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CHANGING TIDES

Screening for Social Determinants of Health in Asian American and Native Hawaiian/Pacific Islander Communities

Prepared by the Center for Social Impact at the Chinese American Service League in Chicago, Illinois

Acknowledgements

Change InSight collaborators—Apna Ghar, the South Asian American Policy & Research Institute (SAAPRI), the Indo-American Center (IAC), the Alliance of Filipinos for Immigrant Rights and Empowerment (AFIRE), the Hanul Family Alliance, and the Chinese American Service League (CASL)—would like to thank the dedicated staff who helped make this initiative possible by administering social determinants of health surveys. Collecting the critical data to build this report would not be possible without your dedication and support. This publication is sponsored by the Julian Grace Foundation and generous support of individual donors. Feedback, data, and lessons gained from this initiative will be used to improve the well-being of AA and NHPI communities in the coming years through data-driven decision-making and policy-making.

A sincere thank you is due to the individuals who took time to review drafts of this report and Hawthorne Strategy Group for their design input. We are deeply grateful to the people who chose to share their experiences, hopes, and strengths with us. Thank you.

Report Team
David Li, Pingjing Zou*, Daniel Craig, Matt Polari, Michael Zhao, Joshua Samos, Joanna Lu, Felicitas Aquegho

Lead Author: David Li

**Former CASL staff*

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CHANGEINSIGHT

Change InSight is an information clearinghouse for the nation's Asian American, Native Hawaiian, and Pacific Islander (AA and NHPI)[1] communities as well as other underrepresented communities (e.g. immigrant communities, communities of color, racial minority groups, vulnerable populations, etc.). Change InSight leverages data to understand minority communities at a deeper level, empowering these communities by:

- Identifying and addressing the social risks and needs unique to AA and NHPI populations through targeted data collection infrastructure;
- Challenging misconceptions about the AA and NHPI populations using the collected data;
- Increase awareness of the shortfall in foundation funding for AA and NHPI organizations relative to these communities' population size and growth; and
- Informing decision-making at a broader scale through data-backed policy insights.

This report shows how Change InSight is working to eliminate health and funding disparities for AA and NHPI communities. For far too long, the AA and NHPI communities have been categorized as a single entity (i.e. "Asians" or "Asian Americans"), leading to a critical lack of culturally-responsive interventions, solutions, and resources. To understand what these communities need, it's important to consider how environmental and personal conditions impact health outcomes. These conditions are known as social determinants of health (SDOH/SDH)[2].

From April 1st to June 24th, 2022, Change InSight partner agencies collected social determinants of health data from 2,244 AA and NHPI individuals. Findings from this sample were then compared with public narratives from multiple sources and supplemented by anecdotal evidence from all involved stakeholders. This new research initiative offers policymakers, nonprofit leaders, community health workers, philanthropic organizations, and civic centers a better understanding of their clients and constituents. This report is a product of a year-long collaboration by nonprofit leaders, providers, and community advocates seeking to identify, educate, and fund targeted social service solutions addressing the needs of AA and NHPI and other immigrant communities.

Background

Although the effects of the COVID-19 pandemic were felt across the U.S., communities of color were disproportionately impacted[3]. During this difficult time, AA and NHPI communities in the US also experienced a 224% increase in anti-Asian[4] hate crime in 2021[5]. This rise in hate crimes, fueled by violent rhetoric and actions, underscores the need for greater protections. One way to do that is through purposeful data-driven decision-making. Change InSight focuses on amplifying the voices of underrepresented communities by collecting data through targeted risk assessments, analyzing the findings, and offering unique policymaking insights and recommendations. This report maps the conditions and risks associated with selected socioeconomic indicators, personal characteristics, environmental conditions, and cultural norms.

Methodology

Using a nationally validated and standardized social screening tool called PRAPARE®[6], (Protocol for Responding to & Assessing Patients Assets, Risks, & Experiences) participants[7] were selected using convenience sampling. More than 500 clinical and non-clinical staff was trained to administer the assessment. The assessment was administered in English and 12 non-English languages (Cantonese, Korean, Mandarin, Urdu, Tagalog, Hindi, Gujarati, Nepali, Arabic, Bengali, Vietnamese, and Spanish) to ensure greater accessibility. Sample participants varied by race, age, household composition, location, educational attainment, and social integration. Future assessments using more comprehensive outreach[8] methods will help gather more data to ensure a continued commitment to improving the lives of individuals in these communities.

Results

Change InSight's findings are broken down by response category, identified risks, and by similarities and differences between ethnic groups, as well as by other categories, including: age, gender, educational attainment, spoken language and so much more. The accompanying dashboard offers users an interactive experience to learn more about each individual community, multiple filter settings, and an opportunity to visualize this data like never before. Although this work is just beginning, the results paint a rounded picture of the participants' lives, as seen through the lens of social determinants of health.

In our sample, the top five ethnic groups were Chinese, Asian Indian, Korean, Filipino, and Pakistani, in that order. The top five risks identified among our top AA and NHPI population include the following:

- Limited English proficiency
- Unemployment
- Low social integration
- Elevated stress
- Living in poverty

This pilot helps establish a benchmark for measuring needs, assets, and risks within the AA and NHPI community in a way that focuses on the unique diversity of this population instead of viewing it as a monolithic whole. From here, we will grow Change InSight partnerships, expand and deepen our investigation into the needs of our communities. Together, we will advance this initiative and begin utilizing the findings for programming, policymaking, and philanthropic efforts.

Recommendations Moving Forward

Responses from this sample portray AA and NHPI communities as a mosaic of unique individuals, rather than one monolithic group. The conditions identified as risk factors from one ethnic group may be completely different from those of another group, but the need for continued disaggregation efforts remains the same. How individuals experience risks vary from person to person, but looking at these experiences in a broader community helps stoke the embers for widespread change. Being able to differentiate between meeting the needs of the individual and the community requires taking time to listen, reflect, and act accordingly. Eradicating health inequities also requires a similar commitment from:

- **Funders and Philanthropists** to financially support efforts to address barriers to resource development and access;
- **Policymakers** to recognize the need for fair representation and promote laws and protections directed at addressing the needs of communities with increased risk;
- **Civic and Social Leaders** to eliminate barriers to collaboration between specific community groups;
- **Community Health Workers and Direct Service Providers** to educate clients on where to find support and how to be heard;
- **Business Communities** to expand their investment horizons and increase economic mobility in their respective neighborhoods;
- **Researchers** to identify culturally-appropriate, ethical, and inclusive methods of reaching community groups with historical trauma.

As one of the fastest-growing racial groups in the U.S.,[9,10] Asian American, Native Hawaiian, and Pacific Islander (AA and NHPI) communities have distinct needs, assets, and experiences. However, federal data sets often group these communities into a single entity, despite their ethnic ties to over 30 countries across Asia, Micronesia, and Polynesia.[11] This hides meaningful differences among these communities that could mean the difference between surviving and thriving.[12] This report seeks to address this problem, starting with a group of community-based organizations (CBOs) serving AA and NHPI populations in the greater Chicagoland area. The first group of Change InSight partners includes six organizations: Apna Ghar, the South Asian American Policy & Research Institute (SAAPRI), the Indo-American Center (IAC), the Alliance of Filipinos for Immigrant Rights and Empowerment (AFIRE), the Hanul Family Alliance, and the Chinese American Service League (CASL). These organizations engage local AA and NHPI communities through culturally-relevant services, advocacy, and research.

Changing Tides highlights some of the most overlooked issues facing the AA and NHPI community today including language and cultural barriers, which greatly affect well-being and access to high quality care.[13] This is why Change InSight is focused on targeted data collection concerning social conditions. Change InSight is leveraging data to eliminate the disparities in funding that have stood in the way of underserved AA and NHPI communities by:

- Addressing the social risks and needs of AA and NHPI populations through targeted data collection infrastructure;
- Challenging misconceptions about the AA and NHPI populations using data;
- Increasing awareness of the shortfall in foundation funding for AA and NHPI organizations relative to these communities' population size and growth; and
- Informing decision-making at a broader scale through data-driven policy insights.

Current evidence on the impact of screening for these conditions still requires more supporting data, even more so when it comes to the 16 AA and NHPI ethnic groups represented in this report.[14] This work seeks to combat blanket statements like "all Asians are smart and successful," or "all Asian immigrants are healthy," by using data to tell a different story. By understanding the root cause of inequities in AA and NHPI communities, Change InSight is dismantling lies like the "perpetual foreigner" stereotype and the "Model Minority Myth."[15]

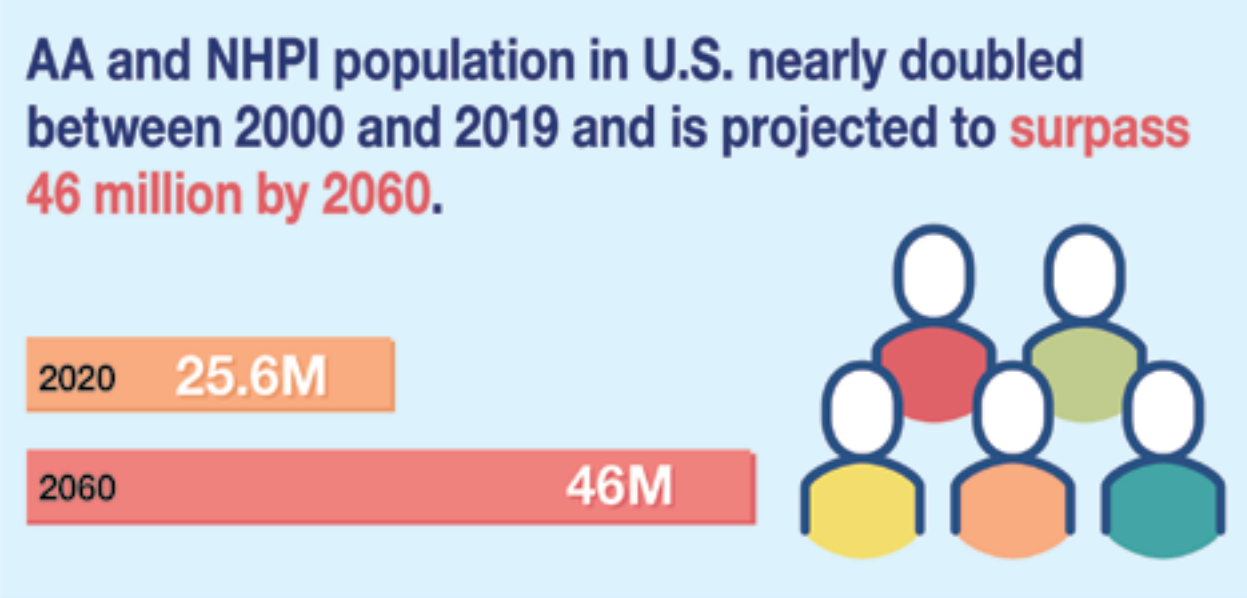
Asian population in U.S. nearly doubled between 2000 and 2019 and is projected to surpass 46 million by 2060

Source: U.S. Census Bureau 2017 population projections for 2020-2060. For 2011 through 2019, American Community Survey 1 year estimate (via Census Bureau data). For 2000 and 2010, census counts from Census Bureau, "The Asian Population: 2010" Census Brief, Table 6. For 1990, U.S. Census Bureau, "Asian Population 2000" Census Brief Table 2. For 1980 and earlier years, Campbell Gibson and Kay Jung. "Historical Census Statistics on Population Totals by Race. 1790 to 1990, and by Hispanic Origin, 1970 to 1990, for the United States, Regions, Divisions and States." U.S. Census Bureau.

The term "Asian Americans and Pacific Islanders" (AAPI) originated as early as 1968 but the U.S. Census Bureau formally separated the categories "Asian" and "Pacific Islander" in 1997.[16]

Today, there are about 25.6 million[17] AA and NHPI individuals in the U.S., according to the most recent Census estimates—or approximately 7% of the general U.S. population. Asians and Asian Americans (A/AA) represent more than 20 different countries of origin[18] alone and Native Hawaiians and Pacific Islanders (NH/PI) have origins in more than 14 countries and a sea of islands dotted across Australia, New Zealand, Melanesia, Micronesia, and Polynesia.[19]

More than half of all AA and NHPI individuals were born outside the U.S. and immigrated for many reasons such as work, school, and asylum.[20] Projected to surpass 46 million by 2060,[21] with over 100 spoken languages, this vibrant community has diverse needs, dreams, and challenges.



Sources: U.S. Census and Pew Research Center

"We're not all the same!"

Despite the "AAPI" (and "AA and NHPI") moniker, Asians and Pacific Islanders are more likely to identify with their national origins or ethnicity instead of seeing themselves as a member of a single racial group.[22] Recent studies[23] show that individuals born outside the U.S. identify this way for a number of reasons. Some have concerns about their citizenship and residency status. Others feel more deeply connected to their family origins. Many speak the same language, and most find it easier to belong when surrounded by people who look, speak, and act as they do.

When portrayed as a single group, important differences are masked. For example, some AA and NHPI subgroups learn English natively in their countries of origin, but others do not. Therefore, grouping these communities in terms of linguistic ability could impede progress for some individuals striving to achieve language equity. This example demonstrates why we cannot afford to generalize the unique experiences among this group. *Changing Tides*, by soliciting disaggregated data, highlights these diverse experiences, and helps reshape misconceptions about this diverse diaspora.

Breaking down data by racial and ethnic subgroups makes it easier to spot differences, trends, and patterns not visible when viewing the data as one big group. The risk of using data as a single group heightens the possibility of overlooking issues before they become problems. For instance, Filipinos, South Asians, and Pacific Islanders (PIs) tended to have higher rates of chronic conditions like obesity, diabetes, hypertension, and coronary artery disease (CAD), but these conditions are masked by their relative absence in the Asian American community as a whole.[24] Although this report does not directly address mortality or morbidity outcomes, the implications for disaggregating health data are clear.

Other misconceptions, like the assumption that all Asians are high income-earners, actively reinforce a myth that poverty is not an issue within AA and NHPI communities. In fact, data indicates that poverty rates vary widely across AA and NHPI households. Further disaggregation reveals glaring differences. When looking at poverty rates by ethnic group, Filipino Americans had a poverty rate of 6% compared to 31% for Micronesian Americans.[25]

There are also vast differences in educational attainment and employment status when looking at individual ethnic groups, but stereotypes inspired by popular culture and a lack of meaningful data disaggregation have made it increasingly difficult to address these disparities.[26] Popular culture has generally portrayed Asians and Pacific Islanders with traditional stereotypes; in a national poll, the top three adjectives used to describe Asian Americans were "Smart/Intelligent," "Hard-working," and "Kind/Nice/Thoughtful."[27] Assumptions like these feed false narratives that all Asians are successful (aka, the "Model Minority Myth"[28]) which undermines the discrimination these populations have long endured. As agencies nationwide come together in combating these harmful stereotypes, it is important to remember that these barriers are the product of structural racism and historically-rooted oppression.[29]

Barriers to Access

Health equity is defined as "the state in which everyone has a fair and just opportunity to attain their highest level of health."[30] In that same framework, "health disparities" are preventable differences that affect some populations more than others.[31] Despite significant efforts to reform and improve the landscape of healthcare in the U.S., stark inequities remain evident among minority communities. AA and NHPI individuals have one of the highest rates of being uninsured,[32] some of the highest suicide rates[33], and have a higher risk of negative health outcomes such as cancer, heart disease, stroke, diabetes, hepatitis B, smoking, tuberculosis, and liver disease.[34,35]

Language access has often been cited as one of the primary barriers facing AA and NHPI communities. In health-care settings, it is estimated that nearly one out of four patients is best served in a language other than English.[36] Change InSight seeks to identify those other languages, thereby supplying AA and NHPI and other minority communities with necessary data to address these barriers. Targeted solutions for this dilemma might include specialized training and/or culturally-appropriate translation or interpretation services. However, getting to this point requires understanding the patterns that contribute to these barriers—these are often referred to as "social determinants of health."

> ***Social determinants of health*** *are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.*[37]

Social determinants of health are often grouped into focus areas such as: health care access and quality, neighborhood and built environment, social and community context, economic stability, and education access and quality.

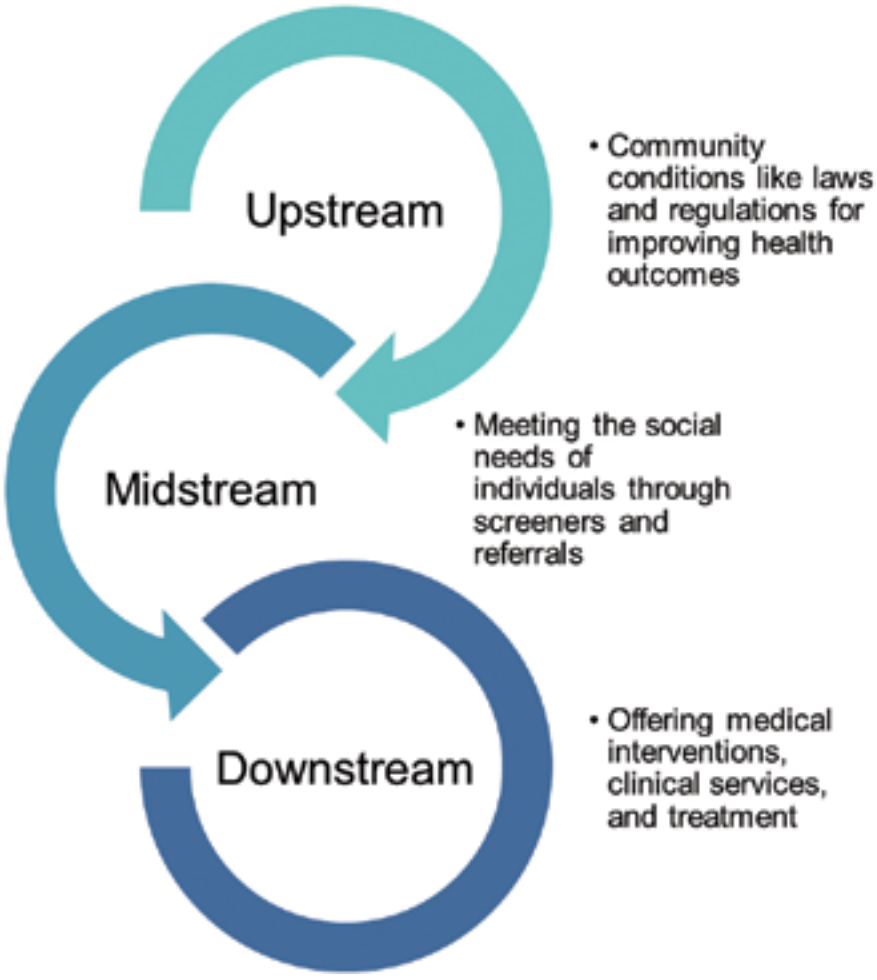
National goals for transforming community health include "creating social, physical, and economic environments that promote attaining the full potential for health and well-being for all."[38] Change InSight is focused on addressing these conditions by measuring social determinants, specifically within AA and NHPI populations.

Social Determinants of Health

Source: Social Determinants of Health Domains. Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved from: https://health.gov/healthypeople/objectives-and-data/social-determinants-health

Another way to picture this is to think of social determinants of health as a river of conditions. Upstream factors include socioeconomic and environmental conditions, institutional power, and social networks,[39] while downstream factors consist of health behaviors and outcomes.[40] As much as 50% of health outcomes, such as morbidity, mortality, life expectancy, health expenditures, health status, and functional limitations, are impacted by these upstream and downstream factors.[41]

With robust social determinants of health data, better decisions can be made at multiple places along the stream, effectively breaking the cycles of health inequities that have plagued AA and NHPI communities for so long. As for why this matters, *"Everyone's well-being is community business."*[42]



Source: A "river of conditions." Author's modification of "Meeting Individual Social Needs Falls Short Of Addressing Social Determinants Of Health", Health Affairs Blog, January 16, 2019. Retrieved from: https://www.healthaffairs.org/do/10.1377/forefront.20190115.234942

To better understand the social determinants AA and NHPI communities encounter, we looked for culturally-responsive needs assessments. The process of selecting an instrument, determining who to distribute it to, and collecting and analyzing the data took several months to complete and offered a wealth of lessons for future research endeavors.

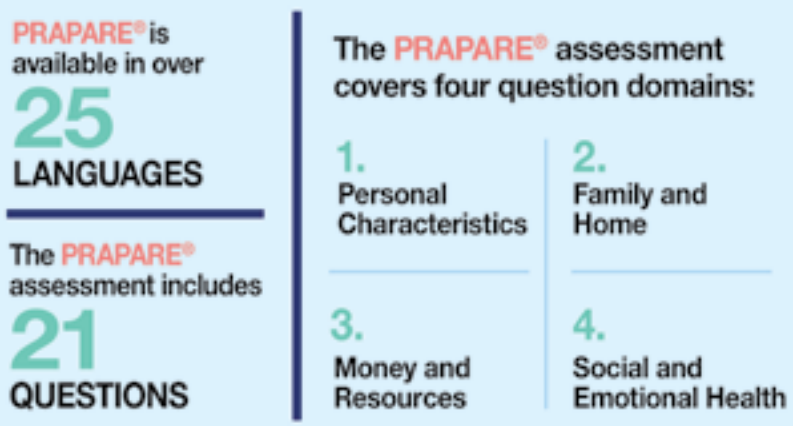
Selecting a Measurement Instrument

For this report, the screening instrument needed to be valid, reliable, practical, and versatile. We chose a nationally recognized and standardized patient social risk assessment tool developed by the Association of Asian Pacific Community Health Organizations (AAPCHO) and the National Association of Community Health Centers, Inc. (NACHC): The **Protocol for Responding to & Assessing Patients' Assets, Risks & Experiences (PRAPARE®)** is designed to engage patients in assessing & addressing social determinants of health.[43] Although PRAPARE® is one of the most widely used social determinant measures today, the landscape of needs assessments is constantly evolving, which warrants special care when tailoring data collection efforts to the population of interest.

Meet PRAPARE®

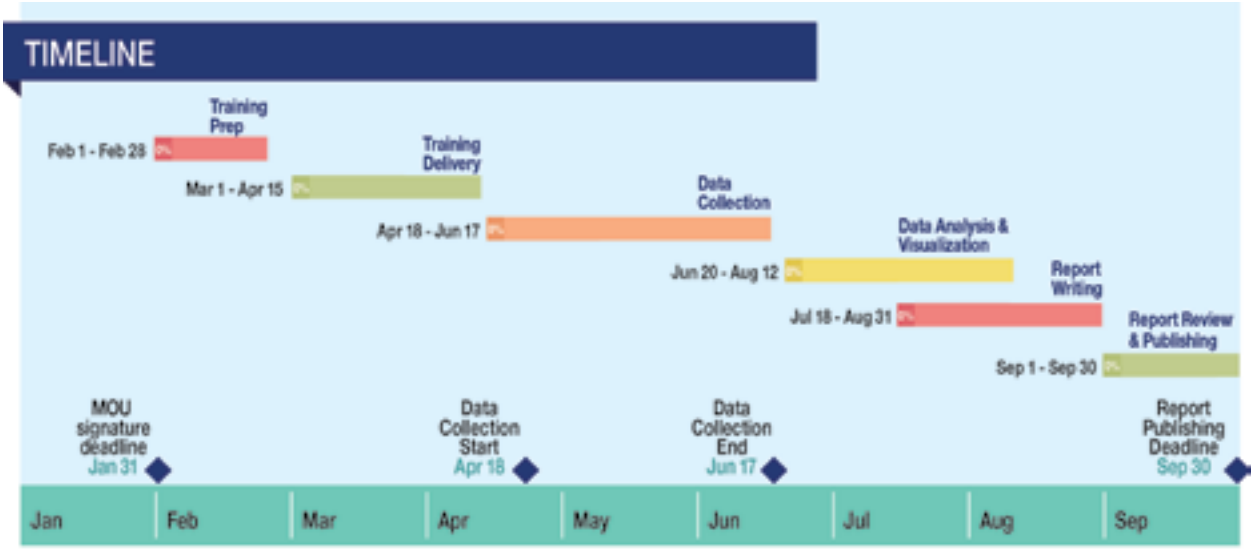
The ultimate goal stated by PRAPARE® is to improve the health of individuals and communities by transforming the approach to high quality care. Health clinics using PRAPARE® have been able to use this data to improve individual health outcomes, tailor specific interventions, and reduce overall costs associated with care.[44] PRAPARE® is also credited with creating better relationships with clients/patients, by practicing a screening method called Empathic Inquiry, which empowers the client to tell their own story and describe their own social conditions.

PRAPARE® is available in over 25 languages[45] and translation requests have been made to include more AA languages in the future such as Hakha, Hmong, and Urdu. The assessment[46] consists of 21 questions covering four core question domains including: personal characteristics, family and home, money and resources, and social and emotional health. Other measures include incarceration history, refugee status, safety, and domestic violence. A rationale for all items in the assessment can be found in Appendix A. As of 2021, 54% of health centers reported using PRAPARE®[47], making it one of the most common social determinant screening tools used in the U.S.



Timeline

After selecting an instrument to document social determinants data, we needed to consider where the data would live, who to recruit, how long it would take to collect the necessary information, and how to present our findings. Planning for Change InSight was divided into four main phases: training, data collection and analysis, and report writing and publishing. The year-long project timeline took this form, consistent with general recommendations from various toolkits and public health experts:[48]



Change InSight sample timeline

Administering PRAPARE®

Training focused mostly on administering PRAPARE® using Empathic Inquiry, a conversational approach that promotes engagement through motivational interviewing and trauma-informed care.[49] The curriculum was centered on client autonomy, mutual respect, privacy, strengths-based thinking, and trust. Training also offered staff the chance to familiarize themselves with the assessment tool, ask questions, and practice asking sensitive questions.[50] Staff had the chance to better understand their clients and clients could learn how to more effectively express their concerns, strengths, and hopes. Unlike a traditional survey, this approach promotes a deeper level of engagement between providers and clients. In other words, the very act of administering the tool helps remind us of the individual agency each client holds. At the conclusion of training, all staff involved in administering PRAPARE® received a certificate as qualified assessors, contingent upon active engagement and participation.

PRAPARE® was administered from April 18, 2022 and June 24, 2022. Participation was entirely voluntary and all participants were recruited from the client pools of each partner organization. All partner organizations received an English copy of the assessment along with instructions on how to download versions of the tool in other languages. Between April and June, a total of five support sessions were readily available for staff to resolve issues and discuss procedural updates.

Sample

At Change InSight, the sample is skewed towards individuals and families that utilize community-based social service organizations, not towards the general population or the broader AA and NHPI community. Change Insight sample participants were solicited by staff and voluntarily agreed to take the assessment. These clients may come to the agencies represented in this pilot for any number of reasons,including: case management, legal advocacy, mental health counseling, transitional housing, crisis intervention, elder care, child care, public benefits assistance, immigration counseling, civic engagement, community health engagement, workforce development, and advocacy.

As a result, participants have additional exposure to higher risk factors than the general population. However, Change Insight's interest focuses on the correlation of risk factors. Change Insight wants to know whether the presence of certain risk factors is correlated with additional risk factors. Change Insight is attempting to address both the needs of the broader community and each individual, recognizing that those two might not be the same.

Limitations

Despite a fairly robust sample size, data is community-level and should not be used to draw conclusions about the general population, due to sampling limitations. However, this report includes supplemental information, drawn from publicly available sources (e.g., the US Census Bureau), to provide additional context.

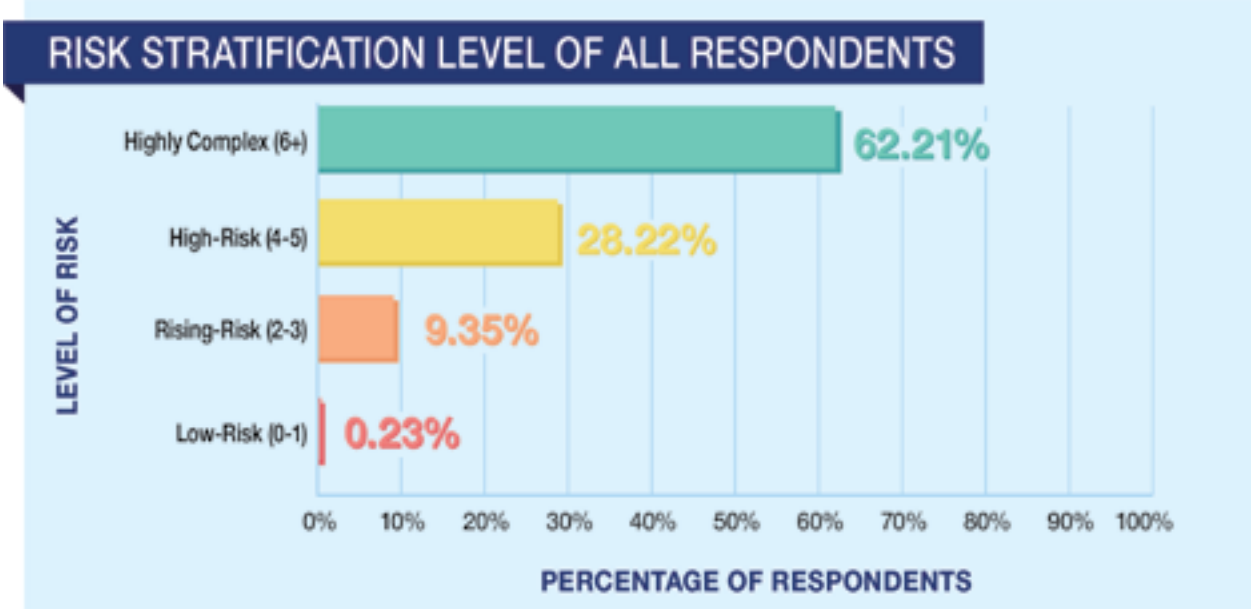
Scoring PRAPARE®

Scores (0-24) were calculated based on the number of risks present.[51] Lower scores indicate low risk and higher scores indicate higher risk. Each response was assigned a numerical value of 1 or 0, which was tallied as a 'risk condition.' All the "1s" were added to reach a final score. That score would fall within ranges offered by PRAPARE®, which would correspond with levels of risk: low, rising, high, and highly complex. Participants with scores between 0-3 had "low" to "rising" levels of risk and "high risk" was considered any score above 4. You can see which responses counted towards the score in Appendix C.

Risk Level	# Conditions (tallies)
Highly Complex	6+
High-Risk	4-5
Rising-Risk	2-3
Low-Risk	0 or 1

Table: Risk stratification scoring

Using this scoring method, over three-fifths (62%) of all participants screened had highly complex risks, followed by over a quarter (28%) reporting high levels of risk. The questions with the lowest responses included topics around income, incarceration history, access to employer-sponsored health insurance, and access to resources. A more detailed explanation of risks and how they factor in with select characteristics is provided in the following section.



After data collection ended, Change Insight staff cleaned and analyzed the data, breaking it down by response.[52] Change Insight staff used statistical modeling[53] to map responses by select characteristics and grouped them into corresponding domains. Below is an outline of general demographic characteristics, followed by a description of the top five risk factors and how they are relevant to health outcomes. "Risks" refers to the conditions that increase the likelihood of developing negative health outcomes. Identifying risks helps determine which problems to address first.

As a community-level data collection, the work focuses on the social determinants of health at play in the communities sampled. Former U.S. Secretary of Health and Human Services Alex Azar made the distinction between individual needs and community-level determinants during a speech in 2018:

> *How can someone manage diabetes if they are constantly worrying about how they're going to afford their meals each week?[...]This can feel like a frustrating, almost fruitless position for a healthcare provider, who understands what is driving the health conditions they're trying to treat, who wants to help, but can't simply write a prescription for healthy meals, a new home, or clean air.*

Top 5 Risks in a National Sample Versus Change Insight's Sample

In 2019, 85% of all AA and NHPI individuals living it the U.S. consisted of six ethnic groups: Chinese, Asian Indian, Filipino, Vietnamese, Korean, and Japanese (ranked by size)[54]. In Illinois, the largest groups are Asian Indian, Filipino, and Chinese[55]. In our sample, the top five ethnic groups were Chinese, Asian Indian, Korean, Filipino, and Pakistani, in that order. Each of these groups has distinct attributes, strengths, and risks. These distinctions would be impossible to make out had all of these groups been clustered as one.

Risk Level	National sample[55] (*n*=2,982)	Change InSight sample filtered by top 5 ethnic groups (*n*=2,101)
1	Limited English proficiency	Limited English proficiency
2	Low educational attainment	Unemployment
3	Stress	Low social integration
4	No insurance coverage	Stress
5	Unemployment	Higher poverty rates*

Table: Top social determinant risks for a national PRAPARE® cohort and Change InSight's pilot sample

**income by itself offers little to no value as a social determinant of health risk. In other words, it requires looking at income in context or relation to other risk factors. More on this on page 21.*

The risks for a national sample and Change Insight's sample were similar. However, since the top five ethnic groups in the Change Insight sample accounted for 94% of participants, this report only focuses on the greatest needs for these ethnicities. Some ethnic groups did not have enough initial participants to include in this ranking, so as more data is gathered, the top risks (or how they are ordered) could look different.

Even though the Change Insight sample is locally-based, the risks shared encompass a greater need for better linguistic access, behavioral health supports, vocational/job training, and social integration. The following section outlines the rationale for measuring risks and illustrates how the public narrative discussing risks impacts the AA and NHPI community.

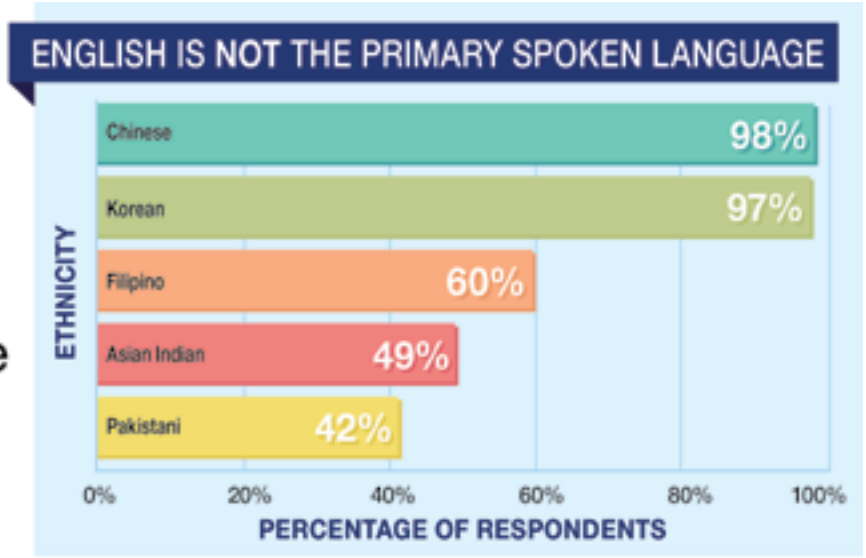
1. Limited English Proficiency

When asked *"What languages are you most comfortable speaking?"* 80% of sample participants indicated a language other than English[57]. This is an important question because higher English proficiency is tied with better access to health care. People who speak a language other than English were less likely to see a health provider, understand the point of certain medical procedures (i.e. age-dependent cancer screenings), and report poorer mental and physical health than their English-speaking counterparts[58]. English proficiency is related to acculturation, the process of adapting to a new culture[59,60]. Despite widespread interest in the topic of acculturation, the experience of Asian Americans has largely gone unnoticed[61,62]. Several reasons for this may include (1) small sample sizes from which it is difficult to draw conclusions or (2) the assessments are only conducted in English[63].

In addition to health outcomes, acculturation affects the degree to which someone can access health care, let alone pay for it. According to recent (2021) national population estimates, 72% of people identifying as Asian alone spoke a language other than English[64]. Although PRAPARE® does not ask how well someone speaks English, 31% of the Asian population in the U.S. was considered having "limited English proficiency."[65] Spoken language is used in this initiative because of the distinct nuances associated with native-born English speakers and health-related oral literacy. The vocabulary, pronunciation, grammar, accents, slang, or other cultural elements present in a person's speech influence the degree to which medical outcomes are affected (e.g. "15" sounds like "50" when spoken aloud). Comparatively, 40% of all Native Hawaiian and Pacific Islanders in the U.S. spoke a language other than English and 12% were considered to have limited English proficiency.[66] To put these statistics into perspective, one in five people (22%) in the total U.S. population (in 2021) spoke a language other than English and less than one-tenth (8%) spoke English less than "very well."[67]

Although more data is needed to make conclusions about the larger context, the findings indicated the need for more targeted language support. In other words, limited English proficiency affects the Change Insight sample, but to what extent? Speaking a language other than English does not automatically mean that the risk looks the same for each community. For instance, 98% of Chinese participants in the Change Insight sample spoke a language other than English, compared to 97% of Korean participants, 49% of Asian Indian participants, 60% of Filipino participants, and 42% of Pakistani participants. Here, the value of disaggregated data reveals key differences among AANHPI sub-groups.

English is NOT the Primary Spoken Language



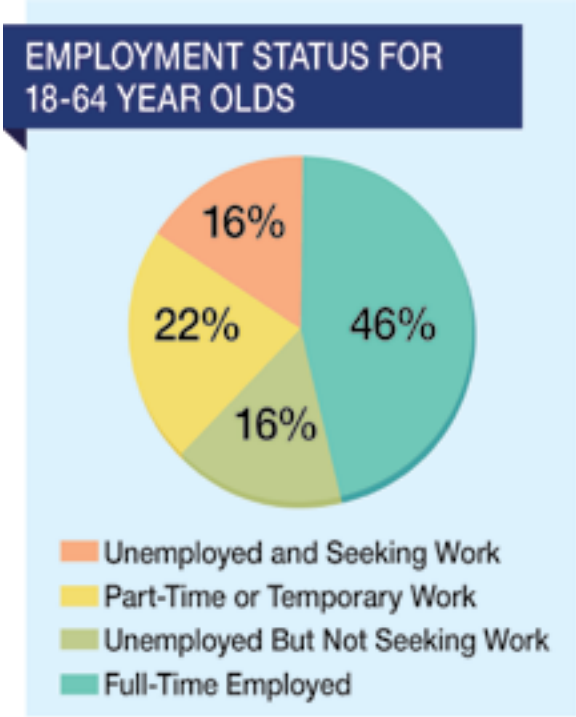
2. Unemployment

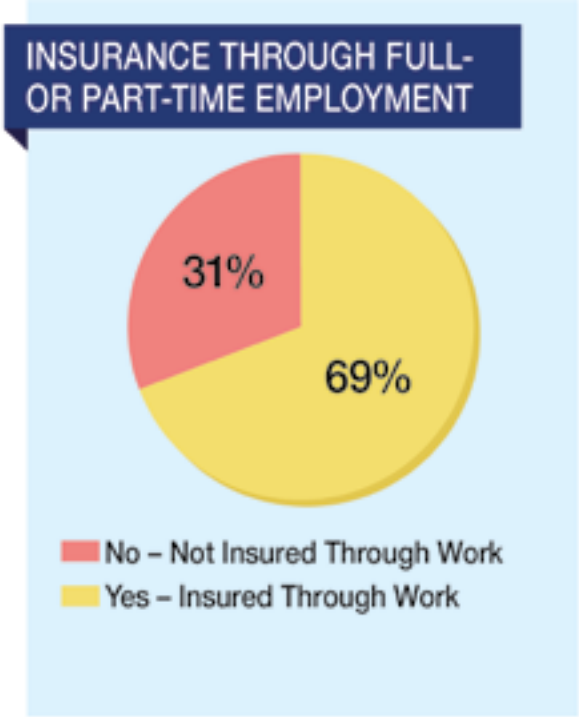
> *Everyone has the right to work, to free choice of employment, to just and favorable conditions of work and to protection against unemployment.*[68]
>
> —Article 23, Paragraph 1 of the Universal Declaration of Human Rights

There is ample evidence[69] that unemployment is associated with lower psychological well-being, more unhealthy behaviors, and higher morbidity and mortality. Aside from the indirect health value of gainful employment, benefits like health insurance coverage and sick leave often depend on employment status. People without health insurance are more likely to delay or forgo medical care. Consequently, they are more likely to be hospitalized[70] with a worse prognosis than people with health coverage.

Change Insight results, as seen in figure 8, describe a varied employment landscape. These figures demonstrate the heterogeneity of our sample. Employment connects health outcomes, access to healthcare, and social integration, but there are many things still unknown.

For instance, in what conditions do our participants work? Stressful work conditions have been shown to have a negative effect on employee health.[71] In the Change Insight sample, two-thirds of (69%) adults (18-64 years old) were employed part- or full-time, but less than one-third (31%) reported having health insurance through their job. If being employed and having adequate health coverage is indeed correlated with better health outcomes, then it is concerning that the majority of working adults in the Change Insight sample did not have insurance coverage.





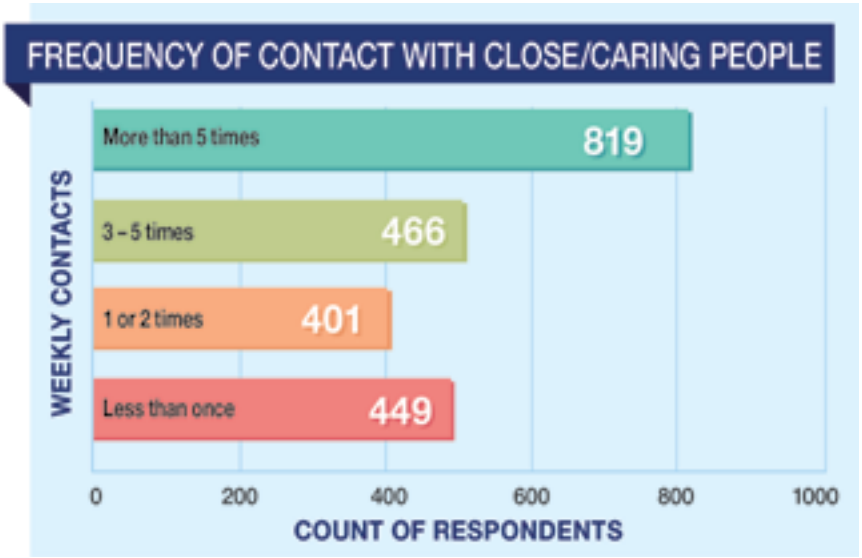
3. Low Social Integration

Research[72] shows that social relationships have short- and long-term effects on health, health behaviors, and mortality risks. Isolation can lead to psychological distress, severe mental illness and even death. On the other hand, studies have also shown that people who are more connected to others are healthier overall and live longer than their isolated counterparts. While the effects of feeling disconnected are well-documented, it is more than just having relationships, but how engaged people are with others. Just because someone has a lot of social relationships does not mean those connections are also high quality. Social integration refers to how involved someone is with a person or groups of persons.[73]

Some evidence even suggests that low levels of social integration have an equal or greater impact on mortality than socioeconomic status, health behaviors, or other social determinants.[74] Similarly, low quality relationships were also associated with negative health outcomes.[75,76] With regards to this study's sample, there is little data specifically directed at understanding the levels of social integration among AA and NHPI individuals and communities. In a recent poll conducted by public opinion researchers between May and June of this year, nearly one quarter of Asian adults reported feeling unwelcome in their own neighborhood and 1 in 10 shared that they have no relatives, friends, or neighbors to rely on for social support.[77]

To measure social integration, PRAPARE® asks: *"How often do you see or talk to people that you care about and feel close to?"* Following up to this question, participants were asked to share with whom they felt close. In the Change Insight sample, 2,135 participants chose to answer this question. Of those individuals, more than three-quarters (79%) had some regular contact with someone they felt close to (e.g. partner, spouse, friends, family, religious institution, or volunteer organization). This means over 20% of participants in this community sample do not have contact with trusted relationships. Considering what is known about the impact of social relationships during times of celebration and sorrow, 449 people are at risk of becoming (or being) isolated. As a result of this work, these individuals are now visible. This data can be used to start conversations about what it would take for individuals in the AA and NHPI communities served by the participating Change Insight organizations to feel more socially connected and supported.

Frequency of Contact with Close/Caring People



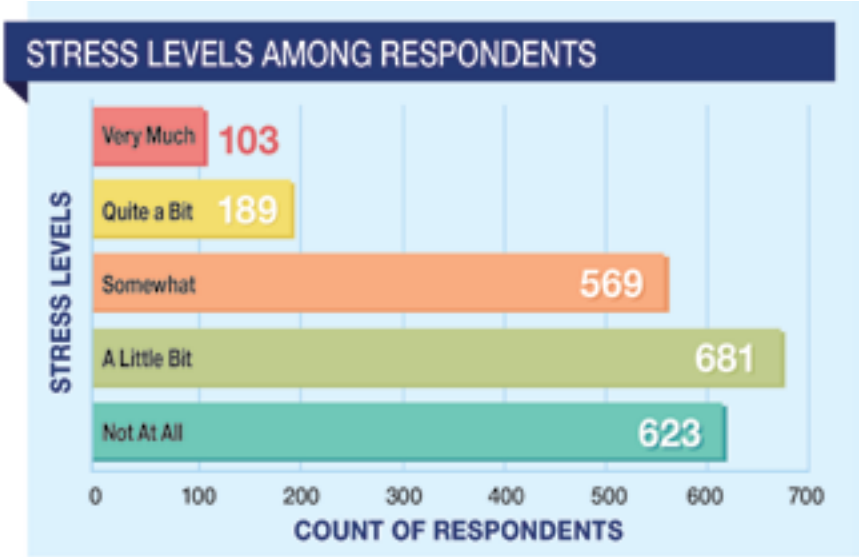
4. Stress

"How stressed are you?" (PRAPARE® question 17)

"Stress" can mean something different for everyone. PRAPARE® does not ask respondents to define or describe their stress but provides an opportunity for them to speak freely about the subject. The assessor asks each participant to rank their level of stress from "not at all" to "very much." Like social integration, there is a lack of data on true stress levels within specific race/ethnic groups. This data provides a baseline for further exploration.

Perhaps more importantly, there is a lack of culturally appropriate (or relevant) interventions for underrepresented communities on managing stress. Because everyone has a different stress threshold, even a little bit of pressure can have negative effects on individuals without the proper resources. Everyday stressors, the environments in which people live, the jobs they have, the support systems they have (or lack) contribute to how stress affects the body. Just because one group is resilient does not mean that any level of stress should be "okay" for some and not others.

Stress Levels Among Respondents

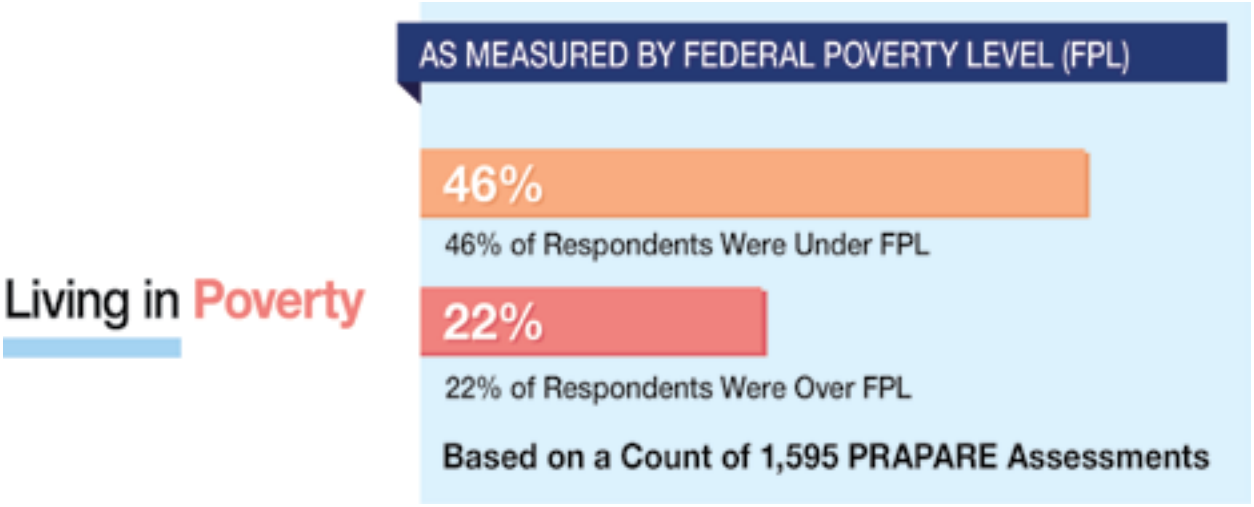


5. Living In Poverty

Only the top five social risks identified using PRAPARE® were used in the Change Insight report. Some participants might have all five risks while others have one or two. When looking at the Change Insight sample compared to state or national data, Change Insight data depicts something very different. That is because the focus of Change Insight was to assess and respond to the risks of Change Insight participants, not just to compare statistics.

Nearly half (46%) of Change Insight participants were considered "living in poverty" according to federal poverty guidelines, based on self-reported income and calculated by the number of people living in a household. However, income by itself offers little value as a social determinant risk. Having a lower income means being able to afford fewer resources like food, housing, healthcare and public benefits. However, the opportunities to obtain food, get healthcare, or find housing are not cost-dependent in and of themselves. Having low income does not necessarily mean automatic disqualification from participating in any of these activities. For example, if someone is eligible for Medicare, that is an age-dependent factor, not an income factor. Now, if that person does not have a way to get to their health appointments, that may be linked to a lack of transportation due to cost, not because they do not have health coverage.

Superficially, poverty rates for Asian Americans as a whole were lowest among major race groups in the U.S., but closer examination reveals significant differences when poverty rates are compared by age or ethnicity. For instance, Asian seniors had higher poverty rates than NHPI and White seniors.[78]

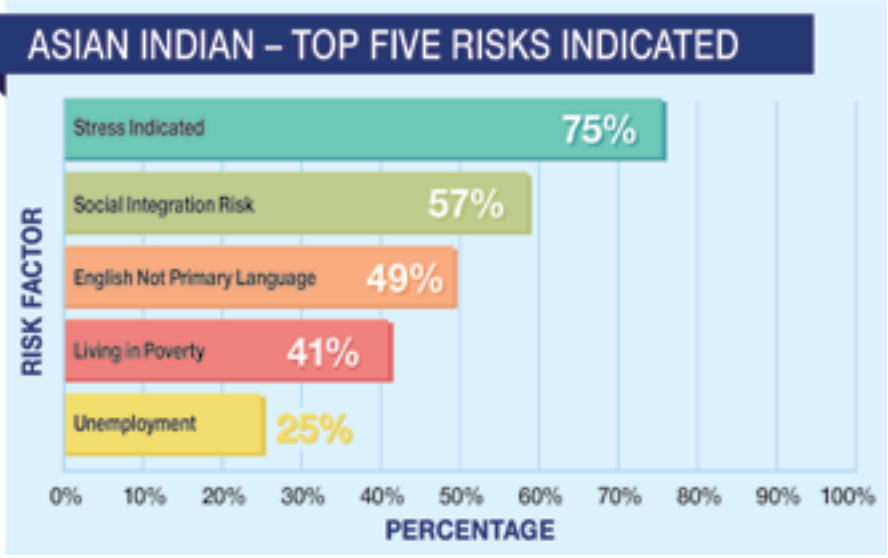


Change InSight participants living in poverty (based on the U.S. Department of Health and Human Services poverty measures. Households with an annual income at or below 100% of this threshold are considered to be "living in poverty")

Risk Profiles by Ethnicity

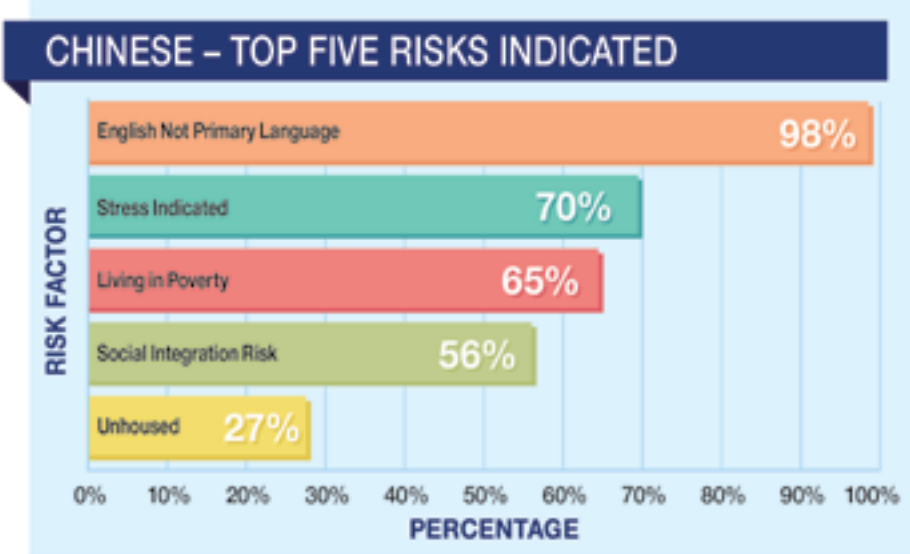
Next, we looked at the top five risks by ethnicity. Please note that only the top five ethnic groups are depicted here, out of 16 total AA and NHPI groups represented in the Change Insight sample. The following risk profiles demonstrate an interesting pattern: When English Proficiency is not the foremost concern, as with Asian Indian and Pakistani Americans, it drops to a lower level of risk, while stress becomes the predominant social determinant risk. Also, low social integration is also common to all groups. However, unemployment, homelessness, poverty, insufficient educational attainment, and unmet medical needs each round out the different ethnic groups.

The Top Five Risk Factors for Asian Indian Respondents



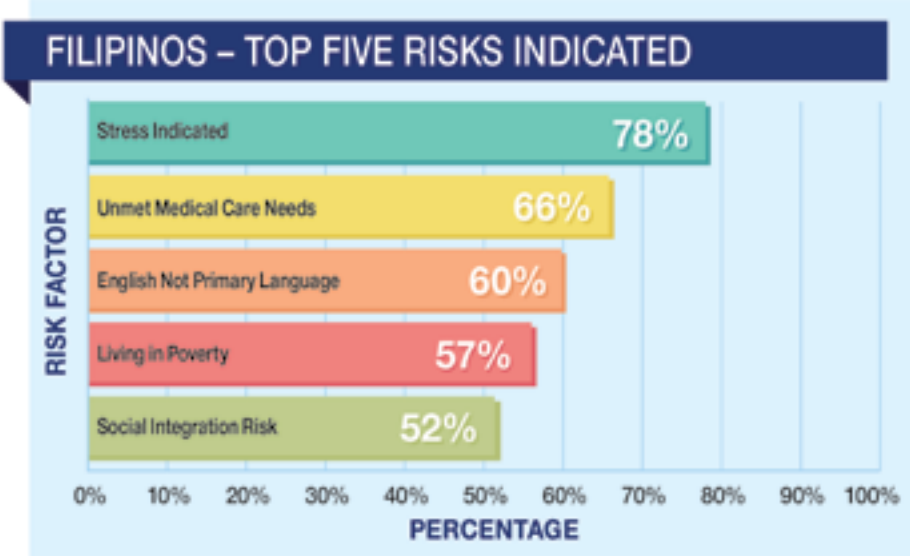
1. The top risk factor for Asian Indian participants in the Change Insight sample was **elevated stress** levels at 75%. Participants with any indication of stress when asked "How stressed are you?" were considered to have 'elevated stress.'
2. The second highest risk factor for Asian Indian participants was **low social integration** at 57%. Participants who reported talking to people they care about less than five times a week were categorized as having low social integration.
3. The third highest risk factor for Asian Indian participants was **limited English proficiency** at 49%. Participants whose primary language was not English were categorized as having 'limited English proficiency.'[79]
4. The fourth highest risk factor for Asian Indian participants was **living in poverty**[80] at 41%.
5. The fifth highest risk factor was **unemployment** at 25%.

The Top Five Risk Factors for Chinese Respondents



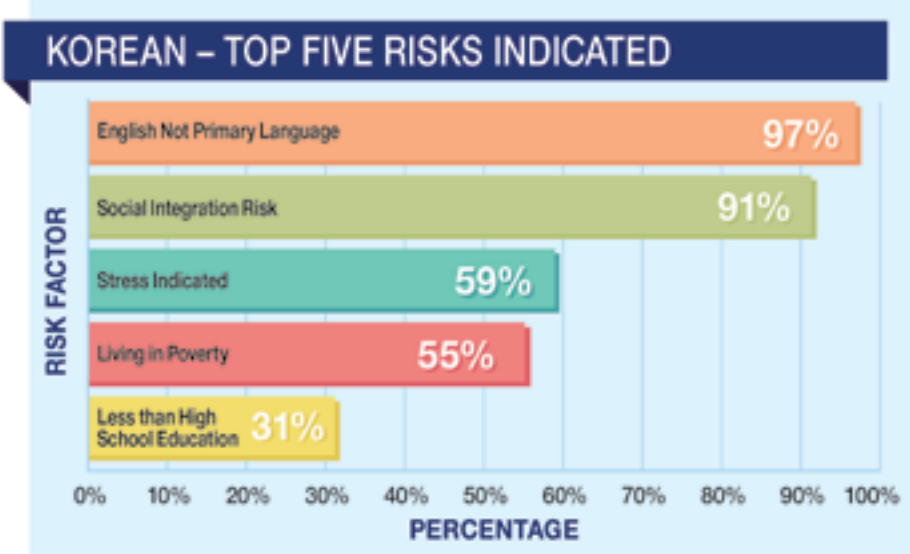
1. The top risk factor for Chinese participants in this sample was **limited English proficiency** at 98%. Participants whose primary language was not English were categorized as having 'limited English proficiency.'[81]
2. The second highest risk factor for Chinese participants in this sample was **elevated stress** levels at 70%. Participants with any indication of stress when asked "How stressed are you?" were considered to have 'elevated stress.'
3. The third highest risk factor for Chinese participants in this sample was **living in poverty**[82] at 65%.
4. The fourth highest risk factor for Chinese participants in this sample was **low social integration** at 56%. Participants who reported talking to people they care about less than five times per week were categorized as having low social integration.
5. The fifth highest risk factor was a **lack of housing** at 27%.

The Top Five Risk Factors for Filipino Respondents



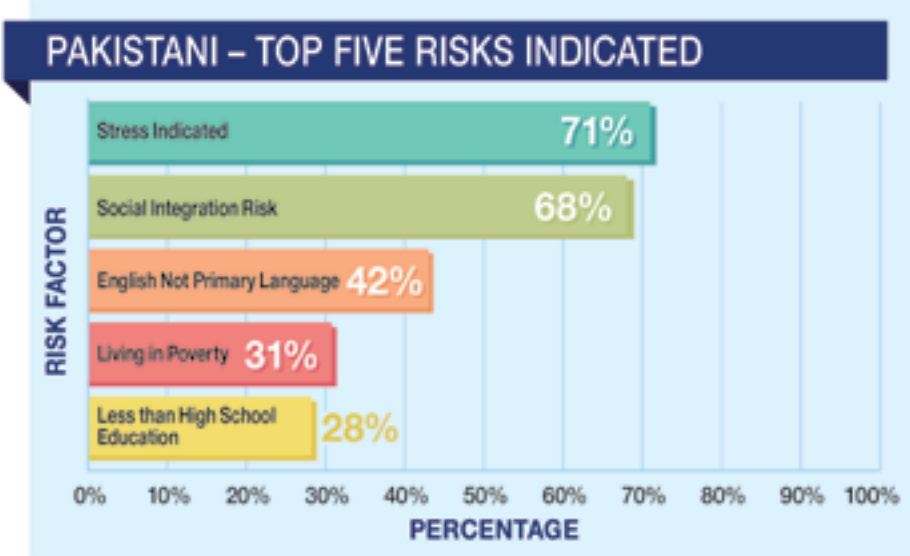
1. The top risk factor for Filipino participants in this sample was **elevated stress** levels at 78%. Participants with any indication of stress when asked "How stressed are you?" were considered to have 'elevated stress.'
2. The second highest risk factor for Filipino participants in this sample was **unmet medical care needs** at 66%. This refers to participants that reported not being able to get medicine or health care (medical, dental, mental health, vision) in the past year.
3. The third highest risk factor for Filipino participants in this sample was **limited English proficiency** at 60%. Participants whose primary language was not English were categorized as having 'limited English proficiency.'[83]
4. The fourth highest risk factor for Filipino participants in this sample was **living in poverty**[84] at 57%.
5. The fifth highest risk factor was **low social integration** at 52%. Participants who reported talking to people they care about less than five times per week were categorized as having low social integration.

The Top Five Risk Factors for Korean Respondents



1. The top risk factor for Korean participants in the Change Insight sample was **limited English proficiency** at 97%. Participants whose primary language was not English were categorized as having 'limited English proficiency.'[85]
2. The second highest risk factor for Korean participants was **low social integration** at 91%. Participants who reported talking to people they care about less than five times per week were categorized as having low social integration.
3. The third highest risk factor for Korean participants in our sample was **elevated stress** levels at 59%. Participants with any indication of stress when asked "How stressed are you?" were considered to have 'elevated stress.'
4. The fourth highest risk factor for Korean participants was **living in poverty**[86] at 55%.
5. The fifth highest risk factor for Korean participants was having **less than a high school education** at 31%.

The Top Five Risk Factors for Pakistani Respondents



1. The top risk factor for Pakistani participants in the Change Insight sample was **elevated stress** levels at 71%. Participants with any indication of stress when asked "How stressed are you?" were considered to have 'elevated stress.'
2. The second highest risk factor for Pakistani participants was **low social integration** at 68%. Participants that reported talking to people they care about less than five times a week were categorized as having low social integration.
3. The third highest risk factor for Pakistani participants was **limited English proficiency** at 42%. Participants whose primary language was not English were categorized as having 'limited English proficiency.'[87]
4. The fourth highest risk factor for Pakistani participants was **living in poverty**[88] at 31%.
5. The fifth highest risk factor for Pakistani participants was having **less than a high school education** at 28%.

Over the past year, Change InSight learned about what worked and what did not, both in terms of data collection and analysis. The findings acknowledged that disaggregating data for any population relies on consistent collection methods and is easily accessible. Change InSight partners reached out to clients during their visits or by phone and integrated PRAPARE® into their day-to-day workflow by streamlining clinical intake processes. When recruiting participants, our priority was to leverage established (or developing) relationships between staff and clients. This made administering PRAPARE® convenient, but still kept the focus on capturing as much of clients' experiences as possible. This meant keeping all administration methods the same to limit the chance that the data would reflect circumstantial information not relevant to social determinants of health.

For instance, if Change InSight employed a range of survey methods, this could help facilitate screening in a variety of settings. Consistent procedures for data collection help reduce the amount of bias introduced when administering assessments. In other words, if staff is trained differently in how they administer the assessment, the reliability of responses would be negatively affected. If some participants are interviewed and others fill out the assessment on their own, that could also affect the integrity of the data collected. After this collection round, we asked staff at each agency what their experience was like in terms of:

- Overall satisfaction
- Clarity of objectives
- Timeframe for completing objectives
- Quality of training sessions
- Process of administering PRAPARE®
- Data collection
- Data entry
- Areas for improvement
- Other useful insights

Several staff participated in the feedback evaluation, but several repetitive themes offered prudent information. Coding responses by particular words or phrases, the feedback from staff involved in the project was consistent. In general, most partner agency staff members were satisfied with the project as a whole. With regards to areas warranting attention, staff shared that additional clarity was needed when explaining the purpose of PRAPARE® to clients. They noted that several questions in the assessment felt irrelevant and some clients expressed resistance. Feedback provided also found that staffing concerns needed to be addressed.

Some staff shared that clients felt uncomfortable responding to certain questions, citing reasons like "shame" and being "too personal." This indicates that additional guidance is needed to address sensitive topics, including those that are influenced by cultural or traditional norms. Taking these suggestions into account when planning for subsequent data collection campaigns, upcoming procedures will be updated with an emphasis on how to make the most out of limited resources (time, staff, money, and scope). Other feedback we received included having a better explanation for both staff and clients on how social determinants screening is relevant to them. Perhaps the most important lesson learned during this initiative was to be flexible and adapt.

The whole point of this project is to better understand AA and NHPI communities and other underrepresented groups, so what good is data when the questions themselves pose a risk when asked? Collecting data for the sake of data accomplishes nothing. This pilot initiative directly addresses the repercussions of the failure to disaggregate, to look deeper, and get specific. As Change InSight continues to address both community- and individual-level barriers, having this kind of input is crucial to developing and implementing targeted solutions that address the roots of inequity.

Someone who is stably housed today might not be tomorrow. Someone who has trouble obtaining medication for a chronic condition might forgo other expenses if cost is the primary risk factor. An individual who has trouble securing reliable transportation is more likely to miss medical appointments, let alone other commitments like work, school, or childcare. Using the data collected in the PRAPARE® assessments, staff at Change InSight partner agencies can act on these risks and priorities with in-house resources or through referrals. Utilizing social determinants data in this way, for the purpose of affecting client well-being, can extend the value of these risk screenings. By connecting the dots between so-called non-medical, social determinants of health information and data routinely collected in a patient's health record, our work will result in improved patient health outcomes. For example, patients discharged from a medical facility may now be able to receive transportation support to return for follow-up care, which they might otherwise forgo without adequate attention to their social determinant risk(s).

A successful continuum of care relies on having both medical and non-medical support, which includes recognizing and addressing social determinants of health factors at play. In the case of an individual who cannot afford medication, there are many scenarios where community-based organizations are well-suited to provide needed patient support. Thus, a high-quality service model for preventative care and treatment must rely on having both medical and non-medical information, and the infrastructure for gathering social determinants of health information will play a vital role. If data disaggregation efforts at the national level are any indication, then consistent collection and analysis at the community and individual levels must become a top priority. That is why Change InSight is applying a significant amount of time and resources to make it happen.

A key lesson we learned during the past year was that disaggregating data relies on strong and consistent data collection methods, to ensure that clients are screened, paired with ready access to support when administering the assessment. With consistent screening and patient access, we will be able to disrupt dysfunctional patterns that impede patient healthcare access, and as a result promote highly personalized care and improved outcomes. High-quality data, when paired with a commitment to both community and individual, leads to improved care and service delivery. Our findings reflect a deep-seated desire to connect people with care that works for them. Other lessons include clarifying why social determinants screening is relevant for providers and clients/patients.

We recommend further examination into what social determinants data means for immigrant and minority communities. In other words, now that there is a compelling basis for needing targeted data, the next step is to identify how to leverage that data and act on it.

What social determinants' data represents for AA and NHPI individuals is being able to understand the unique experiences these communities face—experiences often overlooked when grouped together. This pilot offered a wealth of insight into how needs are communicated, how to address risks, and how to ensure that all voices are heard. Some of the data collected communicated trends similar to what is already known. However, it also magnifies who is missing and illustrates the need for sustained data collection efforts at both individual and community-wide levels.

Examples of how this data has been used in the past include mapping referrals, funding requests, shaping state and federal policies, and establishing a return on investment (ROI). Already, several Change InSight partners have used the data to help inform efforts to promote client health. Some agencies flagged certain risks associated with scoring to inform their referral process. Others shared that the data would be used to address community-level conditions contributing to barriers felt at the individual-level (e.g. lack of transportation, lengthy wait times for care/services, cost, etc.).

Another opportunity Change InSight offers is partnering with formal health entities on documenting/coding PRAPARE® into medical recordkeeping systems. Because non-medical social determinants of health data rarely make its way into standardized health data collection, the findings from this initiative would help articulate the need for data sharing more clearly. For instance, hospitals and other managed care organizations use what are known as ICD-10 (International Classification of Diseases) codes which translate into billable services. Since current Change InSight partner agencies do not yet offer formal health screenings and other medically-based interventions, this kind of partnership could help facilitate intra-agency efficiency and improve the level and quality of care provided to consumers.

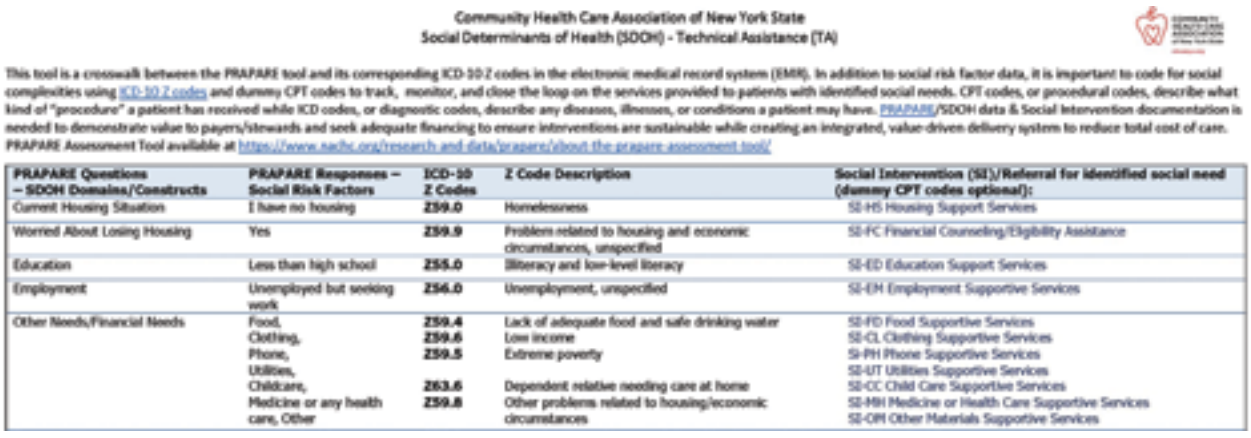
Tools like the PRAPARE® ICD-10 crosswalk, developed by the Community Health Care Association of New York State (CHCANYS) were specifically designed to help different data management systems communicate with each other. For instance, someone who reports feeling stressed "quite a bit" or "very much" on PRAPARE® would correspond with ICD-10 Z Code Z73.3, which translates to a diagnosis of "stress, not elsewhere classified." This is just one way that PRAPARE® scores can directly inform the continuum of care efforts and promote a seamless integration between community-based organizations and hospitals.

Issues like limited English proficiency, unemployment, stress, and isolation were named as some of the top risks identified in the Change InSight sample, but the order of risks varied for every ethnicity. The degree of risk was different too. Asian Indians, Filipinos, and Pakistanis all indicated stress as their top risk, but the proportion of participants who were "a little" stressed compared to "very much" stressed varied widely. Most participants indicated turning to family or friends when they were stressed, but there were also a number of individuals who either refused to answer altogether or expressed that they had no one to talk to.

When looking at any single issue, like stress in this case, it is crucial to ask why someone might be stressed. Despite being translated in multiple languages, anecdotal evidence from agency partners demonstrates that more needs to be done for needs assessments like PRAPARE® to be culturally competent. In the example referenced above, merely asking how stressed someone is could be potentially triggering or all together lost in translation (i.e. individual does not have a working definition of "stress"). Several agency staff shared similar levels of discomfort when asking participants on potentially sensitive topics like educational attainment, income, refugee status, migrant and/or farm worker status, domestic violence, and safety.

Based on this observation, the Change InSight team is currently seeking to address oversights and gaps in assessor training to ensure the highest level of care when delivering assessments, discussing individual-level interventions and programming. The importance of validated data collection notwithstanding, it does not change the fact that the utility of data must never outweigh the needs of the client. This feedback serves as a much-needed reminder to always consider our biases. We must always be mindful of the many identities that intersect in any community.[89] None of the data presented here lives in a vacuum. Identities like age, gender, or race play a part in the way people see and interact with the world around them. As leaders in ethical, participatory methods of data-driven solutions, Change InSight is committed to championing the ideals where health and funding disparities do not exist.

As trusted messengers within their respective communities, each organization has a unique relationship with those they serve in a way that distances this project from other data collection efforts. Akin to the complexity of risks and needs of this sample, Change InSight's data collection efforts will undoubtedly evolve in scope and size. Based off these initial findings, Change InSight recommends the following action steps:



Community Health Care Association of New York State
Social Determinants of Health (SDOH) - Technical Assistance (TA)

This tool is a crosswalk between the PRAPARE tool and its corresponding ICD-10 Z codes in the electronic medical record system (EMR). In addition to social risk factor data, it is important to code for social complexities using ICD-10 Z codes and dummy CPT codes to track, monitor, and close the loop on the services provided to patients with identified social needs. CPT codes, or procedural codes, describe what kind of "procedure" a patient has received while ICD codes, or diagnostic codes, describe any diseases, illnesses, or conditions a patient may have. PRAPARE/SDOH data & Social Intervention documentation is needed to demonstrate value to payers/stewards and seek adequate financing to ensure interventions are sustainable while creating an integrated, value-driven delivery system to reduce total cost of care.
PRAPARE Assessment Tool available at https://www.nachc.org/research-and-data/prapare/about-the-prapare-assessment-tool/

PRAPARE Questions – SDOH Domains/Constructs	PRAPARE Responses – Social Risk Factors	ICD-10 Z Codes	Z Code Description	Social Intervention (SI)/Referral for identified social need (dummy CPT codes optional):
Current Housing Situation	I have no housing	Z59.0	Homelessness	SI-HS Housing Support Services
Worried About Losing Housing	Yes	Z59.9	Problem related to housing and economic circumstances, unspecified	SI-FC Financial Counseling/Eligibility Assistance
Education	Less than high school	Z55.0	Illiteracy and low-level literacy	SI-ED Education Support Services
Employment	Unemployed but seeking work	Z56.0	Unemployment, unspecified	SI-EM Employment Supportive Services
Other Needs/Financial Needs	Food, Clothing, Phone, Utilities, Childcare, Medicine or any health care, Other	Z59.4 Z59.6 Z59.5 Z63.6 Z59.8	Lack of adequate food and safe drinking water Low income Extreme poverty Dependent relative needing care at home Other problems related to housing/economic circumstances	SI-FD Food Supportive Services SI-CL Clothing Supportive Services SI-PH Phone Supportive Services SI-UT Utilities Supportive Services SI-CC Child Care Supportive Services SI-MH Medicine or Health Care Supportive Services SI-OM Other Materials Supportive Services

Snapshot of Community Health Care Association of New York State Social Determinants of Health (SDOH) - Technical Assistance ICD-10 Z Code and PRAPARE crosswalk (click to **HERE** TO view full-size)

For Funders and Philanthropists…

...to financially support efforts to address barriers to resource development and access. With time and resources cited as some of the main issues affecting screening progress, investing in social determinants requires patience.[90] Returns can take years to realize and long-term change starts by celebrating early wins. Just as conditions leading to health deficits have existed for a long time, Change InSight encourages interested stakeholders to proceed with patience and an understanding that improved health outcomes do not have a price tag. Furthermore, establishing trust relies on full participation from all parties involved. While some degree of financial risk is unavoidable when caring for socially vulnerable[91] populations like some in this sample, the success of sustainable funding models relies on careful selection of a trusted 'broker.' The broker plays several roles, from managing finances, mediator, and advisor.[92]

For Policymakers…

...to recognize the need for fair representation and promote laws and protections aimed at addressing higher-risk target communities. Even though Change InSight participating organizations can implement individual-level interventions using the initial data, efforts must go beyond local interventions and craft social policy that addresses broader systemic inequities. Elected officials need to acknowledge the contributions of the rich and vibrant AA and NHPI community. If health and funding disparities are the results of a lack of appropriate systems-level care (e.g. affordable housing, food assistance programs, childcare, etc.), then it must ask why preventative measures were not addressed. Policy actions at any level[93] have the potential to move the needle toward a brighter tomorrow, but to get there, we need to start looking at the bigger picture of how social determinants impact health and well-being.

Based on the initial findings in this report, along with the lack of AA and NHPI representation politically[94], policymakers would be wise to make social determinants a key legislative priority. Equitable policies call for multi-sector input[95], including organizations like the ones that make up Change InSight. Furthermore, policymakers and providers must also remember that as social conditions change, so do determinants warranting updated infrastructure.

For Civic and Social Leaders…

...to address barriers to collaboration between specific community groups. Civic engagement is important and necessary for cross-collaboration when addressing social determinants. In this sample, Change InSight does not ask participants whether they are registered to vote, or if they feel like they have an active voice in their communities. Investing in upstream interventions also requires active participation from community leaders and respected figures that mirror the values and aspirations of that particular setting.

Community engagement is for everyone. As the needs of immigrant communities and other minority groups continue to be captured, the solutions developed must go farther than just the individual. As individual change agents, it takes a collective responsibility for naming the cultural, social, and behavioral factors[96] contributing to health inequity.

For Community Health Workers and Direct Service Providers…

...to educate clients on where to find support and how to be heard. Gathering social determinants of health data can be confusing and appear burdensome. While the importance of social determinants of health data is well known and even promoted by clinical staff, understanding how to make data work for them is the key to taking appropriate action steps. Using the Five Rights Framework of Clinical Decision Support (CDS)[97], community health workers and providers in primary care settings and social service organizations can improve the relationships they have with clients. This includes gathering the (1) right information in the (2) right format to the (3) right people through the (4) right channels at the (5) right time. Having good data relies on knowing what works and providers offer first-hand accounts that inform workflow decisions.

For Business Communities…

...to expand their investment horizons and increase economic mobility in their respective neighborhoods. When mapping where to establish businesses, market value analyses sometimes deem some neighborhoods as economically disadvantaged and therefore not worth investing in. This effectively stunts the economic growth of these communities, often leading to poorer health outcomes. Whether business owners have five or 500 employees, investing in social determinants produces positive change, not just from a societal or environmental viewpoint, but for the community at large.

For Researchers…

...to identify culturally-appropriate, ethically rigorous, and participatory methods of reaching community groups with historical trauma. Health disparities are well-documented in the U.S.[98] However, these inequities are manufactured and strengthened when other aspects of society permit them to thrive. Addressing social determinants of health and disaggregating public narratives by ethnicity are just the first steps towards making opportunity a reality for AA and NHPI communities and other special and vulnerable populations (SVP)[99]. Researchers must continue to engage groups of interest from a lens of intersectionality, always recognizing individuals as their own best advocates.

Further consideration should be given to process-based standardization of procedures. Caution is warranted when interpreting the results of this study. Additional context is needed for this sample to be representative of the AA and NHPI population served in an urban setting. The contributors of this report will revisit work plans, communication schedules, and training manuals to ensure the greatest care when it comes to ethical, participatory outreach methods. *Changing Tides* embarks on an epic course in which better data leads to better decisions and opportunities become reality. Together, Change InSight is changing the way information is collected, synthesized, and shared to understand and empower individuals and communities to thrive where they are.

Appendix A: Terminology

Here are the rationales cited by PRAPARE® for each specific measure along with other useful definitions:

AA and NHPI: Acronym that recognizes the fact that Asian American and NHPI are separate racial categories per the 1997 OMB standards.

Asian[100]: A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.

Culture: Set of shared attitudes, values, goals and practices that characterize an institution, organization or group. Culture is transmitted and reinforced through tradition, art, language and ritual, among other practices. It has also been defined more broadly as a social system of meaning and custom by a group of people to assure its adaptation and survival.

Diversity: Refers to the identities we carry. There are many kinds of diversity, based on race, gender, sexual orientation, class, age, country of origin, education, religion, geography, physical or cognitive abilities, or other characteristics. Valuing diversity means recognizing differences between people, acknowledging that these differences are a valued asset, and striving for diverse representation as a critical step towards equity.

Downstream/upstream: Upstream refers to acknowledging and addressing the structural, societal, community and individual-level factors that influence health. Whereas downstream refers to the dominant approach of treating individual-level factors and/or contributors without wholly addressing structural, societal and community factors. "Moving upstream" involves continuously seeking to address the root causes of health inequities and improving the structural and social drivers of health for all people.

Education: Education is a widely used measure of socio-economic status and is a significant contributor to health and prosperity. Higher education is associated with longer life span and fewer chronic conditions. Parental education is a determinant of child health outcomes

Employment: There is evidence that unemployment is associated with lower psychological wellbeing, more unhealthy behaviors, and higher morbidity and mortality.

English proficiency: English proficiency is related to acculturation, which is associated with health outcomes. It affects access to health care and is also related to higher cost of care.

Ethnicity: a socio-political construct that is a proxy for religion, culture, common history, and shared genetics. It is associated with a wide range of health disparities, and including it in the tool allows for the identification of these disparities and for health care quality assessment.

Farm worker status: Farmworkers have unique toxic exposures related to pesticides and farming chemicals. They may also spend significant amounts of time away from their family. Additionally, there are social conditions related to temporary housing communities for seasonal/migrant work that may adversely affect workers and their families, like an increased risk for violence.

Federal Poverty Level (FPL): The Federal Poverty Guidelines are based on the U.S. Department of Health and Human Services poverty measures. The poverty guidelines reference a household's annual income and the number of people living in that household. Households with an annual income at or below 100% of this threshold are considered to be "living in poverty." U.S. Federal Poverty Guidelines Used to Determine Financial Eligibility for Certain Federal Programs.

Health care inequities: A measurable, systemic, avoidable and unjust difference in health care access, utilization, quality and outcomes between groups, stemming from differences in levels of social advantage and disadvantage.

Health disparities: Refer to a higher burden of illness, injury, disability or mortality experienced by one group relative to another.

Health equity: Defined by the WHO as "the absence of avoidable, unfair, or remediable differences among groups of people, whether those groups are defined socially, economically, demographically or geographically or by other means of stratification. 'Health equity' or 'equity in health' implies that ideally everyone should have a fair opportunity to attain their full health potential and that no one should be disadvantaged from achieving this potential.

Household income: Income is a well-documented factor related to health outcomes. For example, low-income is associated with a lower life expectancy.

Household size: This information is used to calculate %FPL. Income is a well-documented factor related to health outcomes. For example, low-income is associated with a lower life expectancy.

Housing stability: Housing insecurity is associated with poor health and nutrition and lower ability to manage chronic conditions. Homelessness is associated with frequent emergency department use. Housing interventions can reduce emergency department visits, hospital days, and hospitalizations.

Insurance: Insurance coverage affects access to care and quality of care.

Living in poverty: see "Federal Poverty Level (FPL)"

Material security: Material security encompasses both presence of resources and presence of skills and knowledge to manage resources. It is common in households that have material insecurity that patients must make tradeoffs to meet their needs. Overall material security has been linked to many disparities. Material insecurity has a validated relationship with forgoing care and with cost outcomes.

Native Hawaiian or Other Pacific Islander[101]**:** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

Neighborhood: Population level data on risks and assets can be used to estimate risk for individuals living within that population. Patient addresses can be used with geocoded data sets, which have been rapidly growing and will likely expand much further in the next few years. Geocoded information on risk reduces the burden of primary data collection.

OMB: Office of Management and Budget, part of the Executive Office of the President, is responsible for developing the federal budget, managing work across federal agencies, and coordinating and reviewing all significant federal regulations.[102]

Race: Race is a documented predictor of risk for many health outcomes and access to care. It is a combination of social and biological factors. Race is associated with health disparities and disparities in risk and assets, such as psychosocial, behavioral, and environmental factors. Including race allows for the identification of racial disparities.

Social integration: Social relationships impact health[103] as much or more than some major biomedical and behavioral factors. Social integration, or the number of relationships and frequency of contact, has more evidence supporting its role in health outcomes than subjective measures of loneliness.

Stress: Stress has negative health consequences when a patient has insufficient resources to cope with it. Long-term exposure to chronic or severe stressors increases a patient's allostatic load, which is the biological mechanism by which stress produces negative health outcomes. Stress management interventions can prevent stress from becoming toxic to the body and contributing to the development of chronic health conditions.

Transportation: Transportation plays a vital role in an individual's life and a critical role in one's ability to sustain a healthy livelihood by determining one's ability to get to and from work, accessing healthy food options, and visiting healthcare providers.

Veteran status: Veterans are at heightened risk for certain health outcomes, including Post-Traumatic Stress Syndrome and joint replacement surgery.

Domestic violence: Domestic violence is a known contributing factor to mental health and well-being, and can lead to other chronic conditions such as heart disease and stroke. Providing access to resources for support and actively creating & engaging in preventative practices will allow for a safer, healthier livelihood.

Incarceration: Legal problems are inextricably linked to health problems. Oftentimes, people are made ill or have their access to healthcare threatened because laws are not enforced or poorly written and because benefits are wrongfully denied.

Refugee: Healthcare providers need to be aware of, and sensitive to, cultural diversity, life situations, and other various factors that shape a person's identity to provide safe and quality care to all patients. These factors include refugee status, sexual orientation, cultural and linguistic background, sex and gender, disability, religious beliefs, homelessness, and incarceration history among other factors.

Safety: Physical and emotional safety in the community can allow for a better understanding of how individuals and their communities, resources, and others interact. Domestic violence is a known contributing factor to mental health and well-being and can lead to other chronic conditions such as heart disease and stroke. Providing access to resources for support and actively creating & engaging in preventative practices will allow for a safer, healthier livelihood.

Appendix B: PRAPARE® Items & Measures

CHANGEINSIGHT™

Below are the 21 questions in the original assessment. With permission from PRAPARE® staff, we were able to add a few questions, namely age and gender. Each question is followed by a set of multiple-choice answers that can be found in the full assessment available at prapare.org/the-prapare-screening-tool/. Some questions are edited for brevity or clarity.

Personal characteristics include five questions about race, ethnicity, farmworker status, language preference, and veteran status:

1. *Are you Hispanic or Latino?*
2. *Which race(s) are you? Check all that apply.*
3. *At any point in the past two years, has seasonal or migrant farm work been your or your family's main source of income?*
4. *Have you been discharged from the armed forces of the United States?*
5. *What languages are you most comfortable speaking?*

The **Family and Home** measure contains four questions that document neighborhood attributes and housing status and stability:

6. *How many family members, including yourself, do you currently live with?*
7. *What is your housing situation today?*
8. *Are you worried about losing your housing?*
9. *What is your current address?*

The six questions and three optional features in the **Money and Resources** measure ask about education, employment, insurance status, income, material security, and transportation needs:

10. *What is the highest level of school that you have finished?*
11. *What is your current work situation?*
12. *What is your main insurance?*
13. *During the past year, what was the total combined income for you and the family members you live with?*
14. *In the past year, have you or any family members you live with been unable to get any of the following when it was really needed? (Answers include food, utilities, medicine or healthcare, phone, clothing, and child care.)*
15. *Has lack of transportation kept you from medical appointments, meetings, work, or from getting things you needed for daily living?*

Social and Emotional Health measures stress levels and social integration and support. There are two questions in this measure, with one optional feature:

16. *How often do you see or talk to people that you care about and feel close to?*
17. *How stressed are you?*

Other measures in PRAPARE® ask about incarceration history, safety, refugee status, and instances of domestic violence. This measure consists of four questions and one optional feature. All items in this measure are considered optional when administering the tool.

18. *In the past year, have you spent more than two nights in a row in a jail, prison, detention center, or juvenile correctional facility?*
19. *Are you a refugee?*
20. *Do you feel physically and emotionally safe where you currently live?*
21. *In the past year, have you been afraid of your partner or ex-partner?*

Additional questions added with permission from PRAPARE®

Two questions added for context include:

I. *What is your age as of today?*
II. *What is your gender?*

Most questions contain response categories such as, "Yes," "No," and "I choose not to answer this question." There are some optional features that build on previous logic and several spaces for open text responses. Designed with a flexible administration protocol, all responses were recorded on paper by providers. We chose to utilize a modified interview-style approach per best practices outlined by PRAPARE® staff.

RESPONSE CATAGORIES	PRAPARE® TALLY POINTS BY RESPONSE CATAGORY
ETHNICITY: Are you Hispanic or Latino? (maximum of 1 tally)	
No	0
Yes	1
RACE: Which race(s) are you? (maximum of 1 tally)	
Asian	1
Native Hawaiian	1
Pacific Islander	1
Black/African American	1
American Indian/Alaskan Native	1
White	0
Other	1
Multiple Races	1
FARM WORKER STATUS: At any point in the past 2 years, has seasonal or migrant farm work been your or your family's main source of income? (maximum of 1 tally)	
No	0
Yes	1
VETERAN STATUS: Have you been discharged from the armed forces of the United States? (maximum of 1 tally)	
No	0
Yes	1
ENGLISH PROFICIENCY: What language are you most comfortable speaking? (maximum of 1 tally)	
English	0
Language other than English	1

RESPONSE CATAGORIES	PRAPARE® TALLY POINTS BY RESPONSE CATAGORY
GENERATE %FPL (maximum of 1 tally)	
100% or below	1
101-150%	1
151-200%	1
200% or more	0
Unknown	0
HOUSING SITUATION: What is your housing situation today? (maximum of 1 tally)	
I have housing	0
I do not have housing	1
HOUSING STABILITY: Are you worried about losing your housing? (maximum of 1 tally)	
Yes (unstable housing)	1
No (unstable housing)	0
EDUCATION: What is the highest level of school that you have finished? (maximum of 1 tally)	
Less than high school degree	1
High school diploma or GED	1
More than high school	0
EMPLOYMENT: What is your current work situation? (maximum of 1 tally)	
Unemployed and seeking work	1
Part-time work	1
Full-time work	0
Otherwise unemployed but not seeking work	1
INSURANCE: What is your main insurance? (maximum of 1 tally)	
None/uninsured	1
Medicaid	1
CHIP Medicaid	1

RESPONSE CATAGORIES	PRAPARE® TALLY POINTS BY RESPONSE CATAGORY
Medicare	1
Other public insurance (Non-CHIP)	1
Other public insurance (CHIP)	1
Private insurance	0
MATERIAL SECURITY: In the past year, have you or any family members you live with been unable to get any of the following when it was really needed? Check all that apply. (maximum of 7 tallies)	
Food	1
Clothing	1
Utilities	1
Child care	1
Medicine or health care	1
Phone	1
Other (enter written answer)	1
No unmet needs	0
TRANSPORTATION: Has lack of transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living? Check all that apply. (maximum of 2 tallies)	
Yes, it has kept me from medical appointmens or from getting my medications	1
Yes, it has kept me from non-medical meetings, appointments, work, or from getting things that I need	1
No transportation needs	0
SOCIAL INTEGRATION: How often do you see or talk to people that you care about and feel close to? (Example: talking to friends on the phone, visiting friends/family, going to church or club meetings) (maximum of 1 tallies)	
Less than once a week	1
1 or 2 times a week	1
3 to 5 times a week	1
More than 5 times a week	0

RESPONSE CATAGORIES	PRAPARE® TALLY POINTS BY RESPONSE CATAGORY
STRESS: Stress is when someone feels tense, nervous, anxious, or can't sleep at night because their mind is troubled. How stressed are you? (maximum of 1 tallies)	
Not at all	0
A little bit	1
Somewhat	1
Quite a bit	1
Very much	1

[1] Office of Minority Health. (2018, November 2). White House Initiative on Asian Americans and Pacific Islanders HHS Plan for Asian American, Native Hawaiian and Pacific Islander (AA and NHPI) Health. U.S. Department of Health and Human Services. Retrieved from https://www.minorityhealth.hhs.gov/omh/content.aspx?lvl=3&lvlid=65&ID=8800#.YyNnNRiJSUw.link

[2] Healthy People 2030. (2022). Social Determinants of Health. Office of Disease Prevention and Health Promotion. Retrieved from https://health.gov/healthypeople/priority-areas/social-determinants-health

[3] Centers for Disease Control and Prevention. (2022, September 15). COVID Data Tracker. U.S. Department of Health and Human Services, CDC. Retrieved from https://covid.cdc.gov/covid-data-tracker

[4] Native Hawaiians and Pacific Islanders are not specified as a separate race/ethnicity in this study.

[5] Levin, B., Venolia, A., Perst, K., & Levin, G. (2022, August 4). Report to the Nation: 2020s – Dawn of a Decade of Rising Hate. Center for the Study of Hate & Extremism at California State University San Bernadino. Retrieved from https://www.csusb.edu/sites/default/files/2022-08/Report%20To%20The%20Nation8-4-22.pdf

[6] Protocol for Responding to & Assessing Patients' Assets, Risks & Experiences, social determinants of health assessment tool that is nationally and stakeholder-driven. Retrieved from https://prapare.org/the-prapare-screening-tool/

[7] "Participant" refers to an agency's clients, customers, patients, and/or any other constituent/stakeholder participating or receiving goods or services from that particular provider.

[8] SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ). (September 2006). Office of Management and Budget Standards and Guidelines for Statistical Surveys. Retrieved from https://www.samhsa.gov/data/sites/default/files/standards_stat_surveys.pdf

[9] Budiman, A., Ruiz, N.G. (2021, April 9). Asian Americans are the fastest-growing racial or ethnic group in the U.S. Pew Research Center. Retrieved from https://www.pewresearch.org/fact-tank/2021/04/09/asian-americans-are-the-fastest-growing-racial-or-ethnic-group-in-the-u-s/

[10] López, G., & Radford, J. (2017, May 3). 2015, Foreign-Born Population in the United States Statistical Portrait. Pew Research Center. Retrieved from https://www.pewresearch.org/hispanic/2017/05/03/2015-statistical-information-on-immigrants-in-united-states/

[11] Budiman, A., & Ruiz, N.G. (2021, April 29). Key facts about Asian Americans, a diverse and growing population Pew Research Center. Retrieved from https://www.pewresearch.org/fact-tank/2021/04/29/key-facts-about-asian-americans/

[12] White House Initiative on Asian Americans and Pacific Islanders. (2014, August). Building the American Mosaic: Report from the President's Advisory Commission on Asian Americans and Pacific Islanders. U.S. Department of Education. Retrieved from https://obamawhitehouse.archives.gov/sites/default/files/docs/american-mosaic_digital.pdf

[13] Kim, R.H. (2021, Dec 14) Differential impact of racial microaggressions on Asian Americans: relationship to perpetrator and power status. Columbia University. Retrieved from: https://doi.org/10.7916/D8DN49SV

[14] Ibid.

[15] Ibid.

[16] EDSITEment! (2022). Asian American and Pacific Islander Heritage and History in the U.S. National Endowment for the Humanities. Retrieved from https://edsitement.neh.gov/teachers-guides/asian-american-and-pacific-islander-heritage-and-history-us

[17] U.S. Census Bureau. (2022, April 18). Asian American and Pacific Islander Heritage Month: May 2022. Census.gov. Retrieved from https://www.census.gov/newsroom/facts-for-features/2022/asian-american-pacific-islander.html

[18] Budiman, A., & Ruiz, N.G. (2021, April 29). Key facts about Asian Americans[…]. Pew Research Center. Available at https://www.pewresearch.org/fact-tank/2021/04/29/key-facts-about-asian-americans/

[19] Migration Data Portal. (2022, March 30). Migration data in Oceania. International Organization for Migration (IOM) Global Migration Data Analysis Centre. Retrieved from https://www.migrationdataportal.org/regional-data-overview/oceania#_edn1

[20] Budiman, A., & Ruiz, N.G. (2021, April 29). Key facts about Asian Americans[…]. Pew Research Center. Available at https://www.pewresearch.org/fact-tank/2021/04/29/key-facts-about-asian-americans/

[21] Budiman, A., & Ruiz, N.G. (2021, April 9). Asian Americans are the fastest-growing racial or ethnic group in the U.S. Pew Research Center. Available at https://www.pewresearch.org/fact-tank/2021/04/29/key-facts-about-asian-americans/

[22] Budiman, A., & Ruiz, N.G. (2021, April 29). Key facts about Asian Americans[…]. Pew Research Center. Available at https://www.pewresearch.org/fact-tank/2021/04/29/key-facts-about-asian-americans/

[23] Ruiz, N.G, Shao, S., & Shah, S. (2022, August 2). What It Means To Be Asian in American: The lived experiences and perspectives of Asian Americans in their own words. Pew Research Center. Retrieved from https://www.pewresearch.org/race-ethnicity/2022/08/02/what-it-means-to-be-asian-in-america/

[24] Gordon, N.P., Lin, T.Y., Rau, J., et al. (2019). Aggregation of Asian-American subgroups masks meaningful differences in health and health risks among Asian ethnicities: an electronic health record based cohort study. BMC Public Health; 19: 1551. Retrieved from https://doi.org/10.1186/s12889-019-7683-3

[25] Joint Economic Committee Democrats. (2022, May 27). JEC, CAPAC Release New Report on Economic Disparities in Asian American, Native Hawaiian, Pacific Islander Community. JEC. Retrieved from https://www.jec.senate.gov/public/index.cfm/democrats/2022/5/jec-capac-release-new-report-on-economic-disparities-in-asian-american-native-hawaiian-pacific-islander-community#:~:text=Poverty%20rates%20vary%20widely%20across,Micronesian%20Americans%20not%20from%20Guam

[26] Q&A: Grouping statistics on Asian American populations masks health disparities — Aggregating data on diverse Asian populations perpetuates 'model minority' myth, says Ninez Ponce. Aaron Warnick. The Nation's Health September 2021, 51 (7) 10. Retrieved from https://www.thenationshealth.org/content/51/7/10

[27] Leading Asian Americans to Unite for Change (LAAUNCH). (2021). Social Tracking of Asian Americans in the U.S. (STAATUS) Index Report 2021. LAAUNCH Foundation. Retrieved from https://uploads-ssl.webflow.com/5f629e7e013d961943d5cec9/6098a7be3d627168e03054da_staatus-index-2021.pdf

[28] Jin, C.H. (2021, May 25). 6 Charts That Dismantle The Trope Of Asian Americans As A Model Minority. NPR. Retrieved from https://www.npr.org/2021/05/25/999874296/6-charts-that-dismantle-the-trope-of-asian-americans-as-a-model-minority

[29] Yearby, R. (2020, September 22). Structural Racism: The Root Cause of the Social Determinants of Health. Petrie-Flom Center at Harvard Law School. Retrieved from https://blog.petrieflom.law.harvard.edu/2020/09/22/structural-racism-social-determinant-of-health/

[30] Centers for Disease Control and Prevention (CDC). (2022). What is Health Equity? U.S. Department of Health & Human Services. Retrieved from https://www.cdc.gov/healthequity/whatis/?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fcommunity%2Fhealth-equity%2Frace-ethnicity.html#anchor_09858

[31] Office of Disease Prevention and Health Promotion. (2022, March). Health Equity and Health Disparities Environmental Scan. U.S. Department of Health and Human Services. Retrieved from https://health.gov/sites/default/files/2022-04/HP2030-HealthEquityEnvironmentalScan.pdf

[32] Carmen, D.W., Proctor, B.D., and Smith, J.C. (2011, September). Income, Poverty, and Health Insurance Coverage in the United States: 2010. U.S. Census Bureau. Retrieved from https://www2.census.gov/library/publications/2011/demo/p60-239/p60-239.pdf

[33] CDC. (2021). National Vital Statistics Report; 69(13): Table 10. Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr69/nvsr69-13-508.pdf

[34] Lee, R.J., Madan, R.A., Kim, J., Posadas, E.M. and Yu, E.Y. (2021), Disparities in Cancer Care and the Asian American Population. The Oncol; 26: 453-460. https://doi.org/10.1002/onco.13748

[35] CDC. (2021). Summary Health Statistics: National Health Interview Survey: 2018, Table A-1a. Retrieved from http://www.cdc.gov/nchs/nhis/shs/tables.htm

[36] Uniform Data System (UDS) Report. (2021). National Health Center Program Uniform Data System (UDS) Awardee Data. Health Resources & Services Administration. Retrieved from https://data.hrsa.gov/tools/data-reporting/program-data/national

[37] Healthy People 2030. (2022). Social Determinants of Health. Office of Disease Prevention and Health Promotion. Retrieved from https://health.gov/healthypeople/priority-areas/social-determinants-health

[38] Ibid.

[39] Bharmal, N., Derose, K.P., Felician, M., & Wedne, M.M. (2015, May). Understanding the Upstream Social Determinants of Health. RAND® Corporation. Retrieved from https://www.rand.org/content/dam/rand/pubs/working_papers/WR1000/WR1096/RAND_WR1096.pdf

[40] Castrucci, B.C., and Auerbach, J. (2019, January 16). Meeting Individual Social Needs Falls Short Of Addressing Social Determinants Of Health. HealthAffairs at Project HOPE®. Retrieved from https://www.healthaffairs.org/do/10.1377/forefront.20190115.234942

[41] McGovern, L., Miller, G., & Hughes-Cromick, P. (2014, August 21). Health Policy Brief: The Relative Contribution of Multiple Determinants to Health Outcomes. Health Affairs. Retrieved from https://www.rwjf.org/en/library/research/2014/08/the-relative-contribution-of-multiple-determinants-to-health-out.html

[42] Luvvie Ajayi Jones. (2017, December 1). Get comfortable with being uncomfortable. TED. Retrieved from https://www.ted.com/talks/luvvie_ajayi_jones_get_comfortable_with_being_uncomfortable?language=en

[43] National Association of Community Health Centers, Inc (NACHC) & Association of Asian Pacific Community Health Organizations (AAPCHO). (2016). Protocol for Responding to & Assessing Patients' Assets, Risks & Experiences (PRAPARE®). NACHC & AAPCHO. Retrieved from https://prapare.org/

[44] Ibid.

[45] Ibid.

[46] Several questions have been added or modified for context and clarity with permission from PRAPARE® authors—what is your gender? Are you Hispanic and/or Latinx. (2021, September 27).

[47] HRSA Uniform Data System (UDS). (2019). National Health Center Program Uniform Data System (UDS) Awardee Data. Health Resources & Services Administration. Retrieved from https://data.hrsa.gov/tools/data-reporting/program-data/national

[48] Refers to sample of target population and/or populations served by the agency (e.g. client base)

[49] Singer, A.. and Hood-Ronick, C. (2019). Principles for patient-centered approaches to social needs screening. Retrieved from https://www.orpca.org/initiatives/empathic-inquiry

[50] Only staff designated mandated reporters were permitted to ask questions from the Optional Measures in PRAPARE®. Due to the sensitive nature of these items, clinical discretion was strongly advised when conducting face-face assessments. Staff was required to attend all training sessions prior to administering assessments to clients/customers/patients. In any scenario where the immediate emotional or physical safety of the participant

was at risk, staff was instructed to cease all assessment activity and/or deploy crisis or emergency response (if trained), reporting all incidents to their supervisor.

[51] National Association of Community Health Centers, Inc (NACHC) & Association of Asian Pacific Community Health Organizations (AAPCHO). (2016). Protocol for Responding to & Assessing Patients' Assets, Risks & Experiences (PRAPARE®). NACHC & AAPCHO. Retrieved from http://www.nachc.org/wp-content/uploads/2019/01/PRAPARE-SDH-Risk-Tally-Score-Methodology.pdf

[52] National Institute of Mental Health. (2022). What is Prevalence? National Institutes of Health (NIH). Retrieved from https://www.nimh.nih.gov/health/statistics/what-is-prevalence

[53] Agency for Healthcare Research and Quality (AHRQ). (2022). Regression Analysis. Retrieved from https://digital.ahrq.gov/health-it-tools-and-resources/evaluation-resources/workflow-assessment-health-it-toolkit/all-workflow-tools/regression-analysis

[54] Budiman, A., Ruiz, N.G. (2021, April 29). Key facts about Asian Americans[…]. Pew Research Center. Available at https://www.pewresearch.org/fact-tank/2021/04/29/key-facts-about-asian-americans/

[55] Ibid.

[56] Weir, R.C., Proser, M., Jester, M., Li, V., Hood-Ronick, CM, and Gurewich, D. (2020). Collecting Social Determinants of Health Data in the Clinical Setting: Findings from National PRAPARE® Implementation. Journal of Health Care for the Poor and Underserved; 31(2): 1018-1035. Retrieved from https://doi.org/10.1353/hpu.2020.0075

[57] Contributor's analysis of findings from current PRAPARE pilot sample.

[58] Shi L, Lebrun L.A., Tsai J. (2009, December). The influence of English proficiency on access to care. Ethn Health, 14(6):625-42. Retrieved from https://doi.org/10.1080/13557850903248639

[59] Sam, D.., & Berry, J. (Eds.). (2016). The Cambridge Handbook of Acculturation Psychology (2nd ed., Cambridge Handbooks in Psychology). Cambridge: Cambridge University Press. Retrieved from https://doi:10.1017/CBO9781316219218

[60] Berry, J. W. (1997). Immigration, acculturation, and adaptation. Applied psychology; 46(1), 5-34. Retrieved from https://iaap-journals.onlinelibrary.wiley.com/doi/abs/10.1111/j.1464-0597.1997.tb01087.x

[61] Berry, J.W. (1992), Acculturation and Adaptation in a New Society. International Migration; 30: 69-85. Retrieved from https://doi.org/10.1111/j.1468-2435.1992.tb00776.x

[62] Trinh-Shevrin, C., Islam, N.S., & Rey, M.J. (2009). Asian american communities and health: context research policy and action (1st ed.). Jossey-Bass. Retrieved from https://worldcat.org/en/title/246887788

[63] Yoo, Grace J., Mai-Nhung. Le, and Alan Y. Oda. (2013). Handbook of Asian American Health. New York: Springer. Retrieved from https://doi.org/10.1007/978-1-4614-2227-3

[64] U.S. Census Bureau (2021). ACS 1-Year Estimates Selected Population Profiles. Retrieved from https://data.census.gov/cedsci/table?text=S0201&tid=ACSSPP1Y2021.S0201

[65] Ibid.

[66] Ibid.

[67] Ibid.

[68] UN General Assembly. (1948, December 10). Universal Declaration of Human Rights; 217 A (III), Retrieved from https://www.refworld.org/docid/3ae6b3712c.htm

[69] Wilson, S.H. & Walker, G.M. (1993, May). Unemployment and health: a review. Public Health; 107(3):153-62. Retrieved from https://doi.org/10.1016/s0033-3506(05)80436-6

[70] Sommers,, B.D., & Simon, K. (2017). Health insurance and emergency department use—a complex relationship. N Engl J Med; 376:1708-1711. Retrieved from: https://www.nejm.org/doi/full/10.1056/NEJMp1614378

[71] Blanding, M. (2015, January 26). Workplace Stress Responsible For Up To $190B In Annual U.S. Healthcare Costs. Forbes. Retrieved from https://www.forbes.com/sites/hbsworkingknowledge/2015/01/26/workplace-stress-responsible-for-up-to-190-billion-in-annual-u-s-heathcare-costs/?sh=4f19496f235a

[72] Institute of Medicine. (2014). Capturing Social and Behavioral Domains and Measures in Electronic Health Records: Phase 2. Washington, DC: The National Academies Press. Retrieved from https://doi.org/10.17226/18951

[73] Umberson, D., & Karas Montez, J. (2010). Social Relationships and Health: A Flashpoint for Health Policy. Journal of Health and Social Behavior; 51(1_suppl): S54–S66. Retrieved from https://doi.org/10.1177/0022146510383501

[74] Berkman, L.F., & Syme, S.L. (1979, February). Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents. Am J Epidemiol; 109(2):186-204. Retrieved from https://doi.org/10.1093/oxfordjournals.aje.a112674

[75] Kiecolt-Glaser, J.K., McGuire, L., Robles, T.F., and Glaser, R. (2002, February). Emotions, Morbidity, and Mortality: New Perspectives from Psychoneuroimmunology. Annual Review of Psychology; 53(1): 83-107. Retrieved from https://doi.org/10.1146/annurev.psych.53.100901.135217

[76] Robles, T.F., & Kiecolt-Glaser, J.K. (2003). The physiology of marriage: pathways to health. Physiology & Behavior; 79(3): 409-416. Retrieved from https://doi.org/10.1016/S0031-9384(03)00160-4

[77] Harvard University T.H. Chan School of Public Health. (2022, August 1). Personal Experiences of U.S. Racial/Ethnic Groups in Today's Difficult Times: A stark look at problems faced across racial/ethnic groups in the U.S. amid a period of inflation, political conflict, the pandemic, and other competing crises. NPR/Robert Wood Johnson Foundation/Harvard School of Public Health, Public Opinion Poll Series. Retrieved from https://www.rwjf.org/en/library/research/2022/08/personal-experiences-of-u-s-racial-ethnic-groups-in-todays-difficult-times.html

[78] AAPI Data. (2022, June). State of Asian Americans, Native Hawaiians, and Pacific Islanders in the United States. AAPI Data in collaboration with the California Health Interview Survey, 2022. Retrieved from https://aapidata.com/wp-content/uploads/2022/06/Health-Mental-Health-and-Social-Service-Needs-of-AANHPIs-main-draft-6-23-2022.pdf

[79] Although we do not ask how well participants spoke English in our sample, we recognize this as something to ask in the future.

[80] Participants whose median income based on household composition fell under the federal poverty threshold were considered to be living in poverty.

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[87] Although we do not ask how well participants spoke English in our sample, we recognize this as something to ask in the future.

[88] Participants whose median income based on household composition fell under the federal poverty threshold were considered to be living in poverty.
[89] Kimberlé Crenshaw. (2017, June 8). Kimberlé Crenshaw on Intersectionality, More than Two Decades Later. Columbia Law School. Retrieved from https://www.law.columbia.edu/news/archive/kimberle-crenshaw-intersectionality-more-two-decades-later
[90] Nichols, L.M., & Taylor, L.A. (2018). Social Determinants As Public Goods: A New Approach To Financing Key Investments In Healthy Communities. Health Affairs; 37(8): 1223-1230. Retrieved from https://doi.org/10.1377/hlthaff.2018.0039
[91] Ibid.
[92] Ibid.
[93] Hughes, D.L., & Mann, C. (2020). Financing The Infrastructure Of Accountable Communities For Health Is Key To Long-Term Sustainability. Health Affairs; 39(4): 670-678. Retrieved from https://doi.org/10.1377/hlthaff.2019.01581
[94] Chen, S. (2021, May 4). Report: AAPI elected officials make up 0.9% of U.S. elected leaders. Axios. Retrieved from https://www.axios.com/2021/05/04/aapi-representation-elected-officials-leaders
[95] Hughes, D.L., & Mann, C. (2020). Financing The Infrastructure Of Accountable Communities For Health Is Key To Long-Term Sustainability. Health Affairs; 39(4): 670-678. Available at https://www.healthaffairs.org/doi/10.1377/hlthaff.2019.01581
[96] Dubowitz, T., Orleans, T., Nelson, C., May, L.W., Sloan, J.C., and Chandra, A. (2016). Creating Healthier, More Equitable Communities By Improving Governance And Policy. Retrieved from https://www.healthaffairs.org/doi/10.1377/hlthaff.2016.0608
[97] Campbell, R. (2016, February). The Five Rights of Clinical Decision Support: CDS Tools Helpful for Meeting Meaningful Use. Journal of AHIMA; 84(10): 42-47. Retrieved from https://library.ahima.org/doc?oid=300027#.YyyNJ3bMKUk
[98] World Health Organization. Health equity. https://www.who.int/topics/health_equity/en/#:~:text=Equity%20is%20the%20absence%20of,by%20other%20means%20of%20stratification. Published n.d.
[99] Health Resources & Services Administration. (2018, August 20). Health Center Program
[100] Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity.
[101] Ibid.
[102] Office of Management and Budget (White House) https://www.whitehouse.gov/omb/
[103] Umberson, D., & Karas Montez, J. (2010). Social Relationships and Health: A Flashpoint for Health Policy. Journal of Health and Social Behavior; 51(1_suppl): S54–S66. Retrieved from https://doi.org/10.1177/0022146510383501


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