migration research via literature reviews and regular interaction with the PI and project staff/affiliates who are experts in interdisciplinary migration research.
- Gained experience in team-based research and honed professional communication and interpersonal skills with teammates and with supervisors.
- Honed critical thinking and problem-solving skills in resolving research quandaries (alone or with the team).

Map/Index

We also sought to have this project provide a public good, beyond academic circles. We developed a publicly-accessible mapping tool (https://bimi.berkeley.edu/research/mapping-spatial-inequality) to allow stakeholders and members of the general public to visualize and locate immigrant service provision across California, Nevada and Arizona. This tool provides information on clinic location, opening hours, services, and languages served as well as contact information. We aimed for a broader impact for society by providing information for immigrants or those who are assisting immigrants to find services (e.g., teachers, social workers, refugee resettlement workers) so that people can identify places to go to access health care and immigrant legal assistance. The COVID pandemic showed how vital it is to have timely, accurate information on health care services, especially for vulnerable and low-income residents.

In addition to the mapping tool, we developed a single index to identify geographic areas where immigrants reside and are potentially underserved. This index is the first to bring together population “demand” and clinic service “supply” in a single measure for immigrant services. We also improve upon prior analyses by using travel times—isochrones—instead of map distance in the index. This better mirrors the real experience of people traveling to seek services. Finally, our index is calculated at a very small area (the census tract) over three states, spanning a significant geographic and social space at a much more granular level than previous work.
FOR MORE INFORMATION

Interested in learning more? Please see:

Policy Briefs

- Gaps in Health Services for Immigrants in Arizona's Metro Areas (2021)
- Gaps in Health Services in Coastal Southern California (2021)
- Gaps in Legal Aid Services in Arizona's Metro Areas (2021)
- Gaps in Legal Services in Coastal Southern California (2022)
- Gaps in Health Services for Immigrants in the Central Valley (2020)
- Gaps in Legal Services for Immigrants in the Central Valley (2020)
- Gaps in Legal Services for Immigrants in the Bay Area (2020)
- Gaps in Health Services for Immigrants in the Bay Area (2020)

Academic publications


Podcast

- Socius Podcast
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INTRODUCTION

In this report, we identify the gaps in access to health and legal services for immigrants in three states—California, Arizona, and Nevada—and we provide policy recommendations to address those gaps.

As newcomers, and oftentimes noncitizens, immigrants may face multiple challenges such as language barriers, lack of familiarity with U.S. institutions, low incomes, and possible exclusion from government programs. As a result, immigrants may rely on nonprofit organizations for access to vital social services, such as health care in their native language or affordable legal aid with immigration law. Furthermore, immigrants are increasingly living in mid-sized cities and suburbs, places where such services may be sparser. In fact, there is a “new geography” of poverty and migration, driven by the rising cost of living in urban centers. Low-income immigrants, in particular, may move to suburban communities that have historically not provided them with services. For example, immigrants now make up one-third or more of the poor residents of the suburbs surrounding San Francisco.

Nonprofit organizations play a critical role in providing immigrants with access to health and legal services because the U.S. federal government primarily funds and staffs immigration enforcement efforts, not immigrant integration initiatives. In recent decades, the federal government has not only failed to provide intentional safety nets for immigrants, especially those without legal status, but has also actively made it more difficult to access existing resources.

This political legacy is evident in current legislation that prohibits most undocumented immigrants from accessing a) public health insurance such as Medicaid or Medicare and b) legal aid through any legal organization that receives federal grants from the Legal Services Corporation. Even when immigrants can access public programs, they may experience fear that using such programs will be seen as evidence of being a “public charge” and will negatively impact their ability to gain permanent residence or citizenship in the future.

Affordable and accessible legal aid services are key to immigrant well-being. Without the ability to obtain visas or work authorization, or to get help in navigating the U.S. immigration system, immigrants may be socially isolated and subjected to precarious and exploitative employment situations. The fear of falling out of status, or the uncertainty of long wait times for immigration processing, from asylum claims to naturalization applications, substantially harms immigrants and their families. Some risk detention and deportation. Unstable legal status is also a significant stressor, with mental and physical health repercussions that can harm not just an affected immigrant but also family members, especially spouses and children.

Access to health is another important concern: non-citizens are more than twice as likely as native-born residents to lack regular

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1 See Mattiuzzi and Weir (2019): “Governing the New Geography of Poverty in Metropolitan America.”
2 We define “poor” as a household’s income falling below 200% of the federal poverty line.
4 See BIMI’s policy brief by Almasalkhi et al, “Responding to the Public Charge Rule: Immigrant Well-being and Access to Services.”
access to healthcare—from doctor’s office visits to emergency room care—and this impact extends to the US-born children of immigrant parents. Lack of access to health services results in untreated illnesses and injuries, as well as the development of longer-term health conditions. Most undocumented immigrants are still uninsured because they are barred from obtaining public health insurance. These individuals cannot receive care without help from organizations that provide free or affordable health services in their communities.

Immigrant-serving health and legal aid nonprofits clearly fill an important vacuum in providing public services to immigrants, but we find that the locations of these nonprofits can be far from where some immigrants actually live. Investing in more reliable access to health and legal services would support immigrants’ capacity to foster a sense of belonging and support their families, ultimately benefiting local communities and the millions of immigrants who live in California, Arizona, and Nevada.

In this brief, we present our findings on the existing spatial inequality of health and legal clinics in relation to where immigrants live so as to provide recommendations to policymakers, philanthropists, and stakeholders.

"Immigrants may rely on nonprofit organizations for access to vital social services, such as health care in their native language or affordable legal aid with immigration law."

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5 In 2020, California expanded Medi-Cal benefits to DACA recipients and undocumented Californians under 26. In 2022, undocumented Californians over 50 also became qualified to receive Medi-Cal.
Across the U.S., the federal government gives money to fund health clinics to help people without insurance or who have a low income. These federally qualified health clinics (FQHCs), sometimes called community health clinics (CHCs), can offer a range of health services, from primary health care to cancer therapy. To be funded, clinics must be located in places where the need for medical services is most significant. FQHCs are intended to provide a safety net for rural, migrant, homeless, publicly-housed, undocumented, and uninsured communities. FQHCs can sometimes offer some services to help culturally and linguistically diverse patients. Such services include language interpretation, health education, and insurance eligibility assistance. In order to keep up with the high demand, the number and capacity of FQHCs have skyrocketed. In 2010, FQHCs served 19 million patients. In 2019, this rose to 29 million patients.

President Lyndon B. Johnson established the first handful of FQHCs in the 1960s, declaring a “war on poverty” by introducing new social welfare programs. However, the nationwide FQHC system as we know it today was not established until 1989, when the government began subsidizing Medicare and Medicaid reimbursements to FQHCs. For context, private health providers often prefer not to serve Medicare and Medicaid patients because public insurance reimbursement rates are lower than those of private insurance companies. However, the government’s subsidization of these public insurance reimbursement rates to FQHCs encouraged the creation and expansion of these health centers. The FQHC program enjoys support from both political parties and expanded significantly in the past few decades; both the Bush and Obama administrations increased the federal budget for FQHCs. Most notably, the Affordable Care

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6 See Weir et al (2010): “Use of Enabling Services by Asian American, Native Hawaiian, and Other Pacific Islander Patients at 4 Community Health Centers”
7 See National Association of Community Health Centers (2021): “Community Health Center Chartbook”
8 See Kelleher and Gardner (2016): “Are FQHCs the Solution to Care Access for Underserved Children?”
"Uninsured people with limited English proficiency face greater distance-based barriers to accessing health services compared to English speakers."

Studies show that existing FQHC are generally located in places where they can reach their intended populations. Primary Care Service Areas with at least one FQHC are more likely to contain a higher proportion of Black, Hispanic, low-income, linguistically isolated, and uninsured individuals. Hispanic immigrants who live in more established, long-standing immigrant destinations still have better access than Hispanic immigrants who live in newer destinations. However, studies suggest that this healthcare safety net is being expanded into newer immigrant destinations.

We highlight that many immigrant communities still do not have easy access to health services. Uninsured people with limited English proficiency face greater distance-based barriers to accessing health services compared to English speakers.

While the FQHC program has been successful in closing the health service gap in many underserved communities, there are still many communities that remain underserved for a variety of possible reasons. For example, the standards that health centers must meet to receive a federal grant might be outdated, or there might simply not be enough health center applicants for grants in some places.

Act (ACA) in 2010 invested $11 billion to expand the number and capacity of FQHCs across the country, effectively making the FQHC system a permanent part of the health infrastructure in the U.S. Between 2010 and 2019, the number of FQHC delivery sites doubled, from about 7,000 to about 14,000.

Scholars and policymakers alike agree that the FQHC program is an exceptionally successful public health program. It is successful both in improving patient outcomes and in saving costs for the healthcare system. Research finds that areas with higher densities of FQHCs also have patients with “greater use of physician services, reduced unmet need, lower hospitalizations and [emergency department] use, with greater effects among low-income and uninsured populations.” There are fewer avoidable visits to emergency rooms, saving the entire healthcare system billions of dollars annually.

11 See National Association of Community Health Centers (2021): “Community Health Center Chartbook”
16 See Cordasco et al (2010): “English Language Proficiency and Geographical Proximity to a Safety Net Clinic as a Predictor of Health Care Access”
BACKGROUND ON LEGAL AID

Often, immigrants need legal assistance with the incredibly complex U.S. immigration system. They might need help getting approval to work in the country or to sponsor a family member to come, or they might need assistance in immigration court, to secure an asylum claim or challenge a deportation order. Some want to become US citizens but are intimidated by the paperwork; others might be eligible for special programs like Deferred Action for Childhood Arrivals (DACA) but do not know how to apply. Legal aid nonprofit organizations offer a range of services, including assistance with DACA status, family-based immigration petitions, and representation in immigration court.

Unlike federally qualified health clinics, immigrant-serving legal aid nonprofits usually do not receive federal assistance. The Legal Services Corporation (LSC) is a nonprofit that allocates federal money to help low-income people receive legal aid. LSC explicitly prohibits grantee organizations from helping most immigrants without a permanent residence status.

Congress first excluded all undocumented immigrants from receiving federally-funded legal aid in 1980. This was part of a larger phenomenon during the ‘80s and ‘90s, when publicly-funded legal aid was under attack by an increasingly conservative Supreme Court, a Republican Reagan presidency, and a growing conservative legal movement. In 1996, Congress also prohibited any organization that receives LSC funding to use private, non-LSC funds to represent “ineligible aliens.” “Ineligible aliens” included all undocumented immigrants and most immigrants without permanent residence.

<table>
<thead>
<tr>
<th>Service</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Violence Services</td>
<td>8%</td>
</tr>
<tr>
<td>Asylum Applications</td>
<td>16%</td>
</tr>
<tr>
<td>DACA Services</td>
<td>29%</td>
</tr>
<tr>
<td>Uninsured Immigrants</td>
<td>100%</td>
</tr>
<tr>
<td>Naturalization Services</td>
<td>22%</td>
</tr>
<tr>
<td>Green Card Renewal</td>
<td>25%</td>
</tr>
</tbody>
</table>

19 See Heeran (2011): “Illegal Aid: Legal Assistance to Immigrants in the United States”
After 1996, even organizations that used outside funding to assist undocumented immigrants could no longer do so if they received LSC funds. This means that when an employer commits wage theft, fraud, or abuse against an undocumented worker, the worker cannot receive public legal aid, unless a non-LSC-affiliated legal aid organization offers low-cost legal services.

Today, immigrant-serving legal aid clinics largely depend on funding from private donations and grants. Research suggests that these clinics are effective when they are able to serve their immigrant beneficiaries. A higher number of immigrant-serving legal aid clinics in a county is predictive of a lower proportion of deportations among detained immigrants in county jails that cooperated with federal immigration enforcement agents. Having immigrant-focused legal service providers in the community also usually means a shorter detention length for detainees. Furthermore, many immigrant-serving organizations engage in some form of policy advocacy with legislators and local law enforcement.

For immigrant-serving legal aid organizations to be effective, they must be located close enough to their intended constituents. For example, a national study finds detainees in rural detention facilities tend to experience longer detention and more abuse, which suggests that there might not be enough legal aid in rural areas. More broadly, research shows that public interest law organizations, in general, are more likely to be located in areas that are politically progressive, have a higher county population and are more urban. Another study finds that immigrants living in Democratic-leaning areas and higher-income areas have better access to legal aid clinics, but immigrants living in mid-size cities have worse access. The results of these studies inform our research into whether (and where) immigrants experience legal aid service gaps.

"In order for immigrant-serving legal aid organizations to be effective, they must be located close enough to their intended constituents."

20 Chand et al (2021): “Serving Immigrant Communities: Effectiveness of Nonprofit Legal Aid Organizations in an Age of Heightened Enforcement”
23 Ryo and Peacock (2018): “Beyond the Walls: The Importance of Community Contexts in Immigration Detention”
25 Yasemov et al (2020): “Identifying Opportunities to Improve the Network of Immigration Legal Services Providers”
MEASURING ACCESSIBILITY OF HEALTH AND LEGAL CLINICS FOR IMMIGRANTS AT THE CENSUS TRACT LEVEL

Our research team measured and analyzed the accessibility of health and legal clinics for immigrants at the census tract level. To do so, we created an original index called the Service Accessibility Index (SAI). The SAI quantitatively measures how well the nearby supply of immigrant-serving health and legal clinics matches the level of local demand in three states in the Southwest – California, Arizona, and Nevada. The index incorporates several key elements, including actual driving time, core services offered by clinics, and opening hours of clinics.

26 For the full research paper, see Roubenoff et al (2023): “Spatial and Socioeconomic Vulnerability: Quantifying Accessibility to Health Care and Legal Services for Immigrants in California, Arizona, and Nevada.”
27 “Nearby” is defined as within 30 minutes of actual driving time from a census tract to a clinic.
28 Demand for services is calculated by the population of immigrants lacking citizenship (for legal services) or health insurance (for health services).
Rural areas are generally under-served for health and legal services, but more severely for legal services.

Suburbs are complex. There are pockets of good and bad access, and accessibility looks different based on the metro area. Gentrification could explain some of the suburban complexity. Immigrants who used to live in cities have been priced out by rising rents and are moving to suburbs. They are probably moving at a faster rate than clinics have been able to relocate.

- Some suburbs may benefit from services in a nearby medium or large city
- Other suburbs are geographically isolated, however, especially in South SF Bay and Peninsula, and in many neighborhoods in the sprawling Los Angeles urban area.

Mid-size cities generally have better SAI than big cities, especially when it comes to health clinics.

- In California’s Bay Area, the mid-size city of Oakland (420,000 pop) has a higher SAI compared to the big cities of San Jose (1 million) or San Francisco (870,000).
- Among metropolitan areas in Arizona, Tucson (870,000) has a higher SAI than Phoenix (4 million).
- In Southern California, the Riverside-San Bernardino area (2 million) has a higher SAI compared to San Diego (3 million) or Los Angeles (12.5 million).

One exception to this pattern is California’s Central Valley, where the big city of Sacramento (1.8 mil) has a higher SAI, particularly for legal clinics, than mid-size cities Fresno (700,000) and Bakersfield (550,000).

Why? Perhaps larger cities have larger urban sprawl than mid-size cities. Mid-size cities are better encompassed within the 30-minute travel buffer, while those living in larger cities might have to travel farther. It is also harder to find where it’s best to put a clinic in a larger sprawling geographic area.

Compared to health clinics, legal clinics are especially sparse in rural areas and especially good in the capital cities.

- Sacramento and Carson City have higher legal clinic access, perhaps due to being the legislative and judicial centers of the states.
- Legal services are especially accessible in near-border cities like San Diego and Tucson, which have a long history of welcoming immigration/asylum seekers.
- Legal services are especially inaccessible in agricultural areas in the Central Valley and in the rural areas of Arizona and Nevada.

Funding sources may explain the big gap between health and legal services in rural areas.

- Health clinics receive federal funding and immigrants are included in the calculation of an area’s medical need. On the other hand, legal clinics are explicitly barred from receiving federal grants to support most noncitizens.
Percent of Foreign-Born Below Federal Poverty Level
ACS 2021 Estimates

Uninsured Rate by State and Immigrant Status
ACS 2021 Estimates

- Immigrants
- Native Born
**SAI for Legal Help for Non-Citizens**

*Darker colors represent places with better services access for non-citizen immigrants.*

**SAI for Health Services for Foreign-Born Uninsured**

*Darker colors represent places with better services access for uninsured or low-income immigrants*

Population estimates are from ACS 2018 5-year estimates.
See Roubenoff 2023 for the full data.
MEASURING ACCESSIBILITY OF HEALTH AND LEGAL CLINICS FOR IMMIGRANTS AT THE CITY LEVEL

Our research team has also done a city-level analysis of service accessibility for immigrants in the CA Bay Area, CA Southern Coast, CA Central Valley, AZ metro areas, and NV metro areas. We find similar results to Roubenoff et al’s census tract-level analysis. For more detailed analysis and discussion of each specific geographic area and service type, see the BIMI Policy Brief series.

RECOMMENDED ACTIONS

- More mobile clinics by existing FQHCs in rural areas
- New legal clinics in more suburban and rural areas; compensate for lack of federal funding
- Areas with the most dire health service need:
  - Stockton
  - South Bay Area suburbs
  - Anaheim
  - Mesa
- Areas with the most dire legal service need:
  - Kings County
  - Petaluma
  - Los Angeles
  - Mesa
- This research only shows potential access, not actual access and usage by immigrants. We urge others to investigate:
  - What does actual usage look like?
  - How far are immigrants willing to travel for services?
  - How do immigrants find out about service providers?
  - Are various health or legal outcomes better or worse in areas with better or worse service accessibility?
Bibliography


BIMI's dedicated student researchers presented the outcomes of their remarkable mapping spatial inequality projects, shedding light on critical societal disparities. The findings carry provide important insights for policymakers and service providers. By identifying and analyzing areas of spatial inequality, this research serves as a powerful tool to inform evidence-based decision-making and policy formulation.
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