Sutter Health

CALIFORNIA PACIFIC MEDICAL CENTER

2019 Community Health Needs Assessment

California Pacific Medical Center
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2019–2021

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I. About California Pacific Medical Center

California Pacific Medical Center (CPMC) is an affiliate of Sutter Health, a not-for-profit healthcare system. CPMC was created in 1991 by the merger of Children's Hospital and Pacific Presbyterian Medical Center. In 1996, CPMC became a Sutter Health affiliate. In 1998, the Ralph K. Davies Medical Center merged with CPMC. Nine years later, in 2007, St. Luke's Hospital became a campus of CPMC.

Today, CPMC consists of three acute care campuses (totaling 635 licensed beds) and two ancillary campuses in San Francisco:

- The Van Ness Campus (Van Ness & Geary) is a high-level regional hospital offering advanced medical technology, which opened in March 2019. It is the center for acute care, including oncology, orthopedics, ophthalmology, cardiology, and liver, kidney, and heart transplant services. Emergency care includes a dedicated pediatric emergency department.
- The Davies Campus (Castro District) provides advanced surgery and robotic-assisted surgery for orthopedic problems and joint replacements, as well as a 24-hour emergency room. It houses key centers for neurosciences, memory care, microsurgery, and acute rehabilitation, and has been recognized by the Joint Commission as a Primary Stroke Center.
- The Mission Bernal Campus (Mission District), formerly known as the St. Luke's Campus, is a vital community hospital serving underinsured residents in the South of Market districts. A new state-of-the-art hospital opened at this location in 2018, offering comprehensive medical services that include cardiovascular care, breast health, labor and delivery, orthopedics, general surgery, and emergency care. The specialized Acute Care for the Elderly (ACE) Unit is dedicated to the care of older patients. CPMC also manages outpatient clinics located at this campus.
- The Pacific Campus (Pacific Heights) is a center for key outpatient services, including imaging, dialysis, cancer radiation and infusion therapy, ophthalmology, same-day surgeries, cosmetic surgery, and podiatry. All inpatient services, including the Emergency Department, moved to the Van Ness Campus in March 2019.
- The California Campus (Laurel Heights) is the location of the Breast Health Center, the Newborn Connections lactation store, Women's Health Resource Center, Outpatient Imaging, and the Specialty Care Pediatrics clinic (Stanford Children's Health Services). Pediatric emergency room care and all inpatient services moved to the Van Ness Campus in March 2019.

II. Executive Summary

This Community Health Needs Assessment (CHNA) takes a broad view of health conditions and status in San Francisco. In addition to providing local disease and death rates, it also provides data and information on social determinants of health—social structures and economic systems that include the social environment, physical environment, health services, and structural and societal factors.

This CHNA report has as its foundation the CHNA report that was collectively developed by the San Francisco Health Improvement Partnership (SFHIP)—*San Francisco Community Health Needs Assessment 2019*. The processes and findings described within this document refer to those of SFHIP's 2019 needs assessment. SFHIP's original 2019 CHNA document can be found at www.sfhip.org.

The CHNA process involved four steps:

- Community health status assessment
- Assessment of prior assessments
- Community engagement
- Health needs identification and prioritization

Overall, the CHNA found that health has improved in San Francisco:

- More San Franciscans have access to healthcare.
- The estimated rate of new HIV infection in San Francisco continues to decrease.
- Life expectancy increased for all San Franciscans with the biggest gains seen by Black/African Americans.
- Mortality rates due to lung, colon, and breast cancers and influenza and pneumonia continue to decline.
- The availability of tobacco products has decreased. At 11 percent, rates of smoking are lower than the Healthy People 2020 goal of 12 percent.
- 2017 had the lowest number of traffic-related fatalities since record-keeping began in 1915.

The CHNA identified two foundational issues contributing to local health needs:

- Poverty
- Racial health inequities

The CHNA identified five health needs that heavily impact disease and death in San Francisco:

- Access to coordinated, culturally and linguistically appropriate care and services
- Food security, healthy eating, and active living
- Housing security and an end to homelessness
- Safety from violence and trauma
- Social, emotional, and behavioral health

Foundational Issues

Poverty

Enough income generally confers access to resources that promote health—like good schools, healthcare, healthy food, safe neighborhoods, and time for self-care—and the ability to avoid health hazards—like air pollution and poor-quality housing conditions. Page 14 focuses on the economic

barriers to health that many San Franciscans face. Find additional data on economics and health in the Economic Environment data page in Appendix H.

Racial Health Inequities
Health inequities are avoidable differences in health outcomes between population groups. Health inequities result from both the actions of individuals (health behaviors, biased treatment by health professionals), and from the structural and institutional behaviors that confer health opportunities or burdens based on status. For example, the uneven distribution of wealth and resources determines the level of health that those getting the least of these resources can achieve. Pages 14–17 include data on a few improvements to health and determinants of health and point to where more work needs to be done to address structural and institutional racism in San Francisco. Additional data on health inequities are found throughout the community health data pages in the Appendices.

Health Needs

Access to Coordinated, Culturally and Linguistically Appropriate Care and Services
San Francisco continued to see gains in access to healthcare, with 10,000 fewer residents uninsured in 2017 than in 2015. Of the estimated 31,500 uninsured residents, 15,373 have healthcare access through Healthy San Francisco or Healthy Kids. Approximately 2 percent of residents remain without access. Having insurance or an access program is only the first step, however; true access to services is influenced by location, affordability, hours of operation, and cultural and linguistic appropriateness of healthcare services. Pages 18–19 present San Francisco statistics on healthcare use, barriers to use, and consequences of not having access to quality care. Additional information on healthcare quality and access is located in the Healthcare Access and Quality data page in Appendix H.

Food Security, Healthy Eating, and Active Living
Inadequate nutrition and a lack of physical activity contribute to nine of the leading 15 causes of premature death in San Francisco—heart failure, stroke, hypertension, diabetes, prostate cancer, colon cancer, Alzheimer's, breast cancer, and lung cancer. Studies have shown that just 2.5 hours of moderate-intensity physical activity each week is associated with a gain of approximately three years of life. Data on physical activity and healthy eating and barriers to each are presented on pages 19–21. Additional data are available in the Physical Activity, Transportation, Crime and Safety, Overweight or Obesity, and Nutrition data pages in Appendices H, I, and J.

Housing Security and an End to Homelessness
Housing is a key social determinant of health.[1] Housing stability, quality, safety, and affordability all have very direct and significant impacts on individual and community health. Much of California, and especially the Bay Area, is currently experiencing an acute shortage in housing, leading to unaffordable housing costs, overcrowding, homelessness, and other associated negative health impacts. Between 2011 and 2015, the Bay Area added 501,000 new jobs—but only 65,000 new homes. An estimated 24,000 people in San Francisco live in crowded conditions, and about 7,500 homeless persons were counted in San Francisco. Pages 21–22 provide an overview of the housing stressors in San Francisco. Additional information on housing and health is found in the Housing data page in Appendix H.

Safety from Violence and Trauma
Violence not only leads to serious mental, physical and emotional injuries and, potentially, death for the victim, but also negatively impacts the family and friends of the victim and their community. Persons of color are more likely to be victims of violence, to live in neighborhoods not perceived to be safe, and to

receive inequitable treatment through the criminal justice system. Pages 22–25 focus on violence and trauma, their determinants, and their health impacts in San Francisco. Additional data on violence and trauma in the city are presented in the Crime and Safety data page in Appendix H.

Social, Emotional, and Behavioral Health
Mental health is an important part of community health. In San Francisco, the number of hospitalizations among adults due to major depression exceeds that of asthma or hypertension. Presence of mental illness can adversely impact the ability to perform across various facets of life—work, home, social settings. It also impacts the families, caregivers, and communities of those affected. Substance abuse of drugs, alcohol, and tobacco contributes to 14 of the top causes of premature death in the city—lung cancer, chronic obstructive pulmonary disease, HIV, drug overdose, assault, suicide, breast cancer, heart failure, stroke, hypertensive heart disease, colon cancer, liver cancer, prostate cancer, and Alzheimer's. Pages 26–29 focus on psychological distress, major depression, and substance abuse in San Francisco. Find additional data on social, emotional, and behavioral health in the city in the Mental Health, Substance Abuse, and Tobacco Use and Exposure data pages in Appendices I and J.

III. PURPOSE AND COLLABORATORS

This Community Health Needs Assessment (CHNA) takes a comprehensive look at the health of San Francisco residents by presenting data on demographics, socioeconomic characteristics, quality of life, behavioral factors, the built environment, morbidity and mortality, and other determinants of health status.

This report was written in order to comply with federal tax law requirements set forth in Internal Revenue Code section 501(r) requiring hospital facilities owned and operated by an organization described in Code section 501(c)(3) to conduct a CHNA at least once every three years. Internal Revenue Service guidance for conducting the CHNA is provided by 26 CFR Parts 1, 53, and 602; final regulations were effective on December 29, 2014, and published in the Federal Register on December 31, 2014. This written report is intended to satisfy each of the applicable requirements set forth in those regulations. The required written plan of Implementation Strategy will be set forth in a separate document.

Federal requirements: Federal requirements included in the Patient Protection and Affordable Care Act (ACA) of 2010 stipulate that hospital organizations under 501(c)(3) status must adhere to new regulations, one of which is conducting a CHNA every three years. With regard to the CHNA, the ACA specifically requires nonprofit hospitals to: collect and take into account input from public health experts as well as community leaders and representatives of high-need populations—this includes minority groups, low-income individuals, medically underserved populations, and those with chronic conditions; identify and prioritize community health needs; document a separate CHNA for each individual hospital; and make the CHNA report widely available to the public. In addition, each nonprofit hospital must adopt an Implementation Strategy to address the identified community health needs and submit a copy of the Implementation Strategy along with the organization's annual Form 990.

SB 697 and California's history with past assessments: For many years, San Francisco's nonprofit hospitals have partnered to conduct needs assessments to guide allocation of community benefit resources. In 1994, California legislators passed Senate Bill 697 (SB 697), which requires all private

nonprofit hospitals in the state to conduct a CHNA every three years. As part of SB 697, hospitals are also required to annually submit a summary of their community benefit contributions, particularly those activities undertaken to address the community needs that arose during the CHNA.

San Francisco Health Improvement Partnership (SFHIP): As a member of SFHIP, CPMC participates in a collective needs assessment process to ensure that our community benefit investments are responsive to real community needs. Gaining an understanding of why health outcomes exist here in San Francisco can help gear efforts towards addressing root causes and developing better interventions, policies, and infrastructure.

SFHIP's *San Francisco Community Health Needs Assessment 2019* serves as the foundation for CPMC's Community Health Needs Assessment 2019–2021 (this document). The processes and findings described within this document refer to those of SFHIP's 2019 needs assessment. The original 2019 CHNA document collectively developed by SFHIP and prepared by San Francisco Department of Public Health (SFDPH) can be found at www.sfhip.org.

SFHIP is a collaborative body whose mission is to embrace collective impact and to improve community health and wellness in San Francisco. Membership in SFHIP includes:

- San Francisco Department of Public Health
- African American Community Health Equity Council
- Asian and Pacific Islander Health Parity Coalition
- Chicano/Latino/Indigena Health Equity Coalition
- San Francisco Human Services Network
- Dignity Health Saint Francis Memorial Hospital
- Dignity Health St. Mary's Medical Center
- Sutter Health California Pacific Medical Center
- Kaiser Permanente
- Chinese Hospital
- San Francisco Community Clinic Consortium
- Metta Fund
- San Francisco Interfaith Council
- San Francisco Unified School District
- San Francisco Mayor's Office
- UCSF Clinical and Translational Science Institute's Community Engagement and Health Policy Program

SFHIP completes a CHNA once every three years, which provides data enabling identification of priority health issues and is the foundation for various citywide health planning processes including the Community Health Improvement Plan, San Francisco's Health Care Services Master Plan, San Francisco Department of Public Health's Population Health Division's Strategic Plan, and each San Francisco nonprofit hospital's Community Health Needs Assessment and Implementation Strategy Plan.

IV. Process and Methods Used to Conduct the CHNA

The CHNA takes a life course approach when exploring and presenting the health needs of San Franciscans. A life course approach considers one's lived experience and health throughout the lifespan, within the context of one's history, environment, family, community, society, and culture. Certain events and exposures (e.g., trauma, racism, poverty, environmental factors, etc.) during sensitive time periods in early life can have long-term impacts on development and health.[2]

In addition to impacting one's own future health status, early life experiences can have intergenerational health outcomes. One's wellness during the prenatal/pregnancy period impacts the health of one's children. Investing in pregnancy, early childhood, and family well-being through policies, interventions, and systems can support our society and address the root causes of health inequities.

The CHNA collected information on the health of San Franciscans using three methods: Community Health Status Assessment, Assessment of Prior Assessments, and Community Engagement. Through review of the information provided by these sources, SFHIP identified and prioritized San Francisco's health needs.

Community Health Status Assessment

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.[3] While biology, genetics, and access to medical services are largely understood to play an important role in health, socioeconomic and physical environmental conditions are now known to be major, if not primary, drivers of health.[3,4,5] These conditions are known as the *social determinants of health* and are shaped by the distribution of money, power, and resources throughout local communities, nations, and the world.[6]

Recognizing the essential role that social determinants of health play in the health of San Franciscans, the Community Health Status Assessment examined population-level health determinant and outcome variables. We used the San Francisco Framework for Assessing Population Health and Equity (see diagram in Appendix F), which is a modified version of the Public Health Framework for Reducing Health Inequities published by the Bay Area Regional Health Inequities Initiative to guide variable selection.[4] We ranked and selected available variables based on the Results-Based Accountability criteria for indicator selection—communication power (ability to communicate to broad and diverse audiences), proxy power (says something of central significance), and data power (available regularly and reliably), as well as the ability to examine health inequities and current use by stakeholders. Furthermore, we hosted meetings throughout 2017 to gather feedback on indicators from experts and community representatives. In all, 171 variables were analyzed. We present the results from all analyses in the community health data pages in the Appendices.

To reveal health disparities, the Community Health Status Assessment analyzed data by age, race/ethnicity, poverty, place, and more. However, available data do not permit analyses for all groups that are known to experience health inequities, including Native Americans, people who identify as LGBTQ, transgender persons, and persons with disabilities.

Assessment of Prior Assessments

San Francisco's community-based organizations, healthcare service providers, public agencies, and task forces conduct health needs assessments and publish reports of their activities for planning and evaluation purposes and to be accountable to those they serve. Our aim in conducting an assessment of these assessments and reports is to augment what we know from routinely collected secondary health data and primary data collection through CHNA community engagement activities. We hope thereby to gain a better understanding of which communities/populations in San Francisco have been engaged in health needs assessment activities; ascertain what topics are of concern and interest to these communities/populations; and learn about promising and effective approaches to eliciting and addressing these concerns. We included both needs assessments and service reports in our definition of "assessments" for this assessment.

Beginning in January 2017, CHNA administrative leads from San Francisco Department of Public Health and UCSF and a small working group consisting of members of San Francisco's three health equity/parity coalitions, UCSF health professions students, and UCSF Clinical and Translational Research staff began conducting online searches for published assessment reports for the 2019 CHNA.

For this assessment, the San Francisco Framework for Assessing Population Health and Equity was used to define "root causes" that reflect social determinants. Additionally, the working group decided to add incarceration, experience with law enforcement, and community development/investment to the framework.

Further details on methods used and findings are presented in Appendix C.

Community Engagement

The goals of the community engagement component of the CHNA were to:

- Identify San Franciscans' health priorities, especially those of vulnerable populations.
- Obtain data on populations and issues for which we have little quantitative data.
- Build relationships between the community and SFHIP.
- Meet the regulatory requirements including the IRS rules for 501(c)(3) charitable hospitals, Public Health Accreditation Board requirements for the San Francisco Health Department, and San Francisco's Planning Code requirements for a Health Care Services Master Plan.

The 2019 CHNA includes four categories of focus groups: SFHIP key informant group interview, Equity Coalition focus groups, food-insecure pregnant women focus groups, and Kaiser focus groups.

<u>SFHIP Key Informant Group Interview</u>
One focus group was comprised of SFHIP members who are all subject matter experts. Two series of questions were asked:

1) What are the healthiest characteristics of this community? What supports people to live healthier lives?
2) What are the biggest health issues and/or conditions your community struggles with? What do you think creates those issues?

Equity Coalition Focus Groups

Three focus groups were conducted with each of the three health equity coalitions in San Francisco: Chicano/Latino/Indigena Health Equity Coalition, Asian and Pacific Islander Health Parity Coalition, and African American Community Health Equity Council. Using the Technology of Participation (ToP) Consensus Method, the question posed to each focus group was, "What actions can we take to improve health?"

Food-Insecure Pregnant Women Focus Groups

The Homeless Prenatal Program held four focus groups with women who experienced food insecurity while pregnant. Each focus group focused on a different group of women: Spanish-speakers, Chinese-speakers, multi-ethnic English-speakers, and Black/African Americans. The question to respond to was, "What actions can we take to improve your food needs?"

Kaiser-Led Focus Groups

Kaiser conducted four focus groups, one each with Kaiser Permanente leadership, Kaiser Permanente staff, Spanish-speaking parents regarding healthy eating and active living among youth, and homeless and/or HIV-positive youth.

Further details on the methods and findings are available in Appendix D**.**

Health Needs Identification and Prioritization

To identify and prioritize the most significant health needs in San Francisco, the SFHIP steering committee met on October 18, 2018. Participants identified health needs through a multi-step process. First, participants reviewed data and information from the Community Health Status Assessment, the Assessment of Prior Assessments, and the Community Engagement process, as well as the health priorities from the 2016 Community Health Needs Assessment. Then, using the Technology of Participation approach to consensus development, participants engaged in focused discussions about the data. Finally, participants developed consensus on the health needs by using the following steps:

1) Individually listing top health needs.
2) Small group discussions on the top health needs to identify similarities and differences.
3) Sharing all the health needs identified by the individuals.
4) Clustering the similar health needs into themes.
5) Determining a name for the theme, which is the health need.
6) Comparing and discussing new needs with those from the 2016 CHNA.

Throughout the process, health needs were screened using the following pre-established criteria:

- The need is confirmed by more than one indicator and/or data source.
- The need performs poorly against a defined benchmark(s).

This process yielded two foundational issues and five health needs. *Health needs* include health outcomes of morbidity and mortality as well as behavioral, environmental, clinical care, social and economic factors that impact health and well-being. *Foundational issues* shape the context from which health needs emerge, affect health at every level, and must be addressed to improve health in San Francisco.

The two foundational issues identified were:

- Poverty
- Racial health inequities

The five health needs identified were:

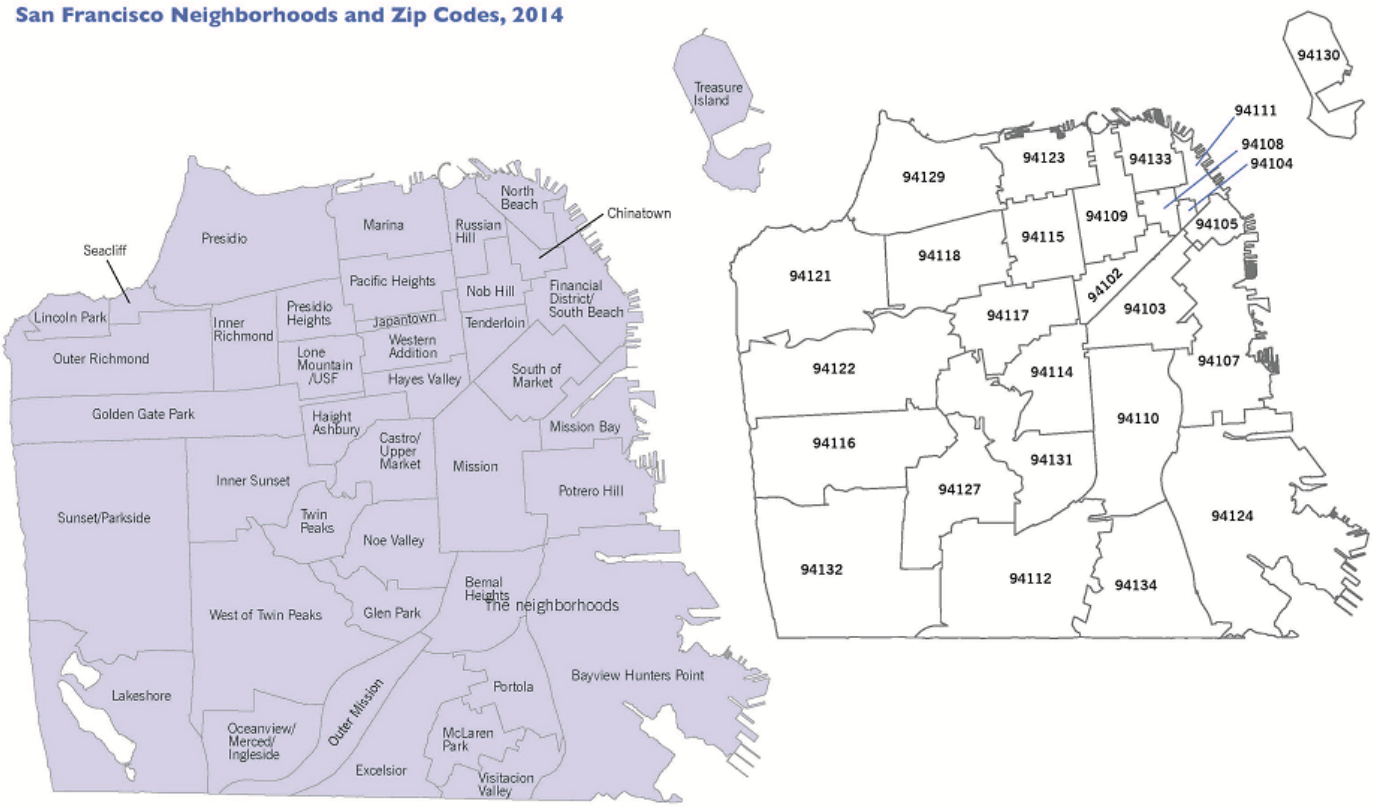
- Access to coordinated, culturally and linguistically appropriate care and services
- Food security, healthy eating, and active living
- Housing security and an end to homelessness
- Safety from violence and trauma
- Social, emotional, and behavioral health

No further needs prioritization or ranking was deemed necessary since all five needs were considered to be very important.

Data describing part of each of the foundational issues and health needs are located in the Findings/Needs Identified section of this report and in the various health data pages in the Appendices.

V. Service Area and Population

The hospital service area includes all populations residing in the City and County of San Francisco.



Population Growth

San Francisco is the cultural and commercial center of the Bay Area and is the only consolidated city and county jurisdiction in California. At roughly 47 square miles, it is the smallest county in the state, but is the most densely populated large city in California (with a population density of 17,352 residents per square mile) and the second most densely populated major city in the U.S., after New York City.[7]

Between 2011 and 2018, the population in San Francisco grew by almost 8 percent to 888,817, outpacing population growth in California (6 percent).[8] By 2030, San Francisco's population is expected to total more than 980,000.

An Aging Population

The proportion of San Francisco's population that is 65 years and older is expected to increase from 17 percent in 2018 to 21 percent in 2030; persons 75 and older will make up about 11 percent.[8] At the same time, it is estimated that the proportion of working-age residents (25 to 64 years old) will decrease from 61 percent in 2018 to 56 percent in 2030. This shift could have implications for the provision of social services.

Population by age group as a percentage of the total population projections, San Francisco, 2010–2030

Groups by age range in years	2010	2018	2030 Projected
Seniors (65+)	14%	17%	21%
Working age (25-64)	63%	61%	56%
College age (18-24)	10%	7%	8%
School age (5-17)	9%	10%	11%
Preschool age (0-4)	4%	5%	4%

Ethnic Shifts

Population growth is expected for all races and ethnicities except for Black/African Americans, who are projected to drop from 5 percent of the population in 2018 to 4 percent in 2030.[9] Asians and Whites will remain the most populous groups and will grow as a percentage of the overall population. Population growth is expected to be lower for Latinos and Pacific Islanders, and Latinos are expected to drop from 15.1 to 14.9 percent of the population.

Ethnic composition by percentage of population, San Francisco, 2010–2030

Ethnicity	2010	2018	2030 Projected
White	42.3%	42.0%	42.5%
Black/African American	5.8%	5.0%	4.0%
Asian	33.1%	33.7%	34.0%
Pacific Islander	0.4%	0.4%	0.4%
Latino	15.1%	15.1%	14.9%
Native American	0.2%	0.2%	0.2%
Multi-ethnic	3.1%	3.6%	4.0%

Currently, 35 percent of San Francisco's population is foreign born, and 20 percent of residents speak a language other than English at home and speak English less than "very well."[7,10] The majority of the foreign-born population comes from Asia (65 percent), while 18 percent were born in Latin America, making Chinese (Mandarin, Cantonese, and other) (43 percent) and Spanish (26 percent) the most common non-English languages spoken in the city.[10]

Families and Children

Although San Francisco has a relatively small proportion of households with children (19 percent) compared to the state overall (34 percent), the number of school-aged children is projected to rise.[8,11] As of 2017, San Francisco was home to 67,740 families with children, 26 percent of which were headed by single parents.[11] There were approximately 132,330 children under the age of 18.[8] The number of school-aged children is projected to rise by 24 percent by 2030.[8] The neighborhoods with the greatest proportion of households with children are: Seacliff, Bayview Hunters Point, Visitacion Valley, Outer Mission, Excelsior, Treasure Island, and Portola (all over 30 percent).[7]

VI. Findings / Needs Identified

Foundational Issues

Poverty

Income generally confers access to resources that promote health—like good schools, healthcare, healthy food, safe neighborhoods, and time for self-care—and the ability to avoid health hazards such as air pollution and poor-quality housing. Low-income groups are at greater risk of a wide range of health conditions than higher-income groups, and have a shorter life expectancy.[12]

People who live in communities with higher income disparity are more likely to die before the age of 75 than people in more equal communities.[13]

Almost one in four San Franciscans (22 percent) live below 200 percent of the federal poverty level.[7]

- For a family of four, 200 percent of the federal poverty level is $50,200 (2018).[14]
- A family of four in San Francisco requires an income of greater than $120,000 to meet all their needs.[15]
- 40 percent of new jobs in San Francisco are expected to be low-wage jobs (less than $54,000/year).[16,17]
- 18 percent of children under 6 years of age in San Francisco live in poverty (less than 200 percent of the federal poverty level).[10]

San Francisco has significant disparities in employment rates between Whites and Black/African Americans.[7]

- 96 percent of White San Franciscans are employed, while only 83 percent of Black/African Americans are employed.
- Black/African American males have the lowest employment rate in San Francisco (81 percent).
- Black/African Americans are a third as likely as Whites to have a bachelor's degree or higher and five times more likely to have less than a high school education.[7]

In San Francisco, there is significant inequality in household income between races.[7] White household median income is over $111,000, while Black/African American household median income is $28,000. San Francisco has the highest income inequality in California. The wealthiest 5 percent of households earn 16 times more than the poorest 20 percent of households.[18]

Low income impacts lifetime health, beginning with pregnancy and birth. Lower-income children in San Francisco experience higher rates of asthma, hospitalization, obesity, and dental caries.[19,20,21] Low birthweight is highest among low-income mothers.[22]

Racial Health Inequities

Two types of racialized social interaction—interpersonal and structural racism—play a role in racial health disparities seen in San Francisco. Racial discrimination in interpersonal behavior, often called everyday racism or bias, sets the kind of experiences that make up the social lives of people of color. The accumulation of those experiences has been associated with increased hypertension, preterm birth, and other conditions mediated by stress.

Long-standing social and institutional rules, both historic and current, determine which spaces and resources are available to marginalized groups. The disparate treatment of children based on race in schools and courts is an example of these forces. So are the historic differences in family wealth that stem from government housing policy and private banking rules. These forces are often intertwined and reinforcing as they occur over the life course.

Racial inequities are not just a matter of unfortunate history, but of ongoing, correctable injustice.

Improvements
For Black/African Americans, improvements are seen in some social determinants and some health conditions. However, the improvements do not always impact the inequity as other groups may experience greater gains.

Indicator	Impacts
Teen Birth	Between 2007 and 2016, the teen birth rate for first-time moms decreased from 34 percent to 10 percent among Black/African American women in San Francisco.[22] In that same time, the proportion of mothers who had a college education when they delivered their first baby increased by 16 percentage points.[22]
Mortality	Mortality rates decreased for all in San Francisco. However, rates decreased the most for Black/African Americans (15 percent, compared to 11 percent for Pacific Islanders, 12 percent for Whites, and 14 percent for Asians and Latinos). Decreased rates among Black/African Americans were primarily due to decreases in ischemic heart disease, lung cancer, assault, and HIV.[23] Life expectancy also grew for all San Francisco, with the largest gains seen by Black/African Americans (a three-year increase between 2005–2007 and 2015–2017 compared to a two-year increase for others).
High School Graduation	Graduation rates increased for all between 2012 and 2017. The biggest gains were seen among Black/African Americans (8 percent) and Pacific Islanders (12 percent), while rates for Latinos (4 percent), Whites (3 percent), and Asians (4 percent) were more modest.[7]
Childhood Caries	Between 2007–2012 and 2012–2017, rates of untreated tooth decay among kindergarteners decreased the most for Black/African Americans (from 26 percent to 19 percent).[21]

Population Loss

- Between 1990 and 2005, the Black/African American population decreased by 41 percent, from almost 79,000 to less than 47,000.
- Between 1990 and 2005, the proportion of very-low-income households increased from 55 percent to 68 percent.[24]
- The strong association between poverty and health would suggest that the poorer remaining Black/African American population is more likely to have poor health than the previous more mixed-income population.

Basic Requirements for a Healthy Lifespan	Pre-Birth/ Infancy	Childhood	Adolescence	Adulthood	Old Age
	Healthy diet, Prenatal care	Adequate income, Engaged with school, Social network, Adequate housing, Healthy diet, Safety	Mistakes corrected, Schools well-resourced, School success	Employment, Stable housing, Active, Healthy childbearing, Freedom	Active lifestyle, Independence, Long life

The starkest inequities are seen between Black/African American residents and all other groups, and occur across the lifespan.

Children Aged 0 to 18 Living in Poverty[7]	
White	3%
Black/African American	46%
Pacific Islander	27%
Asian	10%
Latino	15%

K-3 Suspensions: There is a 2.4 percent suspension rate for Black/African American students, while only 0.1 percent of White SFUSD students are suspended.[25]

Student Proficiency[26]	
Black/African American	13% are proficient or above in mathematics, 19% in English language arts
Latino	22% are proficient in mathematics, 28% in English language arts
Pacific Islander	19% are proficient in mathematics, 25% in English language arts
White	70% are proficient in mathematics, 77% in English language arts

Hurdles to a healthy life start early in San Francisco.

- Full-term birth is more likely for Whites (93 percent) than Black/African Americans (86 percent).[22]
- Food insecurity among pregnant women in San Francisco:[27]
    - 26.5 percent among Latino women
    - 19.5 percent among Black/African American women
    - 6.6 percent among Asian and Pacific Islander women
    - Almost no white women in San Francisco report food insecurity during pregnancy.

Nutrition

Black/African American and Latino SFUSD students are two to three times more likely to consume fast food (64 percent and 73 percent respectively) or soda (44 percent and 36 percent respectively) at least weekly, as compared to White students (fast food at 35 percent and soda at 17 percent).[28]

5th Grade Obesity[25]	
Black/African American	52%
Filipino	65%
Latino	52%
Pacific Islander	66%
White	22%
Asian	23%

Juvenile Detentions

Black/African American youth make up over 57 percent of bookings at juvenile hall, even though they make up only 6 percent of the population.[29] Together, Black/ African American and Latino youth comprise 86 percent of all juvenile bookings. Samoan youth are also over-represented and make up 3 percent of the bookings, but only account for less than 1 percent of the youth population.

Unduplicated Count of Juvenile Hall Bookings—Criminal Offenses, by Ethnicity, 2017		
	Count	% of Total Bookings
Black/African American	201	56.8%
Latino	104	29.4%
Samoan	12	3.4%
Pacific Islander	1	0.3%
White	16	4.5%
Chinese	4	1.1%
Other Asian	2	0.6%
Native American	2	0.6%
Other	12	3.4%

Household Income

The median income in San Francisco varies greatly by race/ ethnicity. Typically, Whites earn four times more than Black/African Americans.[7]

Median Household Income	
All San Francisco	$87,700
White	$111,700
Latino	$62,200
Black/African American	$28,600
Native American	$47,700
Asian	$75,000
Pacific Islander	$50,100

Homelessness

Black/African Americans are over-represented among the homeless in San Francisco; 35 percent of homeless persons are Black/African American and 22 percent are Latino, compared to these groups making up 5 percent and 15 percent, respectively, of the city overall.[7,30]

Heart Disease

Heart disease impacts Black/African Americans at younger ages. Rates of heart disease-related hospitalizations among Black/African Americans in their 40s and 50s are comparable to those seen in other races/ethnicities over 75 years of age.[31]

	2005–2007			2015–2017		
	All	Women	Men	All	Women	Men
All	80.8	84.0	77.6	83.1	86.1	80.3
Asian	85.1	87.5	82.4	87.0	89.6	83.9
African American	68.5	73.7	64.2	72.1	76.5	68.3
Latino	82.7	85.8	79.4	85.1	87.9	82.5
Pacific Islander	73.4	77.0		76.0	76.8	75.5
White	79.7	83.1	76.9	81.7	84.2	79.6

HEALTH NEEDS

Access to Coordinated, Culturally and Linguistically Appropriate Care and Services

Healthy People 2020 defines access to healthcare as "the timely use of personal health services to achieve the best possible health outcomes."[32] Access is influenced by availability of providers, location, affordability, hours, and cultural and linguistic appropriateness of healthcare services.

Accessible healthcare can prevent disease and disability, detect and treat illnesses, maintain quality of life, and extend life expectancy.[33] From a population health perspective, regular access to quality healthcare and primary care services also reduces the number of unnecessary emergency room visits and hospitalizations and can save public and private dollars.

While access to healthcare in San Francisco is better than many other places, significant disparities exist by race, age, and income.

San Francisco's population now numbers over 880,000 people. Many San Franciscans do not access healthcare.

- Over 10,000 fewer San Franciscans were uninsured in 2017 compared to 2015. However, 2 percent of San Franciscans (16,000) still lack insurance or healthcare access via Healthy San Francisco or Healthy Kids. [10,34]
- 8 percent do not have a usual place to go for medical care.[35]
- 24 percent of adults have not had a routine check-up in the past year.[35]
- 51 percent have not had a flu shot in the past year.[35]
- 54 percent of women ages 18 to 44 have not received counseling or information about birth control from a doctor or medical provider in the past year. [35]
- 15 percent of women with public safety-net insurance do not receive timely prenatal care.[27]
- 27 percent of adults have not seen a dentist in the past year.[35]
- 82 percent of Denti-Cal-eligible infants aged 2 years or less do not access dental care.[21]
- Young adults are at risk. Young adults 18 to 34 years of age and people of color are less likely to be covered by insurance.[10]

Different levels of prenatal care: Residents covered by public safety-net insurance do not receive preventative prenatal care at the same rate as those with private insurance. From 2013 to 2015, 99 percent of mothers with private insurance received prenatal care in the first trimester.[27] Only 86 percent of those with Medi-Cal received early prenatal care.[27]

Preventable hospitalizations and emergency room visits:

- While preventable hospitalizations for most causes have decreased over time, preventable hospitalizations for hypertension and diabetes have respectively increased 45 percent and 50 percent between 2011 and 2016—potentially indicating that these conditions are not being well managed at the population level.[19]
- Preventable hospitalizations and ER visits are significantly higher among Black/African Americans and Pacific Islanders compared to all other ethnicities in San Francisco.[36]

Language barriers and cultural competency of services are serious barriers to receiving quality care. Increased cultural competence requires structural and systemic improvements and can be linked to improvement in healthcare access, participation, and patient satisfaction.[37,38]

From the community we heard…

- "Cultural competency doesn't happen with just a class or a one-day training."
- "Healthcare professionals need to be from the community and actually know the culture of the community."
- "Community-based organizations serve a critical role in small, data-sparse cohorts by informing public health efforts and bringing resources to multicultural communities."

Food Security, Healthy Eating, and Active Living

Good nutrition means getting the right amount of nutrients from healthy foods and drinks. Good nutrition is essential from infancy to old age. A healthy diet promotes health and reduces chronic disease risk. It is critical for growth, development, physical and cognitive function, reproduction, mental health, immunity, stamina, and long-term good health.[39]

The USDA's MyPlate.org recommends that fruits and vegetables make up at least half of our plate, or approximately five servings a day.[40]

Leading medical and health associations recommend drinking water instead of sugary drinks.[41] The Institute of Medicine recommends 13 cups of liquids per day for men and nine cups for women who live in temperate climates.[42]

Many San Franciscans are food-insecure.

- 50 percent of low-income residents surveyed report food insecurity.[43]
- 20 to 30 percent of Black/African American and Latina pregnant women are food-insecure.[44]
- 50 percent of SFUSD students qualify for free or reduced-price meals.[45]
- Over 100,000 food-insecure adults and seniors are eligible to receive meals, groceries, or eating vouchers.

Services to ameliorate food insecurity are not meeting need.

- 70 percent of eligible students are not participating in the Summer Lunch Program.
- There has been a 7 percent decrease in the number of food vendors authorized to accept food stamps.[46]
- 1,969 meals were denied seniors and persons with disabilities at congregate meal sites.[43]
- Seniors and persons with disabilities must wait for 21 days and 187 days, respectively, to start getting home-delivered meals.[43]
- 616 persons are waiting for enrollment at a food pantry.[47]

Many San Franciscans do not eat and drink healthily.

- Two out of three pregnant women in the WIC EatSF program and two out of three youth do not eat five or more servings of fruits or vegetables daily.[44]
- Some San Franciscans do not drink enough water; 614 people were hospitalized for "potentially preventable" dehydration in 2016.[48]

- Many do drink sugary drinks. Two-thirds of high school students and one-third of young adults regularly consume soda.[28]

Many factors influence healthy eating, including cost and income, food availability, transportation, time, availability of facilities to store and cook foods, and food preferences. Factors vary across the city and result in neighborhood differences in consumption.

- The USDA has designated Oceanview/Merced/Ingleside, Bayview Hunters Point, Visitation Valley, and Treasure Island neighborhoods as areas of low food access.[49]
- Facilities necessary to eat and drink healthily are not available for all. Barriers to drinking enough water include limited access to bathroom facilities.[50] San Francisco operates 28 public restrooms that are open all day, which amounts to 3.3 restrooms per 100,000 residents.[51]
- The Mission, Bayview Hunters Point, and Treasure Island districts each have only one public access drinking water fountain.
- Not all have a kitchen to cook in. Over 21,000 occupied housing units in San Francisco do not have complete kitchen facilities.

Regular exercise extends lives. The World Health Organization (WHO) recommends that children and adolescents (aged 5 to 17 years) should do at least one hour of moderate to vigorous physical activity daily, while adults (aged 18 years and above) should do at least 150 minutes of moderate-intensity physical activity, 75 minutes of vigorous-intensity physical activity, or an equivalent combination of moderate and vigorous activity throughout the week.[52]

Just 2.5 hours of moderate-intensity aerobic physical activity each week is associated with a gain of approximately three years of life.[53] Walking is a simple, affordable way for people to get around. A walkable city provides a free and easy way for people to incorporate physical activity into their daily lives as they walk to work, to school, to the market, to transit or other nearby services, or just for fun.[54]

Many San Franciscans don't spend the recommended amount of time doing physical activity.

- 56 percent of adults do not walk at least 150 minutes per week for transportation or leisure.[55]
- 47 percent of children aged 3 to 5 in childcare centers are not physically active for 90 minutes per school day.[56]
- 67 percent of middle schoolers do not spend 60 minutes each day of the week doing physical activity.[28]
- 83 percent of high schoolers do not spend 60 minutes per day each day of the week doing physical activity.[28]
- Each day, 4.5 million transportation trips are made in San Francisco. Of these, only about 37 percent are walking trips or public transit trips that include walking.[57]

Many San Franciscans don't meet activity standards.

- 30 percent of fifth- and seventh-graders and 40 percent of high school students do not meet the FitnessGram standard for aerobic capacity, which is ability to run one mile or pass a PACER test.
- 60 percent of Black/African American and Latino ninth-graders do not meet fitness standards, compared to 30 percent of White and Asian students.[20]
- Aerobic fitness is 10 percentage points lower for economically disadvantaged students.[20]
- 14 percent of adults ages 65 to 75 and 37 percent of adults over age 75 have difficulty walking or climbing stairs.[7]

Safety and a lack of resources and other supports are barriers to physical activity in San Francisco.

- Every day, on average two people walking are hit by cars.
- Cars violating a pedestrian's right-of-way are the top risk factor for injuries to people walking.
- In 2018, there were 15 pedestrian deaths and three cyclist deaths.[58,59]

There are gaps in neighborhood resources for physical activity.

- Sidewalk networks support walkers to varying degrees. Downtown and in Chinatown, the blocks are short and provide many pedestrian connections. In other neighborhoods, pedestrians have to walk further to make less-direct connections.[60]
- 35 percent of San Francisco playgrounds do not score an A or B for infrastructure quality, cleanliness, and upkeep.[61]
- San Francisco has 0.18 miles of bike lane for every one mile of streets.[62]

There are gaps in school and workplace supports for physical activity.

- 67 percent of childcare centers do not use a physical activity curriculum.[56]
- "All of our students, regardless of which neighborhood they live in or which school they attend, should be able to safely walk or bike to school. We are adding crossing guards across the city, and I am pushing the SFMTA to expedite Vision Zero projects because we do not have time to waste. We need safer, more livable streets now." —Mayor London Breed[59]
- Although each April more than 10,000 people participate in Walk to Work Day, including San Francisco's mayor and supervisors, over 200,000 workers drive to work on a daily basis.[11]

Housing Security and an End to Homelessness

Shelter is a basic human need, and housing is foundational to meeting other basic needs. Quality housing provides a place to prepare and store food, access to water and sanitation facilities, protection from the elements, and a safe place to rest. Stable/permanent housing can also provide individuals with a sense of security. Unfortunately, California, and especially the Bay Area, suffers from an acute housing shortage that has been driving housing costs to unaffordable levels, leading an increasing number of residents to become homeless.[63]

Housing production has declined in the Bay Area. Between 2011 and 2015, the Bay Area added 501,000 new jobs, but only 65,000 new homes.[64] San Francisco usually exceeds requirements for development of above-moderate-income housing (120 percent AMI), but builds less than one-third of the units allocated for moderate- and low-income residents.[65]

In 2017, about 7,500 homeless persons were counted in San Francisco.[30] Despite making up only 6 percent of the general population, 35 percent of the homeless persons counted were Black/African American.

Among the many challenges homeless persons face, including those in temporary housing, are:[66,67]

- Safely storing medications
- Eating healthfully
- Finding a job
- Maintaining relationships
- Going to the doctor

Overcrowding: An estimated 24,000 people in San Francisco live in crowded conditions.[68] Living in overcrowded conditions can increase risk for infectious disease.[69] Nearly one-third of Chinatown residents live in overcrowded conditions.[70]

Housing affordability:

- Between 2010 and 2018, the median market rate rent for a two-bedroom unit increased 48 percent, to $4,725.[71]
- It takes four full-time minimum wage jobs to afford a "fair market rate" ($3,121) two-bedroom unit.[72]
- It takes six full-time minimum wage jobs to afford a "median market rate" ($4,725) two-bedroom unit.[71]
- The median percentage of income paid to gross rent in San Francisco was 30 percent in 2017; 17 percent of renter households spend 50 percent or more of their income on rent.[68]

There was a steady increase in the number of all-cause eviction notices between 2011 and 2016; however, in 2017 there was a 27 percent decrease in the number of eviction notices filed.[73] This rapid change may be attributable to the implementation of Eviction Protection 2.0 in November 2015, as well as economic shifts and other factors.

Moving can result in the loss of employment, difficult school transitions, increased transportation costs, and the loss of health-protective social networks.[69]

Safety from Violence and Trauma

Violence not only leads to serious mental, physical and emotional injuries and, potentially, death for the victim, but also negatively impacts the family and friends of the victim and their community. Community violence decreases the real and perceived safety of a neighborhood, disrupting social networks by inhibiting social interactions, causing chronic stress among residents who are worried about their safety, and acting as a disincentive to engage in physical activity outdoors.[74,75,76,77]

Children are particularly vulnerable. Witnessing and experiencing violence disrupts early brain development and causes longer-term behavioral, physical, and emotional problems.[78,79,80,81]

Violence is rarely caused by a single risk factor but instead by the presence of multiple risk factors. Risk factors for violence include poverty, poor housing, illiteracy, alcohol and other drugs, mental illness, community deterioration, discrimination and oppression, and experiencing and witnessing violence.[82,83,84]

Violent crime is a concern in San Francisco. Violent crime rates are high (712/100,000) and exceed California rates (452/100,000).[85]

Crime	SF*	CA*
Homicide	6	5
Rape	41	37
Robbery	364	143
Aggravated assault	301	267

*Number of crimes per 100,000 residents

Young men, people of color, and residents of the eastern neighborhoods are most likely to be victims of violence or to witness violence. Violent crime rates and rates of emergency room visits due to assault

are highest in the eastern half of the city. Residents are also less likely to feel safe in these neighborhoods.[36,86,87]

- 122 males died violent deaths between 2015 and 2017.
- Violence is the fifth leading cause of death among Black/African American men and the eighth cause among Latino men.
- Violence kills men in their prime years; 37 was the average age at death for men who died violently.[23]
- 89 of the 134 assault deaths (66 percent) resulted from use of a firearm.
- Emergency room visit rates are 7.5 times higher among Black/African Americans, four times higher among Pacific Islanders, and two times higher among Latinos than among other San Francisco residents.[36]
- Perceived safety at night in San Francisco is highest among Whites (59 percent), followed by Asians and Pacific Islanders (47 percent), Black/African Americans (43 percent), and Latinos (37 percent).[87]

Cases of child abuse have decreased in San Francisco since 2009. However, in 2017 there were 509 cases of substantiated child maltreatment. The majority of child abuse cases are due to neglect (82 percent), with 3 percent due to emotional abuse, 3 percent due to sexual abuse, and 12 percent due to physical abuse.[88] The rate of substantiated maltreatment among Black/African Americans is significantly higher, suggesting a need for greater support.

Child abuse costs the city $226.5 million per year in healthcare, criminal justice, child welfare, and education costs, as well as lost lifetime productivity.[89]

Substantiated Cases of Child Maltreatment per 1,000 Children in San Francisco, 2007–2017											
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
All San Francisco	9.8	10.0	10.5	7.9	6.1	6.4	5.7	6.9	6.2	5.5	4.0
Asian/Pacific Islander	4.1	3.6	4.2	3.0	2.4	3.3	1.7	2.1	2.3	1.7	1.3
Black/African American	45.0	43.6	47.7	40.3	33.1	32.6	32.8	40.4	37.5	40.2	28.0
Latino	14.5	16.1	16.4	12.8	9.7	9.6	10.1	12.0	10.9	8.7	6.6
White	3.6	4.7	5.2	3.7	2.8	3.1	2.7	3.0	2.5	2.3	1.6

In addition to a history of violence in the family and community, maltreatment arises from the confluence of other preventable risk factors:[89]

- High unemployment and poverty: 19 percent of Black/African American children in San Francisco live in poverty (below 100 percent of the federal poverty level), compared to 7 percent of Latinos, 4 percent of Asians and 1 percent of Whites.[7]
- Social and socioeconomic status inequality: San Francisco has the sixth-highest income disparity in the U.S.[18]
- Low levels of education: Only 24 to 26 percent of Black/African American or Pacific Islander residents have a bachelor's degree or higher, compared to 32 percent of Latino, 43 percent of Asian, and 74 percent of White residents.[7]
- Parenting stress: 28 percent of Latino births, 24 percent of Black/African American births, 20 percent of Asian births, and 12 percent of White births are unintended in San Francisco; 27 percent of Latina new mothers, 21 percent of Black/African American new mothers, 12 percent of Asian new mothers, and 10 percent of White new mothers experience prenatal depression.[27]

- High residential instability: According to 2016 data, 2,512 or 4 percent of SFUSD students are homeless.[90] Less than 25 percent of Black/African American, Latino, and Native American residents own their homes.[11]
- Social isolation and lack of social support: 18 percent of San Francisco households have minors compared to 36 percent in California.[7]
- Substance abuse or mental health issues: 27 to 30 percent of Latino, Black/African American and White residents report needing help with mental health or drug use problems; 11 percent of Asians report needing help.[55]

The FBI has identified San Francisco as one of the worst areas in the country for the commercial exploitation of children:[91]

- 673 survivors of human trafficking were identified in San Francisco in 2017.
- 33 percent of persons trafficked in commercial sex were minors.
- 71 percent of those who are trafficked are women, either cisgender or transgender.
- 33 percent of victims were born in the Bay Area.
- 70 percent of survivors were people of color, with the largest groups being Black/African Americans and Latinos.

In San Francisco, steps have been taken to combat the school-to-prison pipeline.[92,93,94] However, Black/African American and Latino students are still more likely to be suspended or expelled and, with Samoan youth, are more likely to be arrested.

- During the 2016–2017 school year, nearly 40 percent of all SFUSD students who received at least one suspension were Black/African American, despite making up only 11 percent of the student population.
- Suspension rates for Black/African American and Pacific Islander students are five times higher than those for Asian students.

Contributors to the school-to-prison pipeline include:

- Inadequate resources (e.g., overcrowded classes, lack of counselors or special education services).
- Police presence at schools.
- Harsh punishments that result in suspensions and out-of-class time.[95]

An arrest, a court appearance, and even brief detention, especially for minor infractions, increase a minor's risk of dropping out and getting into more serious crime.[96] Once a student enters the juvenile justice system, they face barriers to re-entry into traditional schools and many never graduate from school.[95]

- ZIP code 94124, which roughly covers the Bayview neighborhood, was home to nearly 22 percent of all of the youth booked at Juvenile Hall in 2017.
- 86 percent of Juvenile Hall bookings are among Black/African American and Latino youth.[29] Samoan youth make up 3 percent of the bookings, but only account for less than 1 percent of the youth population.

Black/African American and Latino persons are disproportionately detained, searched, and arrested by the police in San Francisco.[97,98,99,100] Incarceration harms the mental and physical health of the incarcerated and that of non-incarcerated partners and children. Mass incarceration also compromises the community's health and contributes to racial health inequities.[101] At the population level,

inequalities in incarceration impact employment and health, which themselves further influence incarceration.[102]

Black/African American defendants experience delays in the criminal adjudication process, are convicted of more serious crimes, and receive longer sentences than White defendants.[103]

Officer-Initiated Detentions, 2017				
	Detentions (Stops)	Searches	Arrests	% of Population
Asian & Pacific Islander	4.2%	4.8%	4.1%%	33.5%
Black/African American	33.1%	37.3%	40.8%	5.2%
Latino	14.9%	21.8%	20.6%	15.3%
Native American	0.2%	0.1%	0.1%	0.2%
White	42.5%	31.3%	30.4%	41.1%
Unknown	5.1%	4.7%	3.9%	4.7%

Officer-Initiated Traffic Stops, 2017				
	Detentions (Stops)	Searches	Arrests	% of Population
Asian & Pacific Islander	16.0%	4.7%	14.3%	33.5%
Black/African American	18.6%	52.5%	36.3%	5.2%
Latino	15.0%	19.5%	12.1%	15.3%
Native American	0.2%	0.1%	5.2%	0.2%
White	35.0%	17.7%	16.4%	41.1%
Unknown	15.2%	5.5%	15.8%	4.7%

Criminal history has a ripple effect. Differences in the severity of charges at booking and the number of times that people of color were previously arrested, convicted, and incarcerated explain almost all of the difference in conviction rates.

- Pretrial custody: Black/African American defendants are held in pretrial custody 62 percent longer than Whites.
- Adjudication process time: Cases involving Black/African American defendants take 90 days for Black/African Americans, but only 77.5 days for Whites.
- Conviction: Defendants of color are convicted of more serious crimes. Black/African American defendants are convicted of 60 percent more felonies and 10 percent fewer misdemeanors. Latino defendants are convicted of a similar number of felonies but 10 percent more misdemeanors.
- Length of sentence: Black/African American defendants receive sentences that are 28 percent longer than for Whites. Latino defendants receive probations that are 55 percent longer.
- Non-consensual searches: Data from 2015 suggest that SFPD performs non-consensual searches among Black/African Americans with lower levels of evidence than for other racial/ethnic groups.[104]
- While Black/African Americans make up 5 percent of the population in San Francisco, in 2017 they accounted for 33 percent of officer-initiated (non-dispatched) detentions and 19 percent of officer-initiated traffic stops.

Social, Emotional, and Behavioral Health

Mental health and well-being are crucial to supporting, maintaining, and optimizing quality of life. The presence of mental illness can adversely impact the ability to function at work, at home, and in social settings and impacts individuals as well as their respective families and communities.[105,106,107] Mental disorders include depression, schizophrenia, anxiety, injuries to the brain, dementias, intellectual disabilities, developmental disorders (e.g., autism), and substance abuse.[105]

Social isolation can be a precipitating factor for suicidal behavior. Individuals who experience isolation in their lives are more vulnerable to suicide than those who have strong social ties with others.[108] Isolation can lead to impaired quality of life, disability, hospitalization, institutionalization, incarceration, suicide, self-injury, and/or death.[105]

People with lower education, income, and/or social status, and those who experience discrimination on the basis of race, gender, social class, or other characteristics are at a particularly high risk of mental illness.

- 23.3 percent of adults reported needing help for mental health or substance use issues in 2011 to 2016.[55]
- 7 percent of adults experienced serious psychological distress in 2014 to 2016.[55]
- Lower-income residents are almost three times more likely to experience serious psychological distress than higher-income residents (15.19 percent compared to 5.31 percent).[55]

Depression is the most common mental illness.[107] Depressive symptoms are common among San Francisco school-aged youth.[28]

- High school depression: 26 percent of SFUSD high school students reported prolonged sad or hopeless feelings in 2017.
- Considering suicide: Almost 13 percent of SFUSD high school students and 20 percent of middle school students had considered attempting suicide in 2017.
- Sexual identification and depression: Bisexual and gay or lesbian high school students are more likely to report prolonged sadness or hopelessness (45 to 62 percent) and suicidal thoughts (32 to 40 percent) than heterosexual students (22 percent and 10 percent, respectively).

Prenatal depression greatly affects the quality of care given to the infant. Between 2013 and 2015, 14.4 percent of pregnant women reported prenatal depressive symptoms in San Francisco.[27]

- Women with less than a high school education are more than three times as likely to report prenatal depressive symptoms as women with a college degree (37.6 percent vs. 9.0 percent).
- Women with Medi-Cal insurance are more than 2.5 times as likely as women with private insurance to report prenatal depressive symptoms (24.1 percent vs. 8.9 percent).
- Hispanic and Black/African American women are more likely to report prenatal depressive symptoms than White or Asian women.

Hospitalizations in San Francisco to treat major depression among adults occurred 2,631 times during the three years from 2014 to 2016.[23]

- The number of hospitalizations for depression exceeded that for hypertension (2,296) and asthma (1,017).[23]
- Adults aged 18 to 24 are the most likely to be hospitalized due to major depression, followed by those aged 45 to 54.[23]

- The age-adjusted rate of hospitalizations due to major depression among Black/African Americans is almost five times higher than among Asians and Pacific Islanders, who have the lowest rate (23.79 vs. 4.93 per 10,000 residents).[23]

Age-Adjusted Rates of Hospitalization* Due to Depression by Race/ Ethnicity in San Francisco, 2014–2016[23]		
	Asian & Pacific Islander	4.93%
	Black/African American	23.79%
	Latino	10.69%
	White	15.08%
	All	12.05%

*Hospitalization rates are not unduplicated (i.e., one person could be hospitalized many times). High rates of hospitalizations among Black/African Americans likely result from inadequate access to medical care.

Suicide is the 12th leading cause of death in San Francisco.[108]

- 34 San Franciscans committed suicide between 2013 and 2017.
- 50.96 years is the average age of death for those who complete suicide.
- Suicide completion is three times more common among men than women (14.22 vs. 4.95 per 100,000 population).
- The suicide rate is the highest in the Castro neighborhood.

Age-Adjusted Mortality Rates Due to Suicide by Race/Ethnicity in San Francisco, 2015–2017[108]		
	Asian	5.37%
	Black/African American	8.52%
	Latino	8.27%
	White	13.01%
	All	9.27%

Alcohol abuse is common in San Francisco—40 percent of adults reported binge drinking in 2014 to 2015.[55] Binge drinking is defined as consuming five or more alcoholic drinks for men and four or more for women, on at least one occasion.[109]

- 53 percent of men and 24 percent of women over age 18 binge drink.
- 8.37 percent of SFUSD high school students reported binge drinking in 2013 to 2017.[28]
- 25 percent of White students binge drink, which is two to twelve times higher than other races/ethnicities.[28]
- 61 percent of young adults ages 18 to 24 binge drink.[55]

Percentage of SFUSD High School Students Who Reported Binge Drinking in the Past 30 Days by Race/Ethnicity, 2013–2017[28]		
	Black/African American	8.84%
	Chinese	2.19%
	Filipino	7.65%
	Latino	12.44%
	Other Asian	5.98%
	White	25.19%
	All	8.37%

Many factors determine whether someone will start to use or become dependent on drugs or alcohol. Risk factors for use among children and adolescents include:[108,110]

- Unstable family relationships
- Exposure to physical, mental, and sexual abuse
- Mental illness
- Early aggressive behavior

- Poor social skills
- Poor academic performance
- Substance use among peers and family members
- Involvement with the juvenile justice system
- Poverty

The effects of substance abuse are cumulative and significantly contribute to costly social, physical, mental, and public health problems. These problems include:[110]

- Poor academic performance
- Cognitive functioning deficits
- Unintended pregnancy
- HIV and other sexually transmitted diseases
- Hepatitis C
- Motor vehicle crashes
- Violence
- Child abuse
- Crime, homicide
- Chronic diseases including liver disease and certain cancers (e.g., colorectal, liver, breast, prostate)
- Mental and behavioral disorders (unipolar depressive disorders, epilepsy, suicide)

Youth in San Francisco are at risk of substance abuse.[28]

- 27 percent of SFUSD high school students and 6 percent of middle school students have smoked marijuana.
- 12 percent of SFUSD high school students and 3 percent of middle school students have abused prescription drugs.
- 8 percent of SFUSD high school students and 6 percent of middle school students have used methamphetamines, inhalants, ecstasy, or cocaine.

Drug and alcohol abuse contribute to homelessness in San Francisco.[30]

- 15 percent of homeless persons reported drug and alcohol use as their primary cause of homelessness in 2017.
- 65 percent of chronically homeless persons reported alcohol or substance use.

From 2014 to 2016, 8,552 emergency room visits resulted from alcohol abuse and 8,245 from drugs.[23] Neighborhoods with a higher density of off-site alcohol outlets coincide with those with higher rates of emergency room visits due to alcohol abuse.[23,111] Neighborhoods with larger Black/African American populations like the Tenderloin and South of Market also have much higher emergency room visit and death rates due to drug abuse.[23] Drug abuse in San Francisco resulted in 470 deaths between 2015 and 2017.

Age-Adjusted Mortality Rates Due to Drug Use Disorders by Race/Ethnicity in San Francisco, 2015–2017[23]		
	Asian	3.33%
	Black/African American	74.22%
	Latino	8.53%
	White	20.65%
	All	16.22%

San Francisco spends nearly $400 million a year on tobacco-related costs, including medical expenses, loss of productivity, and secondhand smoke exposure.[112] Significant gains against smoking have been made, but not everybody has benefited from tobacco control policies and education campaigns.

- In 2015 to 2016, 11 percent of adults in San Francisco reported they were current cigarette smokers. Young adults and low-income earners are disproportionately affected by tobacco.[113]
- Residents who live under 200 percent of the federal poverty level are twice as likely to smoke as those who live above that level (17 percent vs. 9 percent).
- Men are three times more likely to smoke than women (15 percent vs. 5 percent).
- Adults aged 18 to 24 are more likely to smoke than those 25 and older (16 percent vs. 10 percent).

Percent of High School Students Who Smoked Cigarettes in the Past 30 Days by Race/Ethnicity in San Francisco, 2013–2017[28]		
	Asian	2.50%
	Black/African American	9.00%
	Latino	4.56%
	White	15.00%
	All	6.00%

Since adoption of the Tobacco Permit Density Reduction Ordinance in 2014, the number of tobacco retailers has declined by 18 percent. The reduction was 26 percent in the Tenderloin and SOMA districts, which had the highest density of retailers.[113] From 2015 to 2016, the number of packs of cigarettes sold in San Francisco fell by 10 percent.[113]

E-cigarette use:

- In 2017, while 4 percent of SFUSD high school students reported smoking cigarettes, 7 percent reported using e-cigarettes or other electronic smoking devices in the last 30 days.[28]
- 25 percent of SFUSD high school students reported ever using e-cigarettes or other electronic smoking devices.[28]
- "Vaping" is on the rise, especially among young people, which caused the U.S. Surgeon General to call for aggressive steps to curb the epidemic of teen nicotine use in 2018.[112]

The following laws have been passed to limit e-cigarette use among youth in San Francisco:

- 2014 Prohibited the use of e-cigarettes wherever smoking of tobacco products is prohibited.
- 2016 Raised the minimum age to purchase tobacco products from 18 to 21.
- 2018 Banned flavored tobacco product sales including flavored electronic tobacco pods.

VII. Community Assets Available to Respond to the Identified Health Needs

In addition to San Francisco's acute not-for-profit community hospitals, a university hospital that serves as a tertiary care center, and the Department of Public Health, which operates an acute hospital/trauma center and a long-term hospital along with many community clinics, there are numerous community agencies that provide direct services, education, and/or advocacy.

A unique asset for San Francisco is Healthy San Francisco, a universal healthcare program created by the City of San Francisco that makes healthcare services accessible and affordable for uninsured residents. The program offers a new way for San Francisco residents who do not have health insurance to have basic and ongoing medical care. It is available to all San Francisco residents regardless of immigration status, employment status, or pre-existing medical conditions. San Francisco residents with an income at or below 500 percent of the federal poverty level ($62,450 for one person, $128,750 for a family of four in 2019) are eligible to enroll in this one-of-a-kind access program.

Below is a list of the 2019 assessment's community health priorities with select available community assets and resources identified to respond to each need.

Health Need 1: Access to Coordinated, Culturally and Linguistically Appropriate Care and Services
Select community assets and resources available to respond to this need:

- Health Reform as a driver toward primary care home as well as integration and coordination.
- Healthy San Francisco.
- Strong interagency and community collaboration—e.g., SFHIP, Children's Oral Health Collaborative, Tenderloin Health Improvement Partnership, SFDPH's Black/African American Health Initiative Project, Asian and Pacific Islander Health Parity Coalition, San Francisco Kindergarten Dental Screening Project.
- Community-based organizations that focus on physical health and the social determinants of health.
- San Francisco system of care (SFDPH, nonprofit hospitals, community clinics, private providers).

Health Need 2: Food Security, Healthy Eating, and Active Living
Select community assets and resources available to respond to this need:

- Strong interagency and community collaboration to improve nutrition—e.g., SFHIP, Southeast Food Access Working Group, Tenderloin Healthy Corner Store Coalition, Healthy Retail SF, Food Security Task Force (San Francisco Board of Supervisors), San Francisco WIC Program (Special Supplemental Nutrition Program for Women, Infants, and Children).
- Strong interagency and community collaboration to improve opportunities for physical activity—e.g., Sunday Streets, WalkFirst, Bayview HEAL Zone, Safe Routes to School, Shape Up SF Coalition, Healthy Hearts SF, SFUSD Wellness Policy, Walk SF, Vision Zero Network.
- Community-based organizations such as YMCA, CARECEN (Central American Resource Center).
- Strong network of existing and well-maintained parks.
- Current assessment efforts: Communities of Excellence in Nutrition, Physical Activity, and Obesity Prevention (CX^3).

Health Need 3: Housing Security and an End to Homelessness
Select community assets and resources available to respond to this need:

- Strong interagency and community collaboration—e.g., SFHIP, Tenderloin Health Improvement Partnership, Rising Up, Local Homeless Coordinating Board.
- Effective and long-standing nonprofit organizations working to provide housing and end homelessness—e.g., Compass Family Services, Episcopal Community Services, Tenderloin Housing Clinic.
- Community-based organizations working to provide services to homeless and at-risk individuals and families—e.g., Homeless Prenatal Program, GLIDE, Larkin Street Youth Services, Project Homeless Connect.

Health Need 4: Safety from Violence and Trauma
Select community assets and resources available to respond to this need:

- Strong interagency and community collaboration—e.g., SFHIP, BMAGIC Bayview Hunters Point Mobilization for Adolescent Growth in our Communities, SafeStart Initiative.
- Strong existing programs that address these issues such as Bayview Safe Haven after-school program, Tenderloin Community Benefit District's Safe Passage program.
- Strong community-based organizations working to address and prevent violence and trauma—e.g., Safe and Sound, APA Family Support Services, La Casa de Las Madres, Rafiki Coalition, Center for Youth Wellness, Huckleberry Youth Programs, Cameron House.

Health Need 5: Social, Emotional, and Behavioral Health
Select community assets and resources available to respond to this need:

- Strong interagency and community collaboration—e.g., SFHIP, Our Children Our Families Council, San Francisco Tobacco-Free Project.
- Community-based organizations such as Family Service Agency of San Francisco, Jewish Family and Children's Services, Project Homeless Connect, Mission Council on Alcohol Abuse for the Spanish Speaking, Asian American Recovery Services, 3rd Street Youth Center and Clinic, Larkin Street Youth Services, Phatt Chance Community Services, Bayview Hunters Point Foundation, Homeless Children's Network, Homeless Youth Alliance, Richmond Area Multi-Services, NAMI (National Alliance on Mental Illness), Jelani House, San and Sound, Conard House, Progress Foundation, Community Behavioral Health.
- San Francisco system of care (SFDPH, nonprofit hospitals, community clinics, private providers).

VIII. Soliciting for Public Comments

CPMC is soliciting for public comments to help inform the development of its next Community Health Needs Assessment. You have the opportunity to review this CHNA and corresponding Implementation Strategy Plan and submit comments on either document to SHCommBene@sutterhealth.org. All comments received will be considered as part of the community input component in the development of CPMC's Community Health Needs Assessment 2022–2024.

CPMC requested written comments from the public on its 2016 Community Health Needs Assessment and corresponding Implementation Strategy Plan through its website. At the time of the development of this CHNA report, CPMC had not received any written comments. However, input from the broader community was considered and taken into account when identifying and prioritizing the significant health needs of the community we serve for the 2019 CHNA through the process documented in Section IV of this report. CPMC will continue to use its website as a tool to solicit for public comments, and will ensure that these comments are considered community input in the development of future CHNAs.

IX. Evaluation of Impact of Actions Taken Since the Previous CHNA

An important component of this CHNA report is an evaluation of the impact of any actions that were taken since CPMC finished conducting its immediately preceding CHNA to address the significant health needs identified three years ago.

Appendix A uses the framework of the 2016 Implementation Strategy Plan that described how CPMC planned to address each identified significant health need, and lists the impacts achieved for each of the programs where CPMC provided services and/or resources in 2016, 2017, and/or 2018.

X. Next Steps

California Pacific Medical Center's Community Benefit Department will meet to review and discuss the hospital's existing community benefit activities and assets in regard to each priority, and identify opportunities for collaboration in order to enhance impact and avoid unnecessary duplication of services.

The next phase will include developing an implementation strategy for each health need identified, building on current assets and resources. The implementation plan will incorporate evidence-based strategies wherever possible and take into account Sutter Health goals and metrics.

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APPENDICES

APPENDIX A
CPMC'S EVALUATION OF IMPACT OF ACTIONS TAKEN SINCE THE PREVIOUS CHNA

This section is based on the 2016–2018 Implementation Strategy Plan that described how CPMC planned to address significant health needs identified in the 2016 Community Health Needs Assessment. The strategy described actions the hospital intended to take, including programs and resources it planned to commit.

Listed here are the impacts achieved for each of the programs for which CPMC actually provided services and/or resources in 2016, 2017, and/or 2018.

PRIORITY HEALTH NEED #1: ACCESS TO CARE

Name of Program, Activity, or Initiative: St. Luke's Health Care Center (SLHCC) & HealthFirst

Description	CPMC's SLHCC provides a full range of obstetric and gynecological care at its Women's Center; well-baby care, well-child care, and care for ill or injured children at its Pediatric Clinic; and primary, acute and chronic care at its Adult Internal Medicine Clinic for teenagers and adults. SLHCC's clinicians and staff are bilingual in English and Spanish, ensuring culturally and linguistically competent care. Without SLHCC, many of these patients would have to use services at Zuckerberg San Francisco General and its public clinics, facilities that are operating at full capacity. SLHCC's services also counter limited access that may be caused by primary care providers being less likely to serve Medi-Cal beneficiaries due to low government reimbursement rates. HealthFirst, an affiliated center for health education and disease prevention, serves patients in chronic disease management by integrating community health workers (CHWs) into the multidisciplinary healthcare team. CHWs are culturally and linguistically competent as they are recruited from the same community as the patients that HealthFirst serves. CHWs provide health education, assist patients to improve their self-management skills, and encourage them to receive timely and comprehensive care.
Goals	Expand the city's safety net and bridge gaps in accessibility by making services more readily available to publicly insured and uninsured populations, and making those services culturally and linguistically appropriate. Manage chronic illness with cost-effective, quality care by providing prevention, outreach, and education services in a primary care setting that is culturally and linguistically appropriate for uninsured and underinsured patients residing in communities south of Market Street in San Francisco.
Anticipated Outcomes	Increase culturally and linguistically appropriate healthcare services for uninsured and underinsured patients residing in communities south of Market Street in San Francisco, such as the Mission, Bayview Hunters Point, Downtown/Civic Center, Visitacion Valley and Excelsior—some of the neighborhoods identified as having the highest disparities related to important socioeconomic determinants of health.

2016–2018 Impact

St. Luke's Health Care Center population served:
Gender: 75-78% Female, 22-25% Male
Race: 30-37% White (including Hispanic), 8-9% Black/African American, 1% Native American/Alaskan Native, 5-10% Asian/Pacific Islander, 4-8% Multi-Race, 39-48% Other/Unknown
Ethnicity: 52-54% Hispanic, 43-45% Non-Hispanic, 3% Unknown
Preferred language: 58-62% English, 37-39% Spanish, 1-3% Other
Insurance coverage: 5-6% Medicare, 1% Medicare Managed Care, 13-16% Medi-Cal, 37-42% Medi-Cal Managed Care, 37-41% Private insurance, 1-2% Self-pay

	2016	2017	2018
Patients served	12,853	11,991	11,243
Patient visits	39,458	30,770	34,274

HealthFirst:

	2016	2017	2018
Total patients served	787	789	717
Patient visits	n/a	1,161	1,455
Diabetes patients served	348	345	331
Eye exams	205	181	149
Foot exams	211	188	147
Albumin/creatinine ratio tests	259	288	243
Patients with A1c controlled (<9%)	75%	91%	89%
Asthma patients served	439	436	383
Spirometry tests	238	212	173
Patients with up-to-date asthma action plans	100%	100%	100%

Name of Program, Activity, or Initiative: Kalmanovitz Child Development Center (KCDC)

Description

CPMC's Kalmanovitz Child Development Center provides diagnosis, evaluation, treatment and counseling for children and adolescents with learning disabilities and developmental or behavioral problems caused by prematurity, autism spectrum disorder, epilepsy, Down syndrome, attention deficit disorder, or cerebral palsy. Its comprehensive assessments and ongoing therapy programs include the following disciplines: Developmental/Behavioral Pediatrics; Psychology and Psychiatry; Speech/Language and Auditory Processing; Occupational Therapy; Behavior Management Consultations; Early Intervention/Parent-Infant Program; Social Skills Groups; Feeding Assessment and Therapy; Assessment and Therapy for the Neonatal Intensive Care Unit and Assessment for the Follow-Up Clinic; Educational Assessment, Therapy and Treatment. These services provided at reduced or no cost to families are particularly important since children from low-income families have a 50 percent higher risk of developmental disabilities; early identification and treatment can change the course of these children's lives.

Besides operating its own clinics, KCDC also extends its services to a large number of at-risk children and brings services to them in their community by partnering with local schools and other community organizations, such as De Marillac Academy and Sacred Heart Cathedral Preparatory. De Marillac Academy is a tuition-free independent Catholic school serving low-income fourth-to-eighth-grade students in San Francisco's Tenderloin District, where many children suffer from post-traumatic stress disorder impacting their ability to learn. In a unique program that goes beyond the daily classroom setting, clinical and family support services are provided by KCDC to help children process those experiences and overcome the emotional challenges that often accompany them. Speech and language pathologists provide more intensive services as needed at the school; occupational therapy is done at KCDC locations.

Goals

Help children and youth in San Francisco to thrive and live up to their full potential by providing early multidisciplinary assessment and treatment for children with one or more conditions that affect their growth and development, regardless of the patient's ability to pay.

Anticipated Outcomes

Increase services for children with one or more conditions that affect their growth and development.

2016–2018 Impact

	2016	2017	2018
Persons served at two San Francisco clinic locations	1,884	1,483	1,148
Persons served at De Marillac Academy	61	21	38
Patient visits (clinic locations only)	15,783	15,389	15,193

Name of Program, Activity, or Initiative: **Joint Venture Health**

Description

Joint Venture Health (JVH) is a partnership between UC Berkeley School of Public Health, North East Medical Services (NEMS), and CPMC. CPMC's contribution supports the creation of a cost-effective, comprehensive developmental and behavioral health screening, treatment and referral program for the 10,000 children and their families who have NEMS as their medical home.

UC Berkeley School of Public Health's long-term vision for this program is to partner with community health centers, health systems, and health professional training programs to create high-performing primary care systems for kids and families from low-income communities. The program seeks to build primary care teams to systematically detect, treat and support kids with developmental and behavioral health needs at the community clinics where they already receive their medical care. Early identification and intervention is key to changing the course of developmental conditions and helping to minimize the life-impact of these conditions on children and the costs to society.

The first three-year pilot initiative at NEMS began services at the Stockton clinic in August 2014 and expanded to the San Bruno Avenue clinic in July 2015. Five more clinics were included in 2017, for a total of seven clinics. Also in 2017, JVH was able to advance universal screening and prompt follow-up care in San Francisco and Solano Counties by partnering with the First 5 organization. With expansion to the Noriega clinic in 2018, development and behavioral health services are now available to the entire NEMS pediatric population.

CPMC supports program development, operations, and ongoing evaluation through annual cash contributions and program grants.

Goals

Improve early detection of developmental disabilities by integrating developmental and behavioral health services for low-income children into the community clinics where they receive medical services.

Anticipated Outcomes

Increase screenings to detect developmental disabilities and onsite treatment for children with moderate conditions, and coordinate services across care environments for children with high-risk conditions.

2016–2018 Impact

With program expansion to additional NEMS clinic sites, the entire NEMS pediatric population is now served—an increase from 6,500 in 2016 to 10,919 in 2018.

	2016	2017	2018
Number of screenings	4,800	10,094	10,891
Of those screened, %age of children at moderate to high risk for developmental delays and psycho-social issues	19%	18%	16%
Persons connected to child devt and behavioral health svcs	675	809	734
Classes/workshops provided	18	12	14
Percent of NEMS patients who are at or below poverty	48.8%	48.2%	48.0%
Percent of NEMS patients who are Asian	90.4%	90.0%	89.5%
Percent of NEMS patients who speak little or no English	81.7%	81.1%	81.2%

Name of Program, Activity, or Initiative: **South of Market Bayview Child Health Center (BCHC)**

Description

BCHC offers routine preventative and urgent pediatric care in one of San Francisco's most medically underserved neighborhoods, and addresses prevalent community health issues such as weight control and asthma management. BCHC focuses on keeping infants, children and adolescents healthy, and on closely managing their care when they are ill. The center is particularly attuned to the impact of community violence and childhood trauma on children's mental and physical health. The clinic offers psychological and case management services to families through a partnership with the Center for Youth Wellness. Dental services are provided through South of Market Health Center at their main facility.

The clinic was started as a collaboration between CPMC, Sutter Pacific Medical Foundation, and CPMC Foundation. In 2014, clinic ownership was transferred to South of Market Health Center (SMHC), and we were jointly awarded a grant to transition BCHC to become a Federally Qualified Health Center. CPMC continues to be the hospital and specialty partner for BCHC and continues to help fund operational costs as well as construction costs connected to the clinic's modernization plan. CPMC and SMHC will work together to ensure that kids in the Bayview have access to high-quality care while ensuring the clinic's long-term sustainability.

Goals

Improve access to high-quality healthcare close to home for uninsured and underinsured children residing in the Bayview Hunters Point district of San Francisco, regardless of ability to pay.

Anticipated Outcomes

Increase pediatric care, psychological, and case management services to children and families of Bayview Hunters Point.

2016–2018 Impact

	2016	2017	2018
Persons served	770	804	769
Patient visits	1,862	2,200	2,503
Persons connected to mental health services	121	76	n/a

Name of Program, Activity, or Initiative: **African American & Sister to Sister Breast Health Program and Mission Bernal Campus Breast Health Partnerships**

Description

CPMC's African American & Sister to Sister Breast Health Program offers women mammography screening and all the subsequent breast health diagnostic testing and treatment they may need at no cost. Early detection allows for better treatment outcomes and longevity of life. Partnership organizations such as HealthRIGHT 360, San Francisco Free Clinic, and Clinic by the Bay refer uninsured, underinsured, disadvantaged and at-risk women for mammography services.

CPMC's Breast Center at the Mission Bernal (formerly St. Luke's) Campus promotes breast health in underserved communities by partnering with neighborhood clinics and community agencies, including Southeast Health Center, Mission Neighborhood Health Center, and Bay Area Cancer Connections (formerly Latina Breast Cancer Agency). Included in the metrics below are services provided through CPMC grants to Bay Area Cancer Connections, one of the principle organizations referring women to the Mission Bernal Campus Breast Center for services, as well as grants to Shanti Project for care navigation services.

Goals

Increase early breast cancer detection by providing access to no-cost mammography screening for uninsured women who live in San Francisco.

Anticipated Outcomes

Increase early mammography screenings for women in need.

Increase care navigation services for women who face particular challenges in completing treatment.

2016–2018 Impact

	2016	2017	2018
Persons served by CPMC's AABH & Sister to Sister Program	133	115	119
Persons served by Bay Area Cancer Connections (grant)	238	300	180
Patient visits at CPMC campuses	405	433	516
Screenings provided	401	427	283

CPMC grant to Shanti Project's Margot Murphy Women's Cancer Program provided care navigation services, prioritizing women who faced particular challenges in completing treatment due to being low-income, uninsured/underinsured, with limited English proficiency, and/or from immigrant populations:

Persons provided with care navigation services	486	632	392
Taxi vouchers to medical appts and other critical errands	3,000	4,110	2,144
Persons case-managed	195	265	292
Persons connected to mental health services	n/a	59	13
Persons connected to social services	n/a	300	200
Wellness classes/support group meetings offered	103	346	272

Name of Program, Activity, or Initiative: **Coming Home Hospice**	
Description	CPMC's Coming Home Hospice provides 24-hour care for terminally ill clients and their families in a caring, homelike setting. CPMC ensures that high-quality residential hospice care is accessible to terminally ill patients regardless of their ability to pay, by covering the difference between the full cost of providing these services and patient revenue. Services include medical and nursing care, psycho-social counseling, spiritual counseling, religious services, massage therapy, medication monitoring and assistance, personal care assistance, laundry services, recreational activities and entertainment.
Goals	Increase access to quality hospice care and support for those for whom home is no longer an option, regardless of ability to pay.
Anticipated Outcomes	Increase quality hospice care services and support.
2016–2018 Impact	Client population—Ethnicity: 50-66% White, 23-33% Asian, 2-11% Black/African American, 4-10% Hispanic Language: English, Cantonese

	2016	2017	2018
Persons served	176	200	143
Low-income	36%	40%	36%

Name of Program, Activity, or Initiative: **Zuckerberg San Francisco General Hospital (ZSFGH) Diagnostic Services**	
Description	In this partnership with ZSFGH, CPMC provides diagnostic services free of charge to patients referred by ZSFGH, and pays physicians for associated professional fees.
Goals	Improve timely access to key diagnostic services for uninsured and underinsured patients.
Anticipated Outcomes	Increase these diagnostic services for uninsured and underinsured patients; decrease wait times for SFGH patients to receive these diagnostic services.
2016–2018 Impact	Goal of wait-time reduction was achieved, and the program ended with one final patient being served in early 2018. By the second year of the partnership (2016), ZSFGH Echocardiogram wait times went from 48 days to less than 30 days. ZSFGH Pulmonary Function Test wait times went from 140 days to less than 50 days.

	2016	2017	2018
Persons served with diagnostic tests	638	100	1

Name of Program, Activity, or Initiative: **Medi-Cal Managed Care Partnerships**

Description

A key part of CPMC's Medi-Cal program is the Medi-Cal Managed Care partnership with North East Medical Services (NEMS) community clinic and San Francisco Health Plan (SFHP), a licensed community health plan that provides affordable healthcare coverage to over 130,000 low- and moderate-income San Francisco residents. Working together with NEMS, CPMC serves as the hospital partner for these Medi-Cal beneficiaries who select NEMS as their medical group through San Francisco Health Plan, providing them with inpatient services, hospital-based specialty and ancillary services, and emergency care.

CPMC also provides access to quality services at the Mission Bernal Campus for patients who select Hill Physicians or Brown & Toland as their medical group through San Francisco Health Plan.

Additionally, CPMC provides lab services free of charge for NEMS patients in order to further improve access and support NEMS and their patients.

Goals

Make quality services more readily available to publicly insured populations.

Anticipated Outcomes

Increase healthcare services for Medi-Cal patients residing in San Francisco.

2016–2018 Impact

	2016	2017	2018
North East Medical Services enrollees	33,172	31,987	31,193
Brown & Toland enrollees	4,650	4,338	4,115
Hill Physicians enrollees	4,512	3,926	3,600
Bed days per 1,000 (Calif. Benchmark 23.7 for 2016) (Calif. Benchmark 26.69 for 2015)	12.4	12.7	12.4
ER visits per 1,000	12.2	11.1	14.2
NEMS patients served with free lab services	15,120	16,667	17,361

Name of Program, Activity, or Initiative: **Lions Eye Foundation**

Description

Lions Eye Foundation and CPMC partner together to provide highly specialized eye care procedures free of charge to people without insurance or financial resources.

Goals

Provide access to highly specialized eye care for people without insurance or financial resources.

Anticipated Outcomes

Increase eye care procedures/services for uninsured, low-income patients residing in San Francisco.

2016–2018 Impact		2016	2017	2018
	Persons served	245	369	411
	Patient visits	2,310	3,131	3,617
	General surgical procedures	205	175	202
	Laser surgeries	76	132	166
	Intravitreous injections for macular degeneration and eye complications due to diabetes	420	564	659
	Number of diagnostic tests (OCTs, B-scans, angiograms, etc.)	1,309	1,891	2,211

Name of Program, Activity, or Initiative: **Operation Access**

Description

CPMC partners with Operation Access and the San Francisco Endoscopy Center to provide access to diagnostic screenings, specialty procedures, and surgical care at no cost for uninsured Bay Area patients who have limited financial resources. CPMC physicians volunteer their time to provide these free surgical services, while the hospital donates the use of its operating rooms. CPMC also provides a grant to support Operation Access's operating costs.

Goals

Increase healthcare equity for uninsured and underserved patients facing barriers to getting the outpatient surgical and specialty care that they need, by:

- Providing the resources and promoting the medical volunteerism needed for the donation of these services;
- Increasing culturally competent case management;
- Providing medical interpreters to facilitate donated care.

Anticipated Outcomes

Increase number of timely surgical procedures and diagnostic services provided to uninsured and underserved patients.

2016–2018 Impact		2016	2017	2018
	Number of persons served	139	142	138
	Operating room procedures	70	44	56
	GI procedures	48	66	63
	Minor and radiology procedures	69	33	30
	Specialist evaluations	30	25	19
	Volunteering physicians	28	36	39
	Client compliance rate (patients who show up on time and prepared for appointments)	97%	97%	96%
	Median wait time from referral to specialty visit	65 days	71 days	66 days
	Patients very satisfied or satisfied with their experience	98%	99%	97%
	Patients reporting improved health	93%	93%	96%
	Patients reporting improved ability to work	93%	94%	90%
	Patients reporting improved quality of life	93%	95%	93%

Name of Program, Activity, or Initiative: **Advanced Illness Management (AIM) Program**	
Description	Sutter Health's Advanced Illness Management (AIM) program provides customized support for patients with advanced chronic illnesses in order to manage their health/illness symptoms, manage their medications, coordinate their care, plan for the future, and live the kind of life they want. CPMC supports the program, providing funding for the people who enroll in the program in San Francisco. Once the AIM team understands the patient's health issues, lifestyle, and personal preferences, they work with the patient to tailor a care plan, ease the transition from hospital to home, and provide continuing over-the-phone support and in-person visits in the home or at the doctor's office as needed. If the patient returns to the hospital, AIM staff continues to support the patient there. The AIM team also provides support for the patient's family and helps them understand anything about the patient's condition that the patient wants them to know.
Goals	Help chronically ill patients better manage their health/illness through skilled, respectful coaching and care tailored to their needs.
Anticipated Outcomes	Increase coaching services and support for patients who need help in self-managing advanced chronic illness.
2016–2018 Impact	Women 55%, Men 45% Age: 18-64 (18-22%), 65-74 (21-22%), 75+ (57-60%) Insurance type: Commercial 10-12%, Medi-Cal 9-12%, Medicare 47-54%, Medicare/Medi-Cal 12-20%, Other PPS Payors 9-13%

	2016	2017	2018
Persons enrolled in the program	364	382	259
Persons transitioned to home/self-care from hospital	29%	12%	13%
Persons transitioned to home healthcare service	36%	56%	58%

Name of Program, Activity, or Initiative: **Grants and Sponsorships Addressing Access to Care**	
Description	Grants and sponsorships are decided annually based on community need. Selected executed grants and sponsorships will be reported at year end.
Goals	Expand the city's safety net by making healthcare services more readily available to publicly insured and uninsured populations, and making those services culturally and linguistically appropriate.
Anticipated Outcomes	Increase affordable, accessible, culturally and linguistically appropriate healthcare services for uninsured and underinsured patients by supporting community-based organizations that develop/expand clinical services, outreach programs, and health education workshops to ensure that the needs of underserved populations are met.

2016–2018 Impact

Here are some selected achievements of the organizations funded by CPMC grants and event sponsorships:

- Daly City Youth Health Center assists underserved youth with holistic, comprehensive services such as primary healthcare, counseling, insurance enrollment, vocational programs, and health education including sexual health education for youths aged 12 to 24. The Center's primary care medical clinic is a satellite facility of San Mateo Medical Center. DCYHC expects a 37 percent increase in clientele over the next five years and a 12 percent increase in primary care and behavioral health utilization. CPMC provided a grant to help them move into a larger, more cohesive space to better meet this growing need. In 2018, the Center served over 5,700 people, connecting 1,700 to a primary care provider and 275 to mental health services.
- HealthRIGHT 360 offers a full range of primary care services at its San Francisco locations, including Women's Community Clinic. The new Integrated Care Center also offers primary care services, along with comprehensive dental services. In 2018, over 9,000 people received primary care. The clinics provide integrated medical care, substance abuse, and mental health services to more than 6,000 individuals who are classified under HRSA regulations as homeless.
- Kimochi provides culturally sensitive, Japanese-language-based programs and services to 3,000 Bay Area seniors and their families each year, including transportation, referral and outreach, health and consumer education seminars, healthy aging and senior center activities, social services, congregate and home-delivered meals, in-home support services, adult social day care, and 24-hour residential and respite care.
- Each year, Maitri Compassionate Care provides residential care in a nurturing, home-like setting to about 45 to 50 disadvantaged people living with AIDS who are in need of hospice or 24-hour care. Nursing staff ensure compliance with anti-retroviral therapies, and the program focuses on closely catering to residents' particular nutritional needs, controlling health conditions resulting from medications, maintaining/increasing weight, and improving key health indicators.
- Planned Parenthood Northern California provided reproductive healthcare services to 10,800 people in 2018. CPMC's grant helps to fund the renovation of their new San Francisco Flagship location that will house a new health center and other programmatic services, including community education, research, and advocacy. The new location is anticipated to serve 13,000 patients per year, accommodating 20 percent more visits; decrease wait time for appointments to three days; and utilize more medical providers to deliver all services six days a week, with a safe and private entrance. The new flagship will also enable the organization to annually deliver education and outreach to 30,000 San Francisco youth, parents, providers, and professionals at diverse venues.

Besides the organizations highlighted above, CPMC made cash and in-kind contributions to other community organizations that address the Access to Care community health need; these organizations together improved the lives of thousands of San Franciscans through their services. Organizations included:

APA Family Support Services
Bay Area Cancer Connections
Bayview IMANI Breast Cancer Support Group
Catholic Charities
Center for Youth Wellness
Chinatown Community Health Fair
Chinese Hospital
Clinic by the Bay
Community Living Campaign
Compass Family Services
Conard House
Curry Senior Center
Elder Care Alliance
Episcopal Community Services
GLIDE Foundation
Homeless Prenatal Program
Huckleberry Youth Programs
Institute on Aging
Instituto Familiar de la Raza
Jewish Family and Children's Services
Larkin Street Youth Services
Lions Eye Foundation
Mission Neighborhood Health Center
NAMI San Francisco
National Coalition of 100 Black Women
North East Medical Services
On Lok
Operation Access
Operation Rainbow
Portola & Excelsior Family Connections
Project Homeless Connect
Richmond Area Multi-Services
Safe & Sound
Samoan Community Development Center
San Francisco Business and Professional Women
San Francisco Community Clinic Consortium
San Francisco Community Health Center
San Francisco Free Clinic
San Francisco General Hospital Foundation
San Francisco Village
Self-Help for the Elderly
SF LGBT Community Center
Shanti Project
South of Market Health Center
Southeast Community Facility Commission
St. Anthony Foundation
UC Berkeley School of Public Health
Wu Yee Children's Services

PRIORITY HEALTH NEED #2: HEALTHY EATING AND PHYSICAL ACTIVITY

Name of Program, Activity, or Initiative: **HealthFirst**

Description

HealthFirst, a center for health education and disease prevention affiliated with CPMC's St. Luke's Health Care Center, serves patients in chronic disease management by integrating community health workers (CHWs) into the multidisciplinary healthcare team. CHWs are culturally and linguistically competent as they are recruited from the same community as the patients that HealthFirst serves. CHWs provide health education, assist patients to improve their self-management skills, and encourage them to receive timely and comprehensive care.

CHWs teach community workshops in healthy eating to parents of children at risk for obesity in the South of Market, Mission, and Bayview Hunters Point districts. They also teach classes on nutrition designed to manage chronic adult diabetes.

Goals

Manage chronic illness with cost-effective, quality care by providing prevention, outreach, and education services in a primary care setting that is culturally and linguistically appropriate for uninsured and underinsured patients residing in communities south of Market Street in San Francisco.

Anticipated Outcomes

Increase culturally and linguistically appropriate services to assist patients with self-management skills.

2016–2018 Impact

	2016	2017	2018
Total patients served	787	789	717
Patient visits	n/a	1,161	1,455
Diabetes patients served	348	345	331
Eye exams	205	181	149
Foot exams	211	188	147
Albumin/creatinine ratio tests	259	288	243
Patients with A1c controlled (<9%)	75%	91%	89%
Asthma patients served	439	436	383
Spirometry tests	238	212	173
Patients with up-to-date asthma action plans	100%	100%	100%

Name of Program, Activity, or Initiative: **Grant to Community Health Resource Center (CHRC)**

Description

CHRC collaborates with over 20 different healthcare centers in San Francisco, providing supportive services to thousands of clients through the many free or low-cost programs, screenings and counseling services that are available to anyone in the community. Programs include dietitians, social work counseling, nutrition guidance, community health screenings, educational lectures including monthly wellness events, health information and local resources, employee and group wellness

	presentations, and support groups. Services are offered free, at a reduced cost, or on a sliding scale. In CHRC's Nutrition Counseling program, the team of highly qualified registered dietitians is available by appointment for nutrition counseling and diet review, with the goal of establishing a diet balanced for all life stages. Nutritionists are cross-trained to meet the nutritional needs and provide guidance for a variety of conditions, concerns and goals. Dietitians are also trained to address weight management concerns specific to age through a number of healthy, supportive treatment options. Dieticians also bring their knowledge to the community by presenting to a variety of community groups.
Goals	Increase knowledge and awareness regarding healthy eating and help patients to effectively meet their goals as they relate to nutrition and diet.
Anticipated Outcomes	Increase high-quality, professional supportive services, tools and information for healthy eating among San Francisco residents.

2016–2018 Impact

	2016	2017	2018
Appointments with a registered dietitian	2,534	2,346	2,369
Health screenings related to diet/exercise and lifestyle change (BMI, glucose, etc.)	2,501	2,510	2,506
Attendees at nutrition/exercise/lifestyle classes and presentations, including health fair	1,345	1,112	2,101

Name of Program, Activity, or Initiative: **Grants and Sponsorships Addressing Healthy Eating and Physical Activity**

Description	Grants and sponsorships are decided annually based on community need. Selected executed grants and sponsorships will be reported at year end.
Goals	Facilitate behavioral changes of adults and children in homes, schools, worksites, and communities that will lead to the consumption of healthier foods and increased physical activity. Identify and respond to risk factors such as obesity and inactivity that have been linked to cardiovascular disease, stroke, diabetes, gallbladder disease, osteoarthritis, and certain cancers. Establish a culture of health consciousness among adults and children.
Anticipated Outcomes	Examples: • Increase knowledge and awareness regarding healthy eating and physical activity among adults and children through culturally relevant tools and information. • Increase children's and adults' access to healthy and nutritious foods. • Increase children's and adults' participation in various forms of exercise through exercise and fitness programs.

- Increase referral and case management for children who are at risk of poor nutrition, obesity, and obesity-related diseases.

2016–2018 Impact

Here are some selected achievements of the organizations funded by CPMC grants and event sponsorships:

- For 10 years, CPMC has funded the William McKinley Elementary School Lunchtime Wellness Program. Throughout each school year, 360 school children participate in moderate to vigorous physical activity during their lunch period five days a week. The program emphasizes team building, cooperation, sportsmanship skills, and conflict resolution while introducing current healthy nutrition and fitness concepts. Staff members help to supervise the playground as a safe, inclusive, and fun environment where children are able to take full advantage of the available games and activities. Students develop positive fitness and social experiences through cooperative play. The Physical Activity Challenge Course, used for eight weeks in 2018 as a key performance indicator, saw a 52 percent increase in participants' fitness measures pre- and post-test, and an 8 percent increase over 2017.
- CPMC's 2018 grant to the Jewish Community Center of San Francisco funded scholarships to ensure that the center's youth enrichment programs were accessible to all and made available free afterschool dance, movement, and athletic programs for low-income families in the Mission District. The assistance served over 500 kids.
- Portola & Excelsior Family Connections provides community and family programs in the Portola and Excelsior neighborhoods. CPMC's annual grant supports the Healthy Connections initiative offering nutrition education, cooking demonstrations, exercise classes and other opportunities, healthy lifestyle workshops in English, Chinese, and Spanish, health screenings, and mental health support to participants throughout the organization's programs. Its 2017 achievements included providing over 16,000 healthy meals to children and families, and performing BMI evaluations and skin carotene tests for over 90 children aged 3 to 12 to establish risk for poor nutrition, obesity, and obesity-related diseases.

Besides the organizations listed above, CPMC made cash and in-kind contributions to other community organizations that address the Healthy Eating and Physical Activity community health need; these organizations together improved the lives of thousands of San Franciscans through their services. Organizations included:

APA Family Support Services
Bethany Center Foundation of San Francisco
Catholic Charities
Community Living Campaign
Curry Senior Center
GLIDE Foundation
Homeless Prenatal Program
Meals on Wheels
On Lok
Samoan Community Development Center
San Francisco Parks Alliance
Self-Help for the Elderly
Southeast Community Facility Commission
St. Anthony Foundation

Institute on Aging	Wu Yee Children's Services
Kimochi, Inc.	YMCA Bayview Hunters Point
Maitri Compassionate Care	

PRIORITY HEALTH NEED #3: BEHAVIORAL HEALTH

Name of Program, Activity, or Initiative: **Kalmanovitz Child Development Center (KCDC)**

Description

CPMC's Kalmanovitz Child Development Center provides diagnosis, evaluation, treatment and counseling for children and adolescents with learning disabilities and developmental or behavioral problems caused by prematurity, autism spectrum disorder, epilepsy, Down syndrome, attention deficit disorder, or cerebral palsy. Its comprehensive assessments and ongoing therapy programs include the following disciplines: Developmental/Behavioral Pediatrics; Psychology and Psychiatry; Speech/Language and Auditory Processing; Occupational Therapy; Behavior Management Consultations; Early Intervention/Parent-Infant Program; Social Skills Groups; Feeding Assessment and Therapy; Assessment and Therapy for the Neonatal Intensive Care Unit and Assessment for the Follow-Up Clinic; Educational Assessment, Therapy and Treatment. These services provided at reduced or no cost to families are particularly important since children from low-income families have a 50 percent higher risk of developmental disabilities; early identification and treatment can change the course of these children's lives.

Besides operating its own clinics, KCDC also extends its services to a large number of at-risk children and brings services to them in their community by partnering with local schools and other community organizations, such as De Marillac Academy and Sacred Heart Cathedral Preparatory. De Marillac Academy is a tuition-free independent Catholic school serving low-income fourth-to-eighth-grade students in San Francisco's Tenderloin District, where many children suffer from post-traumatic stress disorder impacting their ability to learn. In a unique program that goes beyond the daily classroom setting, clinical and family support services are provided by KCDC to help children process those experiences and overcome the emotional challenges that often accompany them. Speech and language pathologists provide more intensive services as needed at the school; occupational therapy is done at KCDC locations.

Goals

Help children and youth in San Francisco to thrive and live up to their full potential by providing early multidisciplinary assessment and treatment for children with one or more conditions that affect their growth and development, regardless of the patient's ability to pay.

Anticipated Outcomes

Increase services for children with one or more conditions that affect their growth and development.

2016–2018 Impact		2016	2017	2018
	Persons served at two San Francisco clinic locations	1.884	1,483	1,148
	Persons served at De Marillac Academy	61	6121	38
	Patient visits (clinic locations only)	15,783	15,389	15,193

Name of Program, Activity, or Initiative: **Grant to Center for Youth Wellness (CYW)**

Description	The Center for Youth Wellness is an integrated center for children, offering pediatric care that addresses the root causes of poor outcomes for children and youth in high-risk communities. Care is based on emerging data on how exposure to poverty, domestic and community violence and other early life stressors affects the developing brains and bodies of children. CPMC's funding makes it possible for patients and families referred by Bayview Child Health Center to receive mental health services at CYW.
Goals	Reduce health disparities and help children to heal and thrive by addressing the health effects of traumatic Adverse Childhood Experiences.
Anticipated Outcomes	Increase psychiatry, psychology, and case management services to children and families in the Bayview Hunters Point district of San Francisco.
2016–2018 Impact	Grant was for 2012 through 2017. CYW patient population (2017): Race/Ethnicity: 70% Black/African American, 15% Hispanic/Latino, 15% Other Age: 36% ages 3-5, 39% ages 6-12, 21% ages 13-18, 4% ages 19-21

	2016 Grant Period	2017 Grant Period
Patients served	196	146
Mental health visits	1.690	1,356

Name of Program, Activity, or Initiative: **Joint Venture Health**

Description

Joint Venture Health (JVH) is a partnership between UC Berkeley School of Public Health, North East Medical Services (NEMS), and CPMC. CPMC's contribution supports the creation of a cost-effective, comprehensive developmental and behavioral health screening, treatment and referral program for the 10,000 children and their families who have NEMS as their medical home.

UC Berkeley School of Public Health's long-term vision for this program is to partner with community health centers, health systems, and health professional training programs to create high-performing primary care systems for kids and families from low-income communities. The program seeks to build primary care teams to systematically detect, treat and support kids with developmental and behavioral health needs at the community clinics where they already receive their medical care. Early identification and intervention is key to changing the course of developmental conditions and helping to minimize the life-impact of these conditions on children and the costs to society.

The first three-year pilot initiative at NEMS began services at the Stockton clinic in August 2014 and expanded to the San Bruno Avenue clinic in July 2015. Five more clinics were included in 2017, for a total of seven clinics. Also in 2017, JVH was able to advance universal screening and prompt follow-up care in San Francisco and Solano Counties by partnering with the First 5 organization. With expansion to the Noriega clinic in 2018, development and behavioral health services are now available to the entire NEMS pediatric population.

CPMC supports program development, operations, and ongoing evaluation through annual cash contributions and program grants.

Goals

Improve early detection of developmental disabilities by integrating developmental and behavioral health services for low-income children into the community clinics where they receive medical services.

Anticipated Outcomes

Increase screenings to detect developmental disabilities and onsite treatment for children with moderate conditions, and coordinate services across care environments for children with high-risk conditions.

2016–2018 Impact

With program expansion to additional NEMS clinic sites, the entire NEMS pediatric population is now served—an increase from 6,500 in 2016 to 10,919 in 2018.

	2016	2017	2018
Number of screenings	4,800	10,094	10,891
Of those screened, children at moderate to high risk for developmental delays and psycho-social issues	19%	18%	16%
Persons connected to child development and behavioral health services	675	809	734
Classes/workshops provided	18	12	14
Percent of NEMS patients who are at or below poverty	48.8%	48.2%	48.0%
Percent of NEMS patients who are Asian	90.4%	90.0%	89.5%
Percent of patients who speak little or no English	81.7%	81.1%	81.2%

Name of Program, Activity, or Initiative: **Project Homeless Connect (PHC)**

Description

CPMC annually sponsors a Project Homeless Connect event where CPMC staff and other volunteers help to provide medical and social services to homeless people in San Francisco, including mental health services, substance abuse connections, shelter and housing information, employment assistance, primary medical care, eye exams, wheelchair repair, dental treatment, and even acupuncture and massage. Besides donating hours of staff volunteer time to the event, CPMC also contributes a cash sponsorship to help cover event costs.

Goals

Improve the mental and physical health and well-being of homeless people by making it easier for them to access difficult-to-obtain services at a one-stop shop event.

Anticipated Outcomes

Increase mental health, substance abuse, medical and social services to San Francisco's homeless population.

2016–2018 Impact

CPMC sponsored a Day of Service in 2017 and 2018.

	2017	2018
Total persons served (200+ service types)	1,198	1,168
Number receiving medical care	123	69
Number receiving acupuncture treatments	50	54
Number receiving chiropractic treatments	--	70
Number receiving massage	35	46
Number treated for bugs and lice	--	13
Number receiving assistance through County Adult Assistance Program (CAAP)	--	39
Number accessing needle exchange services	130	75
Number receiving housing/shelter assistance	138	90
Number receiving California State IDs	116	72
Number receiving dental services	67	67
Number receiving eye exams	108	85
Number receiving prescription glasses	147	121
Number receiving reading glasses	432	536
Number receiving hearing exams	42	38
Number receiving podiatry services	49	--
Number receiving flu shots	76	90
Number receiving HIV/STI tests	72	29
Number receiving TB tests	19	12
Number receiving legal assistance	44	54
Number receiving wheelchair/walker repair services	16	31
Number provided with showers	--	28
Number receiving veterinarian services	--	49
Food Bank groceries distributed	5,912 bags	12,432 lbs.

(2018) 80.9% stated that they felt better about their overall wellness and outlook after having attended the Day of Service; 61.9% received a service that positively

	impacted their physical or mental health; 90.5% were satisfied overall with the services that they received.

Name of Program, Activity, or Initiative:	**Grant to Safe & Sound (formerly San Francisco Child Abuse Prevention Center)**
Description	Safe & Sound and its Child Advocacy Center of San Francisco endeavor to prevent child abuse and reduce its devastating impact by providing supportive services to children and families; education for children, caregivers and service providers; and through advocacy for systems improvement and coordination.
Goals	Ensure that every child is protected and our community is free from abuse; prevent child abuse and reduce its devastating impact through supportive services, education, and policy advocacy.
Anticipated Outcomes	• Increase services for victims of child abuse. • Increase community education/public awareness of child abuse and its prevention. • Improve facilities and infrastructure to continue to provide high-quality and effective services.
2016–2018 Impact	Race/Ethnicity of population served (2018): 31% Latino, 21% White, 16% Asian/Pacific Islander, 13% Multi-racial/ethnic, 11% Black/African American, 7% Unknown, 1% Native American Language: English, Spanish, Cantonese, Mandarin In recent years, Safe & Sound's Child Advocacy Center has become an anchor institution that harnesses medical, legal, social services, and law enforcement expertise in one centralized location, with shared goals and continuous communication among agencies. It serves as the locus to improve citywide systems to prevent and respond to child abuse and a resource hub for best practices in children's social and emotional healing services. In 2016, Safe & Sound purchased its building, ensuring long-term sustainability and strength. Expanding at the request of the city to lead a multidisciplinary team addressing the commercial sexual exploitation of children and supporting its victims, a Bay Area-wide study on *The Economics of Child Abuse* was completed in 2018. As of mid-2018, the Center has provided more than 1,185 children who have disclosed abuse with best-in-class forensic interviews and follow-up care. In 2018, the family support center provided 1,200 parents and children in 700 vulnerable families with individualized, strengths-based support services; over 92 percent of these families demonstrated improved Protective Factors shown to decrease abuse risk, increasing from 80 percent of those served in 2016. In addition, Safe & Sound teaches vital personal safety skills to thousands of children, parents, and child-serving professionals—serving over 7,000 in 2016, increasing to over 12,000 in 2018. Their 24/7 TALK Line saw over 9,700 calls in 2017, with a 20 percent increase in 2018.

Name of Program, Activity, or Initiative: **Grant to Community Health Resource Center**

Description

CHRC collaborates with over 20 different healthcare centers in San Francisco, providing supportive services to thousands of clients through the many free or low-cost programs, screenings and counseling services that are available to anyone in the community. Programs include dietitians, social work counseling, nutrition guidance, community health screenings, educational lectures including monthly wellness events, health information and local resources, employee and group wellness presentations, and support groups. Services are offered free, at a reduced cost, or on a sliding scale.

CHRC's Behavioral/Mental Health Services by a licensed team of professionals offer support to individuals, groups and families looking for emotional or practical guidance and support for a wide range of needs. Fees for services are on a sliding scale.

Counseling sessions may include: Individualized Needs Assessment to help clarify and prioritize the patient's most urgent concerns in order to develop goals and identify possible solutions; Short-term Emotional Support where counselors help align resources and make recommendations; Resource and Referral where a social worker can help connect the patient with other resources and agencies such as insurance, housing, reduced billing options for utilities, transportation, as well as a wide range of specific community support; Psychotherapy based on individual needs; and Follow-up Support.

Examples of past support groups/programs include the Cancer Buddy Program that connects recently diagnosed cancer patients with trained volunteer cancer survivors; the Stroke Survivor Support Group designed to aid the recovery of stroke survivors at any stage by providing a safe and supportive atmosphere where individuals are able to share their experiences; and the Liver Cancer Support Group, where those living with liver cancer, family members, loved ones, and caregivers are provided with emotional and social support, education, and shared experience in an open, accepting environment.

Educational classes offered by the CHRC social workers include topics such as advanced healthcare directives, bereavement, care for givers, and dementia.

Goals

Improve the mental health and well-being of San Francisco residents.

Anticipated Outcomes

Increase behavioral/mental health services and connectivity to needed social services for San Francisco residents.

2016–2018 Impact

	2016	2017	2018
Appointments for behavioral health/social work services	3.104	3,140	3,710
Attendees at stress management/emotional health classes	36	111	167
Stroke support group sessions (with 6-10 attendees each)	8	12	12

Name of Program, Activity, or Initiative:	**Psychiatry Residents Serving at Community-Based Organizations**
Description	As part of CPMC's health professions education program, CPMC psychiatry residents provide services one day per week to patients in need of behavioral health services at community-based organizations and public institutions, including HealthRIGHT 360, Jewish Home, and San Quentin Prison. As trainees, psych residents are part of a treatment team and under the supervision of an attending physician. These organizations provide treatment for substance use disorder and other mental health problems, geriatric psychiatric services, and/or social support and re-entry services for incarcerated/formerly incarcerated clients to help them to attain self-sufficiency and continued recovery.
Goals	Improve the mental health and well-being of at-risk populations by making high-quality services more readily available.
Anticipated Outcomes	Increase mental health and substance abuse services for at-risk populations.
2016–2018 Impact	Each year an estimated 900 people were served through the services provided by the psychiatry residents at three sites: • San Francisco Free Clinic: First-year residents provided an estimated 400 annual patient encounters. • HealthRIGHT 360: Third-year residents provided an estimated 100 annual patient encounters at the Clayton/Haight Addictions Campus. • San Quentin State Prison (Marin County): Third-year residents provided an estimated 400 annual patient encounters through their team participation in telepsychiatry sessions serving a wider California prison population at prisons where no psychiatrists are on staff.

Name of Program, Activity, or Initiative:	**Grants and Sponsorships Addressing Behavioral Health**
Description	Grants and sponsorships are decided annually based on community need. Selected executed grants and sponsorships will be reported at year end.
Goals	Promote mental health and the healthy development of children and families in both the broader community and at-risk communities; prevent child abuse and domestic violence.
Anticipated Outcomes	Examples: • Increase re-entry social support services that empower formerly incarcerated residents to attain economic self-sufficiency, continued recovery, and creation of a stable living environment by building skills, accessing resources, and modeling

professional behavior.

- Increase substance use disorder treatment services that are gender-responsive and welcoming to people of any gender identity.
- Increase support to families in need of resources, such as employment training, parent education classes, housing, child care, and shelters.
- Increase intensive assessment, counseling, and referral services to help families and individuals avert homelessness.
- Increase mental health services to homeless and at-risk youth.
- Increase linguistically and culturally appropriate support groups and counseling.
- Increase early childhood education for at-risk families.
- Increase integrated treatment services for clients with co-occurring substance use disorder and mental health problems.
- Increase integration of behavioral health services into existing primary care settings for at-risk San Francisco residents.

2016–2018 Impact

Here are some selected achievements of the organizations funded by CPMC grants and event sponsorships:

- APA Family Support Services provides family support services to relieve parental stress and prevent child abuse and domestic violence. In 2018, they served over 950 parents and caregivers with parenting classes, support groups, case management, linguistically appropriate counseling services, and home visitation services to families in need of resources such as employment training, housing, childcare, shelter, and meal services.
- Compass Family Services provides a comprehensive range of safety-net support services to families experiencing homelessness or are at imminent risk for homelessness, helping them achieve housing stability, economic self-sufficiency, and family well-being. Services include housing placement, transitional housing, family shelter, employment counseling and adult education for homelessness prevention, and intensive case management. Their Children's Center provides homeless and at-risk children with full-time infant and toddler care and pre-school, stimulating age-appropriate skills for kindergarten-readiness. Therapists provide mental health services. Each year of the period 2016–2018, 3,400-4,800 people were served with support services, and 180-250 received mental health services. In 2017, 70 percent of families exiting Compass transitional housing had secured a permanent housing solution, and 92 percent remained stably housed a year after leaving.
- Conard House provides supportive housing with on-site mental health and human services in San Francisco's Tenderloin and South of Market neighborhoods. Residents constitute an at-risk cohort of extremely low-income, aging-in-place, mentally ill, often drug-compromised individuals. Each year, on-staff Health Navigators, who have lived experience of these issues, help around 30 residents to overcome barriers to health-seeking behaviors by providing one-on-one medical appointment support, including personal coaching, escort, and self-advocacy support.

- Curry Senior Center promotes the wellness, dignity, and independence of low-income seniors living in the Tenderloin and South of Market districts by providing them with primary care, case management, behavioral health services, substance abuse counseling, housing, and daily meals. Over 2016–2018, Curry provided about 500 to 850 counseling visits annually, case-managed 370 to 500 people, and delivered medical care to 1,050 to 1,240 patients annually, with nearly six appointments per year per patient.
- Homeless Prenatal Program aims to break the cycle of childhood poverty by providing family services such as case management, prenatal and parenting support, housing assistance, domestic violence prevention and intervention, mental health services, child welfare support, job training, and emergency support of basic needs. In 2018, HPP served 3,450 families, 68 percent of which had children aged 0 to 5. Clients gave birth to 311 babies—90 percent delivered at normal birthweight and 100 percent were born "drug-free." Housing assistance was provided to 322 families, and case management to 50 families experiencing domestic violence.

Besides the organizations highlighted above, CPMC made cash and in-kind contributions to other community organizations that address the Behavioral Health community health need; these organizations together improved the lives of thousands of San Franciscans through their services. Organizations included:

Bethany Center Foundation of San Francisco
Catholic Charities
Center for Youth Wellness
Community Living Campaign
Daly City Youth Health Center
Elder Care Alliance
Episcopal Community Services
Friends of the Children—SF Bay Area
GLIDE Foundation
Gum Moon Women's Residence/ Asian Women's Resource Center
HealthRIGHT 360
Huckleberry Youth Programs
Institute on Aging
Instituto Familiar de la Raza
Jewish Family and Children's Services
Kimochi, Inc.
Maitri Compassionate Care
NAMI San Francisco
North East Medical Services
On Lok
Project Homeless Connect
Richmond Area Multi-Services
Safe & Sound
Samoan Community Development Center
San Francisco Community Clinic Consortium
San Francisco Community Health Center
San Francisco Free Clinic
San Francisco LGBT Community Center
San Francisco NAACP
San Francisco Suicide Prevention
San Francisco Village
Self-Help for the Elderly
South of Market Health Center
St. Anthony Foundation
Tenderloin Housing Clinic / La Voz Latina
Tenderloin Neighborhood Development Corporation
Wu Yee Children's Services

Name of Program, Activity, or Initiative: **Psychiatry Residency & Psychology Intern Training Program**	
Description	As a multi-campus teaching hospital, CPMC offers educational experience to physicians through its residency training programs, which include Psychiatry. Psychology interns and fellows also receive training while working in locations such as Kalmanovitz Child Development Center, Adult In-Patient, and Women's Health Initiative. CPMC usually trains 16 psychiatric residents, 10 psychology interns, and 2 psychology fellows annually.
Goals	The next generation of mental/behavioral healthcare professionals will receive world-class training/educational experience.
Anticipated Outcomes	Increase number of well-trained psychiatrists and psychologists and the availability of these services in the future.
2016–2018 Impact	Each year, CPMC trained 16 psychiatric residents, 10 psychology interns, and 2 psychology fellows.

FOUNDATIONAL ISSUES AND THE SOCIAL DETERMINANTS OF HEALTH

Name of Program, Activity, or Initiative: **Investments in Housing, Transportation, and Workforce Development**	
Description	Besides identifying the three priority health needs, the Community Health Needs Assessment also identifies two Foundational Issues: economic barriers to health, and racial health inequities. These broader factors point to the social determinants of health that are shaped by the distribution of money, power and resources, and that influence the context from which health needs emerge, affect health at every level, and must be addressed to improve health. These social, economic and physical environmental conditions are now recognized as important drivers of health. As part of its Development Agreement with the City and County of San Francisco that made possible the building of CPMC's new hospitals at Van Ness/Geary and at the St. Luke's Campus, CPMC annually contributes funds to the San Francisco Foundation and various local government agencies in support of affordable housing, increased access to healthcare, workforce training, and transit and pedestrian safety improvements. These upstream investments help to address the root causes of health disparities and ensure healthy and safe living environments with good housing and jobs.
Goals	Create social, economic, and physical environments that shape the conditions of daily life in a way that promotes good health for all.

Anticipated Outcomes	Increase opportunities for San Franciscans to access the resources that lead to good health by investing in affordable housing, transit, safe neighborhoods and the built environment, healthcare innovation, and job training.
2016–2018 Impact	In compliance with its Development Agreement with the City and County of San Francisco, CPMC made contributions for the following mandated categories:

	2016	2017
Affordable Housing	$8,100,000	$3,475,000
Transit	$2,500,000	$2,500,000
Tenderloin sidewalk widening and pedestrian lighting improvements	$100,000	--
Transit and safety improvements in neighborhoods around the Van Ness/Geary Campus	$575,000	--
Environment and traffic safety measures around Pacific and California Campuses	$1,000,000	--
Healthcare Innovation Fund	$1,725,000	$1,125,000
Totals	$14,000,000	$7,100,000

APPENDIX B
SUMMARY OF DATA FINDINGS BY SECTION

DEMOGRAPHICS

- San Francisco's population is expected to grow to 983,000 by 2030 and to 1.2 million by 2060.
- San Francisco is expected to see a 38 percent increase in the number of residents 65 years and older by 2030—more than any age group.
- Fifty-eight percent of San Francisco's population is non-White and the ethnic diversity score is increasing.
- Twenty-four percent of San Francisco residents 5 years and older have limited English proficiency; 57 percent of those persons speak Chinese.
- The percentage of persons living in family households and households with unrelated roommates is increasing, while the percent of people living alone is decreasing.

ASTHMA AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE

- Asthma continues to be a major public health concern with a continually increasing prevalence.
- COPD is the third leading cause of death in the nation. Additionally, it was estimated in 2010 that COPD-related expenses cost the nation approximately $49.9 billion annually.
- The prevalence of asthma among cigarette smoker adults (18 percent) in San Francisco is 63 percent higher than that for non-smokers (11 percent).
- Black/African American and Filipino middle (23.75 percent and 23.35 percent) and high school (24.9 percent and 25.9 percent) students were more likely than other ethnicities to have asthma.
- Asthma hospitalization rates among children age 0 to 4 are much higher than other age groups.
- Rates of asthma and COPD hospitalizations are highest for Black/African Americans and are almost 10 times higher than for Whites. The rates are also higher in the Tenderloin, SOMA, and Bayview Hunters Point neighborhoods.

BREASTFEEDING

- San Francisco does not meet the national Healthy People 2020 target of 46 percent of women exclusively breastfeeding at three months.
- Only 36 percent of women in San Francisco are exclusively breastfeeding at three months.
- San Francisco has significant breastfeeding disparities. Among women who intend to exclusively breastfeed, rates of exclusive breastfeeding drop more sharply between one month and three months for lower-income and non-White women than they do for higher-income and White women.

CANCER

- The most common cancers in San Francisco were breast (females), prostate, lung/bronchus, colon/rectum, and non-Hodgkin lymphoma.
- The leading types of cancer causing death were: lung/bronchus, colon/rectum, liver, pancreas and breast.
- Between 2010 and 2014, rates of invasive cancer per 100,000 population decreased from 438.24 to 390.17.
- In general, rates were higher among Whites and Black/African Americans as compared to other ethnicities.

- Among males, death rates due to lung/bronchus, prostate, liver, colon/rectum, and pancreas were 85 percent to 213 percent higher for Black/African Americans than all males citywide.
- Similarly, among females, rates of lung/bronchus, breast, colon/rectum, pancreas, and lymphoma/multiple myeloma were 46 to 132 percent higher for Black/African Americans.

CARDIOVASCULAR DISEASE AND STROKE

- Cardiovascular disease and stroke are largely preventable yet heart disease and stroke remain the first and third leading causes of death in the U.S.
- Black/African Americans are 30 percent more likely to die from heart disease and two times more likely to have a stroke.
- Native Americans are twice as likely to die of cardiovascular disease before the age of 65 compared to all Americans.
- The percent of high blood pressure among males increased to 32.71 percent from 10.21 percent in 2014, and Black/African Americans had the highest percentage at 33.50 percent in 2011–2016.
- The hospitalization rates due to hypertension or heart failure for Black/African Americans were three to five times higher than all other ethnicities.
- The impact of cardiovascular disease in San Francisco is higher among residents in the southeast half of San Francisco and among those who live in households earning less than 300 percent of the federal poverty level.

CHILDCARE AND EDUCATION

- There are 6.8 infants 0 to 2 years old for every licensed childcare slot.
- The annual mean cost of infant childcare in a licensed center is $21,384—18 percent of the median family income for households with minor children.
- The number of children receiving childcare subsidies has decreased.
- The percent of 3-4 year olds enrolled in preschool has been increasing, up to 70 percent in 2016.
- Educational outcomes are the poorest for Black/African American students across all measures reported here.
- The percentage of students that are "ready" for kindergarten and high school has been increasing.
- The percent of SFUSD students with regular attendance has decreased slightly.
- Overall rates for suspension and expulsion in San Francisco public schools have decreased since the 2012–2013 school year, but disparities exist by sex and ethnicity.
- 60 percent of Black/African American SFUSD third grade students do not meet state standards for English language arts/literacy.
- SFUSD cohort graduation rates have increased to 87 percent, but not all ethnic groups have experienced this rise.

CHILDREN'S ORAL HEALTH

- Tooth decay is the most common chronic disease among school-aged children in the U.S. One-third of students in San Francisco public schools have experienced tooth decay by the time they are in kindergarten.
- 18 percent of kindergarteners have untreated tooth decay, a leading cause of school absences.
- Dental services to prevent tooth decay reach fewer than 20 percent of Denti-Cal eligible children ages 1 to 2 years in San Francisco.
- Low-income, Asian, Black/African American, and Latino children are twice as likely to experience tooth decay by the time they are in kindergarten as higher-income and White children.

CIVIC PARTICIPATION

- Voter turnout is lower in more socioeconomically disadvantaged neighborhoods.
- The number of neighborhood block party permits has been increasing over time.
- Around 20 percent of San Francisco adults report meeting with others to deal with community problems, and 10 to 14 percent report volunteering with a community organization.

CLIMATE AND THE NATURAL ENVIRONMENT

- The annual number of days with "Good" air quality has increased since 2009 to a high of 310 in 2016; however, there is no clear indication that the trend toward improvement is permanent, and more frequent wild fires may jeopardize progress.
- The South of Market neighborhood is the most impacted by air pollution exposure.
- San Francisco lags behind peer cities in tree canopy coverage—some neighborhoods have less than 5 percent coverage.
- San Francisco has made significant progress towards greenhouse gas reduction goals, largely due to reducing residential and landfill organics emissions.
- The neighborhoods with the greatest extreme heat vulnerability include Chinatown, Tenderloin, South of Market, Japantown, and Mission.
- The neighborhoods that are most vulnerable to the negative health effects associated with flooding include South of Market, Bayview, Tenderloin, and North Beach.

CRIME AND SAFETY

- There was an increase in all crime types except for drug crime between 2013 and 2015.
- Asian, Black, and Latino residents have significantly lower perceptions of safety during the day and night compared to White residents.
- Despite citywide decreases, the rate of substantiated child maltreatment cases for Black/African American children remains 17 times higher than the rate for Asian/Pacific Islander children or White children.
- Rates of at-school and electronic bullying are the highest for middle and high school students that do not identify as heterosexual.
- Gay, lesbian, and bisexual identified middle and high school students experienced at least twice the rate of dating violence than their heterosexual peers.
- Black youth make up over 57 percent of the youth booked at Juvenile Hall, even though they make up only 6 percent of the youth population.
- Both male and female Black and Pacific Islander residents experience higher levels of ER admission for assault compared to other ethnic groups.

DIABETES

- Diabetes is the eighth leading cause of death in San Francisco. It is a major contributor to cardiovascular disease, which is the leading cause of death, and is the leading cause of kidney failure and need for dialysis.
- Women who are diagnosed with gestational diabetes are 7.4 times more likely to develop diabetes within about 10 years after pregnancy than other women. In San Francisco, the prevalence of gestational diabetes increased significantly from 5.4 (5.2-5.7) to 7.1 (6.9-7.4) percent of live births between 2007–2011 and 2012–2016.
- Over the past 30 years the prevalence of diabetes among Black/African Americans quadrupled. Black/African Americans are 70 percent more likely to develop diabetes than Whites. In

San Francisco, rates of hospitalization are three to six times higher and rates of death are two to three times higher among Black/African Americans compared to all other races/ethnicities.
- People living in households earning less than 200 percent of the federal poverty level are three times more likely to have diabetes than those who earn more in San Francisco.
- Residents in the eastern zip codes (94102, 94110, 94115, 94124, and 94130) are more likely to be hospitalized due to diabetes than those living elsewhere in San Francisco. The hospitalization charge due to diabetes as a primary cause in 2016 was $85,000,000 and the number was 15.8 times higher for diabetes as an underlying cause.
- In 2016, diabetes resulted in more than $87 million in hospitalization charges in San Francisco. Diabetic patients may require a higher level of care resulting in increased hospitalization costs; hospitalization costs for diabetes patient hospitalizations in the 2011 California study were estimated to be $2,200 higher than costs for non-diabetic hospitalizations.

ECONOMIC ENVIRONMENT

- The self-sufficiency income in 2014 for two adults, one infant, and one school-aged child in San Francisco was $83,522.
- Seventy-two percent of 25- to 35-year-old residents in San Francisco have a bachelor's degree or higher.
- Black/African American residents have both the lowest labor force participation (55 percent) than other ethnic groups (Whites are at 76 percent, Latinos are at 72 percent).
- Forty-six percent of residents 75 years and older live below 200 percent of the federal poverty level.
- The median household income in Areas of Vulnerability (AOV) is half ($50,000) that of areas that are not AOVs ($111,000).
- San Francisco has the second highest income inequality in the Bay Area.

ENTERIC DISEASES

- Salmonellosis incidence rates in San Francisco are consistently above the Healthy People 2020 target of 11.4 cases per 100,000 residents.
- The rate of salmonellosis is highest among Asians and Pacific Islanders.
- Rates are highest among children under five years of age.
- Rates of shigellosis in San Francisco are consistently one of the highest in the state, with an incidence rate of 21.4 cases per 100,000 residents in 2016.
- Generally, Shigellosis rates among men are significantly higher than women in San Francisco. This is primarily attributed to sexual transmission among men who have sex with men.

HEALTHCARE ACCESS AND QUALITY

- The percent of San Franciscans that lack health insurance has fallen dramatically since 2010, to a low of 3 percent in 2016.
- Females age 18 to 24, persons earning less than $50,000 per year, Black/African American and Latino residents and persons living in Areas of Vulnerability are more likely to not have health insurance.
- During certain survey periods, young adults report higher rates of delaying medical care or not having a usual source of care than seniors age 65 and over.
- Outlying neighborhoods, including Lakeshore, Visitacion Valley, and Treasure Island have significantly lower transit access to healthcare facilities.
- Asian, Black/African American, and Latino physicians are under-represented relative to the San Francisco population.

- There is a shortage of physicians that speak Chinese and Tagalog based on the linguistic composition of the San Francisco population.
- Preventable emergency room rates are higher for females than males, and higher for Black/African American and Pacific Islander residents compared to other ethnicities.
- 94130, 94102, 94103, and 94124 have the highest preventable emergency room rates.

HEPATITIS B AND C

- San Francisco has the highest rate of liver cancer in the country, which is mostly caused by viral hepatitis.
- Asian Pacific Islanders in San Francisco are disproportionately affected by hepatitis B (HBV), comprising one-third of San Francisco's population but representing nearly 90 percent of reported cases.
- Black/African Americans in San Francisco are disproportionately affected by hepatitis C (HCV), comprising almost 8 percent of San Francisco's population but representing over 30 percent of reported cases.
- Viral hepatitis is a health equity issue; End Hep C SF and SF Hep B Free have emerged as innovative campaigns to increase awareness of HCV and HBV, and ultimately eliminate HCV and HBV as public health threats in San Francisco.

IMMUNIZATIONS AND VACCINE-PREVENTABLE DISEASES

- Vaccine-preventable diseases can be very serious—even deadly—especially for infants and young children.
- Influenza and pneumonia affect millions of people in the U.S. every year and together were the ninth leading cause of death in the U.S. in 2010, and the seventh among those age 65 and over.
- In 2016–2017, 94.2 percent of children entering daycare and 94.2 percent of children entering kindergarten had all required immunizations.
- Data suggest that Asian and Asian Pacific Islander and Latino children were more likely to be vaccinated than Black/African American and White children. Foreign-born children were less likely to be completely vaccinated than those born in the U.S.
- The annual incidence rate of pertussis in San Francisco typically varies between two and seven cases per 100,000 residents. In 2014, San Francisco again saw high case numbers in the setting of a statewide epidemic. Measles is very rare in San Francisco and is not endemic. The city reports fewer than five cases a year.
- Influenza and pneumonia disproportionately affect Black/African Americans and people living in the eastern half, and especially the southeastern quadrant, of the city.

HOUSING

- San Francisco falls behind the most in construction of moderate-income housing (80-120 percent AMI)—which has made up only 4 percent of all housing built between 2015 and 2017.
- Between 1990 and 2014–2015 there was a significant decrease in the percentage of low-income San Francisco workers (<80 percent AMI) that lived in San Francisco—suggesting that these workers must contend with higher transportation costs.
- The South of Market Planning District alone accounted for over half of all housing units built between 2015 and 2017.
- Asian residents are the most likely to own their homes, while Black/African American and Latino residents are the least likely.
- In Chinatown, only 71 percent of households live in uncrowded conditions.
- There was a significant decline in eviction notices in 2017.

- Supervisor Districts 6 and 10 are home to 65 percent of San Francisco's unsheltered homeless population.

MENTAL HEALTH

- In San Francisco, 22.5 percent of adults surveyed reported needing help for mental health or substance use issues in 2016. The local prevalence is higher than the statewide prevalence of 16.4 percent.
- One quarter of pregnant women with Medi-Cal insurance in San Francisco reported prenatal depressive symptom in 2013–2015.
- 26.1 percent of San Francisco high school students reported prolonged sad or hopeless feelings in the past year in 2017.
- Over 10 percent of high school and middle school students in San Francisco considered attempting suicide in 2017.
- In 2012–2016, the rate of emergency room (ER) visits due to major depression increased from 16.768 to 20.427 per 10,000 residents.
- The ER rate due to self-injury decreased significantly by more than 50 percent, but suicide rates increased by 87 percent to 11.8 per 100,000 population in 2013–2016.
- Mental health issues were more common among females than males, people ages 18 to 24 and 45 to 54 years old than other age groups, Whites, Filipinos, Latinos and Black/African Americans than other race-ethnic groups, people living with incomes below 200 percent of the federal poverty level than people with higher income, and people identifying as bisexual, gay or lesbian. Rates of mental health issues were highest in the Tenderloin and South of Market neighborhoods.

MORTALITY

- The leading causes of death are predominately chronic diseases including heart diseases, cancers, Alzheimer's, chronic obstructive pulmonary disease, and diabetes.
- Mortality rates of both Alzheimer's disease and diabetes are increasing in San Francisco.
- Drug and alcohol use and suicide are also leading causes of death in San Francisco. Drug and alcohol use are especially important among adults 18 to 64 while suicide is one of the leading five causes of death for residents aged 13 to 34.
- Additional important causes of premature death in San Francisco include assault, traffic accidents, injuries and HIV. While each of these kill relatively few residents, those afflicted are typically younger.
- Overall life expectancy is high in San Francisco with the typical resident living to 83 years. Similar to trends seen nationwide, life expectancy in San Francisco has decreased since 2014.
- Life expectancy varies by race/ethnicity and gender. Black/African Americans and Pacific Islanders have the lowest life expectancy.

MATERNAL AND INFANT MORTALITY

- San Francisco does not meet the national Healthy People objective for maternal mortality of no more than 3.3 deaths per 100,000 live births. The estimated local rate is 11.2 deaths per 100,000 live births.
- Each year in San Francisco, about one woman dies from complications of pregnancy or childbirth. The top three local causes of maternal death are embolism, infection, and chronic disease.

- In the past five years, 122 infants died within 12 months of birth. The top three local causes of infant death are low birth weight related to preterm birth, sudden unexpected infant death (SUID), and birth asphyxia or trauma.
- Over the past 10 years, Black/African American mothers had about 4 out of 100 births, but experienced 5 out of 10 maternal deaths, and 15 out of 100 infant deaths. Significant maternal and infant death disparities persist.

NUTRITION

- Available data suggest that the diets of many San Franciscans do not meet minimum recommendations for vitamins and water and exceed maximum recommendations for salt, fat, and added sugar. Two-thirds of children and teens in San Francisco report less than five servings of vegetables and fruit daily.
- Not meeting dietary recommendations is associated with low income, Hispanic and Black/African American race/ethnicity, and neighborhood—southeastern San Francisco and Treasure Island in particular.
- Food insecurity is prevalent among students in public school, low-income pregnant women, housing-insecure adults, and older adults with disabilities.
- 53 percent of students in San Francisco Unified School District qualify for free or reduced-price meals; 72 percent of pregnant women participating in the WIC-EatSF program report food insecurity; 84 percent of people living in single-residency-occupancy hotels (SROs) report food insecurity; an estimated 20,000 older adults with disabilities are estimated to be food insecure.
- Despite increases in the number of food outlets in San Francisco, the number of vendors that accept SNAP decreased by 7 percent, widening disparities in access to food.

OVERWEIGHT OR OBESITY

- Over 30 percent of fifth-grade SFUSD students and over 40 percent of adults in San Francisco are overweight or obese.
- Overweight or obesity disproportionately affects individuals with low income and individuals of color.
- For individuals with low income, increased risk of becoming overweight or obese is associated with specific zip codes and community-level factors, such as type of housing, childcare center, and hospital.

PHYSICAL ACTIVITY

- San Francisco scores well on the Trust for Public Land's "Park Score"—however, it falls short with regards to supply of amenities, including playgrounds, recreation centers, and restrooms.
- Treasure Island, Potrero Hill, and Financial District/South Beach have the lowest access to public recreation facilities.
- There has been a steady increase in the percentage of target childcare centers with no television visible.
- 50 percent of San Francisco adults report walking for at least 150 minutes each week for leisure or transportation.
- Female, Chinese, Latino, and bisexual students are less likely to be active for 60+ minutes each day of the week.
- Lower percentages of Black, Latino, and economically disadvantaged students meet five or more standards from the California Physical Fitness Test.

PRETERM BIRTH

- Annually, over 700 infants are born in San Francisco before 37 weeks of gestation.
- In 2012–2016, 414 infants were born before 32 weeks gestation.
- Preterm birth disparities persist for Black/African American women and vulnerable population groups.

QUALITY OF LIFE AND FUNCTIONING

- Self-assessed health status is a more powerful predictor of morbidity and mortality than many objective measures of health.
- Higher levels of well-being are associated with decreased risk of disease, illness, and injury, better immune functioning, speedier recovery, and increased longevity.
- In 2016, 15 percent of residents reported having fair or poor health and 10.8 percent reported having a disability in 2012–2016.
- Latino and Asian residents were more likely to report poor or fair health than were Whites; Black/African American residents were more likely to have a disability.
- Those living in households earning less than 200 percent of the federal poverty level are 3.5 times more likely to report fair or poor health and disability than those with higher household incomes in 2013–2016.

SEXUAL HEALTH

- The estimated rate of new HIV infection in San Francisco has decreased from 56 per 100,000 in 2012 to 40 per 100,000 in 2014.
- Between 2013 and 2016, incidence rates for chlamydia, gonorrhea, and early syphilis increased by 60 percent, 107 percent, and 13 percent, respectively.
- Incidence rates for HIV and each STD are higher among men; men contract chlamydia and gonorrhea up to nine times more often than woman.
- In 2016, rates of chlamydia, gonorrhea, and early syphilis were 4.7, 7.3, and 5.2 times higher among Black/African Americans, respectively, than among Asians and Pacific Islanders, who experience the lowest rates of STDs in San Francisco.
- Among sexually active San Francisco youth, only 71 percent of middle school and 58 percent of high school students used a condom in 2017.
- From 2015 to 2017, alcohol or drug use before sex decreased among high school students but increased among middle school students.

SUBSTANCE ABUSE

- In 2015, 36 percent of adults in San Francisco self-reported binge drinking on at least one occasion. In 2017, 5.7 percent of high school students reported binge drinking and 0.97 percent of middle school students reported binge drinking.
- Hospital admission rates due to alcohol abuse among adults citywide decreased between 2014 and 2016 from 10.53 to 1.12 per 10,000, but Latinos and Black/African Americans still had the highest rates.
- The density of off-sale alcohol permits is highest in the Tenderloin, where there are 104.4 licenses per square mile, compared to 16.26 licenses per square mile for the city as a whole.
- In 2017, 25.65 percent, 10.98 percent, and 10.15 percent of high school students in San Francisco reported they had used marijuana, unauthorized pain medications, and other drugs (including methamphetamines, inhalants, ecstasy, and cocaine).

- More than 40 percent of White, Black/African American, and Latino high school students as well as more than 10 percent of Black/African American and Latino middle school students reported they had used marijuana.
- The age-adjusted rate of mortality due to drug use disorders decreased from 18.97 per 100,000 in 2015 to 10.58 per 100,000 in 2017. The rate among Black/African Americans over that period was over five times as high as that among other races/ethnicities.
- Neighborhoods like the Tenderloin and South of Market with large Black/African American populations also have much higher mortality rates due to drug use disorder.

TOBACCO USE

- Tobacco, the number one preventable cause of the death, claims nearly half a million lives a year in the U.S. and estimates have shown that 18 percent of all U.S. deaths could have been avoided if not for tobacco products. Tobacco products are cancer-causing and contribute to nearly every type of cancer.
- Tobacco industry targeting commences early, as tobacco addiction starts early in the developmental period, with over 90 percent of adult tobacco users having started smoking prior to age 18.
- Tobacco products have been heavily marketed and targeted to some of the most vulnerable communities in San Francisco. This includes Black/African American, LGBT, lower-income, and homeless populations.
- In 2016, 0.98 percent of new mothers in San Francisco reported smoking before or during pregnancy. The percentage has been dropping in the last 10 years from 2.71 percent in 2007. However, it was still 6 to 15 times higher among Black/African American women (6.83 percent) than all other races and ethnicities.
- Districts in San Francisco with higher concentrations of smokers, ethnic minorities, and youths are associated with a higher density of tobacco retailers, despite the fact that all the districts have approximately the same number of residents.

TRANSPORTATION

- The number of enrollees in free Muni programs has been steadily climbing between 2016 and 2018, indicating the programs' ongoing popularity.
- Areas of San Francisco that are designated as Areas of Vulnerability have a slightly lower ratio of bike lanes/paths to street miles (0.18) compared to parts of the city that do not have this designation (0.20).
- Households that live within the borders of the MacLaren Park neighborhood have lower car access compared to the surrounding Visitacion Valley neighborhood, likely because much of the population that falls within its borders lives in the Sunnydale Public Housing site, where residents may not have the income necessary to have a car. Previous analysis of the Sunnydale site as part of the HOPE SF redevelopment has indicated that public transportation is often challenging for residents; thus, Sunnydale residents may struggle with greater transportation challenges than elsewhere in the city.
- Between 2007–2011 and 2012–2016, there was a significant decrease in the percentage of people driving alone (38 to 35 percent), while there were significant increases in the percentage of workers commuting by bike (3 to 4 percent) and those that use other modes (including Lyft/Uber, taxi, and motorcycle—2 to 3 percent).
- The neighborhoods that are most impacted by local traffic density include Tenderloin, Japantown, South of Market, Financial District, Hayes Valley, Chinatown, and Nob Hill, which all have over 70 percent of residents living in the most traffic dense parts of the city.

- The Tenderloin neighborhood is by far the most impacted by traffic injury, and the rate of severe and fatal traffic injuries is nearly six times as high as the city overall. Other highly impacted neighborhoods include all of the neighborhoods that border the Tenderloin, including South of Market, Nob Hill, Japantown, Western Addition, Mission, and Hayes Valley.

APPENDIX C
ASSESSMENT OF PRIOR ASSESSMENTS

Findings

The health needs of communities are connected across public health and public sector domains. Health needs are more urgent and chronic in groups and communities that experience poverty. These groups are also likely to experience discrimination, exploitation and trauma. Resilience and adaptability are present in these groups and communities.

The following health needs were assessed in multiple reports, across health topics:

- Linkage/navigation in and between services/agencies
- Substance use prevention and treatment
- Stable housing
- Culturally appropriate services
- Adequate and accurate information
- Engagement of isolated groups and individuals
- Resilience in the face of trauma, fear, stress, threats, discrimination and exploitation

In these assessments, the most-identified health issues and health determinants were:

- Alcohol and other drugs
- Stress
- Mental health
- Health promotion and prevention

A range of interventions are recommended across the strategic priority health needs, ranging from policy change to case management. Case management includes navigation/linkage within and between service areas. Access to Care should be defined broadly to include a range of services from prevention to specialized medical interventions. Multidisciplinary expertise and interagency approaches are required to address health needs, impact inequities, and end disparities in health and healthcare.

Barriers to good health include barriers to social services and healthcare, including disjointed systems, legal problems, threat of deportation, and social isolation. Substance abuse in youth, which has long-term effects on all aspects of health, is identified as a health problem in all three 2016 SFHIP priority health need areas.

Systems that provide healthcare and health services require ongoing reform, training and coordination between agencies. These services require more strategic and coordinated use of data and technology and an equity framework for service provision.

A scan of the aims and findings of the assessments revealed these themes:

- Inequities and disparities are well documented.
- Systemic barriers.
- Cost of health, systems problems.
- Health issues are interconnected, but services and data are not.
- Lack of coordination and alignment.
- Innovation and risk.

- Health is multigenerational and intergenerational.
- Capacity-building and training for providers is needed in all health priority areas.
- Health is impacted by and relevant to practices in all social sectors.
- Equity frameworks are essential to gaining insight into population health needs and the many levels of intervention needed to address them.

Assessments Summary

TABLE 1: Assessment Topics by 2016 SFHIP Strategic Priority Areas
A snapshot of health needs assessment topics categorized by SFHIP 2016 Strategic Priority Areas. Topics are listed in alphabetical order. Assessments may be categorized under more than one strategic priority area. Access to Care is defined broadly in this document, referring to health services ranging from (tertiary) prevention to specialized medical services. Two assessments addressed needs that did not fall under the three Strategic Priority Area categories.

Table 1: **Assessment Topics by 2016 SFHIP Strategic Priority Areas**		
2016 SFHIP Strategic Priority Area	**Assessment Topics**	**Number of Assessments**
Healthy Eating and Physical Activity	Access and availability of healthy foods Access to tobacco and tobacco messaging Aging population Cost of alcohol addiction DPH alcohol prevention Healthy retail	9
Access to Care	Aging population needs Asian & Pacific Islander youth needs Disabled population needs DPH alcohol prevention Early childcare and education HIV services Homelessness Housing Jail health services Post-acute care Prenatal care Safe injection sites Safety Senior service needs Subsidized childcare Supportive housing Targeted/customized services Youth incarceration	23
Behavioral Health	Access and availability of legal addictive substances Aging population Asian & Pacific Islander youth needs Childcare DPH alcohol prevention DPH substance abuse prevention plan Education Homelessness	22

	Housing Jail health services Law enforcement hiring practices Safe injection sites SROs Use of legal addictive substances Use of illicit addictive substances	
Not represented by a SFHIP Strategic Priority Area	Maternal, Child and Adolescent Health: housing security and healthy homes	1

TABLE 2: 2016 SFHIP Strategic Priority Areas, Assessment Topics, Number of Assessments and Populations Assessed

A snapshot of 2016 SFHIP Strategic Priority Areas with detailed assessment topics, number of assessments for each area, and demographic/population variables whose needs were assessed. Many but not all of San Francisco's communities/populations were included in these assessments. Some were the "target population" of the assessments; most were not. Geographic variables are the least often used in these assessments.

Table 2: 2016 SFHIP Strategic Priority Areas, Assessment Topics, Number of Assessments and Populations Assessed			
2016 SFHIP Strategic Priority Area	**Assessment Topics**	**Number of Assessments**	**Populations Assessed (Demographic Variables Analyzed)**
Healthy Eating and Physical Activity	Access and availability of healthy foods Access to tobacco and tobacco messaging Aging population Cost of alcohol addiction DPH alcohol prevention Healthy retail	9	Adults African American Asian Pacific Islander (API) Bayview residents Cantonese speakers Chicano/Latino Children English speakers Faith-based providers Families Fathers Females Formerly homeless children and families Homeless adults HOPE SF residents Males LGBTQ adults LGBTQ seniors Mothers Multi-ethnic, multi-racial Native American Pacific Islander Seniors Seniors with disabilities Tenderloin residents Veterans Youth (5 to 25)

Access to Care	Aging population needs Asian & Pacific Islander youth needs Disabled population needs DPH alcohol prevention Early childcare and education HIV services Homelessness Housing Jail health services Post-acute care Prenatal care Safe injection sites Safety Senior service needs Subsidized childcare Supportive housing Targeted/customized services Youth incarceration	23	Adults Adults with disabilities African American API high school students Asian Pacific Islander (API) Cantonese speakers Castro residents Chicano/Latino Children (0-5) English speakers Excelsior residents Faith-based providers Families Fathers Females Homeless adults Homeless families Homeless youth Incarcerated youth Injection drug users Low-income pregnant women Males Medi-Cal patients Mission residents Mothers Multi-ethnic, multi-racial Native American Pacific Islander People with HIV Potrero Hill residents Residents of supervisor districts 6, 8, 10 LGBTQ adults LGBTQ seniors Middle Eastern Seniors SRO residents Substance users Treasure Island residents Veterans Youth (5 to 25)
Behavioral Health	Access and availability of legal addictive substances Aging population Asian & Pacific Islander youth needs Childcare DPH alcohol prevention DPH substance abuse prevention plan Education Homelessness Housing Jail health services Law enforcement hiring practices	22	Adults African American API high school students Asian Pacific Islander (API) Cantonese speakers Chicano/Latino English speakers Faith-based providers Formerly homeless children and families Homeless adults Homeless youth Incarcerated adults

	Safe injection sites SROs Use of legal addictive substances Use of illicit addictive substances		Incarcerated youth Injection drug users LGBTQ adults LGBTQ seniors Middle Eastern Multi-ethnic, multi-racial Native American Pacific Islander Residents of supervisor districts 6, 8, 10 SRO residents Substance users Tagalog speakers Veterans Vietnamese speakers

TABLE 3: Assessed Populations

Number of assessments by San Francisco populations assessed. Categories can overlap and are counted each time they appear in an assessment. Populations are defined here as identity groups characterized by race/ethnicity, age, gender/sex, family status, language, sexuality, housing status, HIV status, substance use, incarceration status, disability, veteran status and income. As noted previously, assessed populations are populations/groups included in assessment analyses, not only assessment "target population(s)." This CHNA cycle there are groups/populations that are not analyzed in the assessments collected by the Working Group. These include refugees, newcomers, caregivers, and healthcare providers. With a few exceptions, assessments do not disaggregate "race/ethnic" categories such as African American, Chicano/Latino, Asian Pacific Islander and Native American, and therefore are missing significant and relevant population-specific information and insights. Assessments also do not routinely ask participants for geographic information or to identify the neighborhood where they reside. Groups assessed the most are African American, Chicano/Latino and Male. Because of xenophobic rhetoric and policies proposed and implemented at the federal level after 2016, it is important to note whether participation of Chicano/Latino and other immigrants and their families in services and assessments decreased (as we believe is the case) and how that skews our data and knowledge of community health needs.

Table 3. Assessed Populations

Persons Participating	Number of Assessments	Persons Participating	Number of Assessments	Persons Participating	Number of Assessments
Bayview Residents	3	Black/African American	19	LGBTQ people	14
Tenderloin Residents	5	Asian & Pacific Islander	18	Males	19
Western Addition Residents	1	Vietnemese	2	Females	18
Mission Residents	3	Filipino	1	Families	16
Treasure Island Residents	2	Chinese	1	People with HIV	7
Potrero Hill Residents	1	Middle Eastern	2	Substance Users	12
Castro Residents	1	Latinx	19	Incarcerated Peopl	3
Excelsior Residents	1	Native American	4	Faith Based Providers	1
SOMA Residents	2	Pacific Islander	5	Cantonese Speakers	3
Public Housing Residents	4	White	9	Spanish Speakers	5
SFHOPE Residents	3	Multi-Ethnic	2	English Speakers	3
SRO Residents	6	Young Children (0-5)	12	Tagalog Speakers	1
Private Renters	1	Youth (5 -25)	17	Vietnemese Speakers	3
Homeless People	13	Adults	21	Veterans	3
Formerly Homeless Families and Children	1	Seniors	14	People with Disabilities	3
Accessing Public Benefits	1	Pregnant Women	2	Low Income People	6

TABLE 4: Categorization of Health Needs Assessments by Current (2016) SFHIP Strategic Priority Health Needs and Modified BARHII Continuum of Root Causes, Consequences and Interventions

Assessments use a range of approaches to identify, analyze and address health needs. To better understand these approaches, each health needs assessment was categorized by SFHIP 2016 Strategic Priority Area. Then, elements of the Modified BARHII Framework (Root Causes, Consequences of Health Problems, and Types of Interventions) were identified in each assessment in the Strategic Priority Areas. These are inclusive—assessments can be counted multiple times. Access to Care has the broadest range of Root Causes, Consequences, and Interventions.

Table 4. Categorization of Health Needs Assessments by Current SFHIP Strategic Priority Health Needs and Modified BARHII Continuum of Root Causes, Consequences and Interventions

2016 SFHIP Strategic Priority Areas	Modified BARHII Root Causes	Modified BARHII Consequences	Modified BARHII Interventions
Healthy Eating and Physical Activity	Belief Systems -Cultural values -Discrimination/stigma Living Conditions -Land use -Safety -Social cohesion -Transportation Health Behaviors -Oral health -Nutrition Psychosocial Factors -Resilience	Health and Well Being -chronic disease -injury -mental health	Strategic Partnerships Advocacy Health Promotion and Prevention
Access to Care	Belief Systems -Cultural/societal values -Discrimination/stigma Institutional Policies & Practices -Public policies -Organizational practices Living Conditions -Education -Educational attainment -Employment -Healthcare -Housing -Income -Land use -Safety -Social cohesion -Social services -Transportation Health Behaviors -Nutrition -Physical activity -Alcohol and other drugs -Preventive care -Sleep Psychosocial Factors -Stress -Lack of control Health and Wellbeing -Communicable disease -Mental health	Health and Well Being -chronic disease -mental health Health Behaviors -tobacco use -alcohol & other drugs Death	Strategic Partnerships Advocacy Community Capacity Building Community Organizing/Civic Engagement Health Promotion & Prevention Case Management Medical Care
Behavioral Health	Belief Systems -Cultural/societal values -Discrimination/stigma Institutional Policies & Practices -Public policies -Organizational practices Living Conditions -Safety -Social cohesion Psychosocial Factors -Lack of control -Stress -Resilience Health Behaviors	Health and Wellbeing -Injury -Mental health Death	Strategic Partnerships Advocacy Health Promotion & Prevention Medical Care
Not represented by a SFHIP Strategic Priority Area	Institutional Policies & Practices -Public policies -Organizational practices Living Conditions -Employment -Educational attainment -Housing -Income -Safety -Social services -Transportation		Case Management Strategic Partnerships Advocacy

TABLE 5: Distribution of Modified BARHII Intervention Recommendations by Current (2016) SFHIP Strategic Priority Health Needs

*Recommended strategies to address health needs. Strategies characterized as **health promotion and prevention** are the most often recommended in all three areas of health need. Strategies characterized as case management are most often recommended to address Access to Care. All types of Modified BARHII Framework interventions have roles to play in addressing health needs in the three SFHIP strategic health need priority areas.*

Table 5. Distribution of Modified BARHII Intervention Recommendations by Current SFHIP Strategic Priority Health Needs			
Modified BARHII Interventions	**Healthy Eating and Active Living**	**Access to Care**	**Behavioral Health**
Strategic Partnerships	2	2	2
Advocacy	2	3	3
Community Capacity Building	3	3	4
Community Organizing/Civic Engagement	4	2	3
Health Promotion and Prevention	7	7	7
Case Management	2	6	3
Medical Care	2	5	5

Observations regarding distribution of Types of Consequences in the assessments:

1) **Distribution of Living Conditions Addressed by Assessments**
   Social services is the most referenced element of living conditions, followed by safety and healthcare. Natural environment and occupational safety were not referenced.

2) **Distribution of Health Behaviors Addressed by Assessments**
   Alcohol and other drugs is the most referenced health behavior, followed by nutrition and sexual health.

3) **Distribution of Psychosocial Factors Addressed by Assessments**
   Stress is the most referenced psychosocial factor, followed by resilience and lack of control.

4) **Distribution of Health and Well-being Issues Addressed by Assessments**
   Mental health is the most referenced element of health and well-being, followed by chronic disease and communicable disease.

Methods and Limitations

San Francisco's community-based organizations, healthcare service providers, public agencies and task forces conduct health needs assessments and publish reports of their activities for planning and evaluation purposes and to be accountable to those they serve. Our aim in conducting an assessment of these assessments and reports is to augment what we know for our citywide CHNA from routinely collected secondary health data and primary data collection through CHNA community engagement activities. We hope thereby to gain a better understanding of which communities/populations in San Francisco have been engaged in health needs assessment activities; what topics are of concern and interest to these communities/populations; and learn about promising and effective approaches to

eliciting and addressing these concerns. We included both needs assessments and service reports in our definition of "assessments" for this assessment.

Beginning in January 2017, SFHIP's CHNA administrative leads from the San Francisco Department of Public Health and UCSF and a small Assessment of Prior Assessments Working Group consisting of members of San Francisco's three health equity/parity coalitions, UCSF health professions students, and UCSF clinical and translational research staff began conducting online searches for published assessment reports for SFHIP's 2019 CHNA. The Working Group simultaneously reached out by email and phone to request health needs assessments reports that were not available online. By June 2018, the Working Group had collected 48 assessments, 33 of which met our inclusion criteria.

Working Group members were interested in finding assessments that pertain not only directly to health but also to the social determinants of health, especially those experienced by communities/populations bearing the burden of health inequities. As with the CHNA overall, this assessment used the **San Francisco Framework for Assessing Population Health Equity** to determine the breadth of circumstances affecting health. The Working Group added incarceration, experience with law enforcement, and community development/investment explicitly to the framework for the purposes of this assessment.

To be included, assessments were required to meet the following criteria:

- Assessments involve primary data collection.
- Primary data are available for San Francisco alone.
- Primary data are collected in July 2013 or later.
- Data are published between July 1, 2015, and June 30, 2018.
- Data collection methods are identified.
- Assessed population(s) are clearly defined.
- The assessment topic explicitly includes the social determinants of health or relates to other health outcomes.

During the collection of assessments, the assessment team encountered challenges obtaining several assessments. In some instances community health program leaders were not sure about sharing assessments they deemed too small, too "unscientific," and/or not "analytic" enough. Others were wary of handing over their findings to a group of city leaders with whom they had not previously had direct contact. For these reasons, several community providers decided not to share their assessments with SFHIP or contribute them to the CHNA process. The Working Group has submitted recommendations to SFHIP leadership to address these challenges.

Some assessments of important health needs are not included in the information considered for this assessment because, while they analyze data for San Francisco alone and they draw explicit analytic connections to social determinants of health and health outcomes, they do not collect primary data and instead exclusively produced analyses of existing datasets. The Working Group passed these on and, where appropriate, data from these reports were incorporated into the CHNA data pages and infographics and are referenced throughout.

Among the reports included in this assessment, the primary data collection activities included focus groups, key informant interviews, online and in-person surveys (including a point-in-time count), community forum feedback, and thematic analysis of meeting notes. Several assessments used a racial/ethnic and/or income equity framework to analyze the data they collected.

The Working Group read the assessment reports and extracted information using an online survey that allowed reviewers to confirm each criterion was met and answer questions pertaining to the target populations, primary data collection methods, and social determinants of health or health outcomes addressed in the assessment. The survey asks readers to extract information on the upstream determinants of health ("Root Causes"), downstream outcomes ("Consequences") and intervention strategies ("Interventions").

There are significant limitations to using an assessment of prior assessments in the determination of community health needs. The Working Group was attentive to the need for a wide range of assessment topics and interested in assuring that topics relevant to the experiences of historically oppressed and marginalized communities were represented—some topics may be overrepresented and some missing. Lacking standardized definitions, parameters and methodologies regarding health, populations, and interventions or programs, these assessments cannot be used to generalize or draw definitive conclusions about health needs or the health status of communities. This assessment is meant to provide SFHIP leadership with information to augment other data sources in order to glean more in-depth and detailed insights into the urgency and distribution of San Francisco's health needs, health disparities, and promising practices to address them. These analyses engage a broad spectrum of San Francisco's population, but not evenly and not every community. Some groups are not assessed at all, some only as a small segment of the population engaged in one small assessment. But thanks to that one segment, we might know something new about the health needs of that group. When taken into account along with more rigorously and regularly analyzed data, these assessments present themes and patterns to guide the interpretation of all the data available as a whole in the determination and prioritization of health needs and, ultimately, planning for implementation of interventions to address those priorities.

When interpreting this assessment of prior assessments, care was taken to keep in mind that "target populations" are not the same as "assessed populations." Assessment readers may have interpreted SFHIP Strategic Priority Areas and Modified BARHII Root Causes, Consequences and Interventions differently. Assessment topics as they are identified and listed in this report may be incomplete or may obfuscate sub-topics. We do the best we can to represent the topics, health needs assessed, interventions interrogated and their places in a framework that expands the meaning of health and how disparities and inequities happen and can be undone.

Readers interested in assessment topics are encouraged to access the assessments and read about the issue more deeply. All publicly available assessments are referenced in this summary (see List of Assessments). Requests for an assessment that is not publicly available should be directed to the program that conducted it.

The implementation of xenophobic policies at the federal level from 2016 to the present (2019) have caused local immigrant populations to avoid participating in programs, services and assessments. They are likely to be under-counted and their health needs unassessed.

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APPENDIX D
COMMUNITY ENGAGEMENT

The goals of the community engagement component of the CHNA are to:

- Identify San Franciscans' health priorities, especially those of vulnerable populations.
- Obtain data on populations and issues for which we have little quantitative data.
- Build relationships between the community and SFHIP.
- Meet the regulatory requirements including the IRS rules for Charitable 501(c)(3) Charitable Hospitals, Public Health Accreditation Board requirements for the San Francisco Health Department, and the San Francisco Planning Code requirements for a Health Care Services Master Plan.

The 2019 CHNA includes four categories of focus groups: SFHIP key informant group interview, Equity Coalition focus groups, food insecure pregnant women focus groups, and Kaiser focus groups.

SFHIP Key Informant Group Interview. On September 20, 2018, one focus group comprised of SFHIP members who are all subject matter experts was held. The groups represented by SFHIP are:

- San Francisco Department of Public Health
- Metta Fund
- Kaiser Permanente
- African American Community Health Equity Council, Rafiki Coalition
- San Francisco Community Clinic Consortium
- Chicano/Latino/Indigena Health Equity Coalition, Instituto Familiar de la Raza
- St. Mary's Medical Center
- Asian and Pacific Islander Health Parity Coalition, APA Family Support Services
- California Pacific Medical Center
- Chinese Hospital
- San Francisco Interfaith Council
- Saint Francis Memorial Hospital
- University of California San Francisco

Two series of questions were asked: "What are the healthiest characteristics of this community? What supports people to live healthier lives?"; and, "What are the biggest health issues and/or conditions your community struggles with? What do you think creates those issues?"

The SFHIP Steering Committee members' responses to and discussion of the two key questions were entered into the Google word cloud generator. The following words were articulated most frequently and, by extension, the themes that emerged for each area are:

- Healthy Characteristics: CBOs, culture, access/care, and space/parks.
- Health Issues: mental health, housing, access, trauma/violence, and culture/language.

Equity Coalition focus groups. Focus groups were conducted with each of the three health equity coalitions in San Francisco: Chicano/Latino/Indigena Health Equity Coalition, Asian and Pacific Islander Health Parity Coalition, and African American Community Health Equity Council. The Asian and Pacific Islander Health Parity Coalition focus group was comprised of care providers and executive directors of community-based organizations that provided services to their community. The African American

Community Health Equity Council hosted approximately 40 diverse and mostly Black/African American community members to attend their focus group. The Chicano/Latino/Indigena Health Equity Coalition invited Indigena promotoras, many of whom spoke Mayan as their first language, to participate in their focus group.

Using the Technology of Participation (ToP) Consensus Method, the question posed to each focus group was, "What actions can we take to improve health?" While each focus group came up with their own particular themes, the broad cross-cutting themes from all three equity coalition focus groups covered education, safety, care, community, environment, and funding.

Cross-Cutting Themes from Equity Coalition Focus Groups

Cross-cutting Themes (Note: Themes in this column were titled by Priscilla Chu)	**Asian Pacific Islander Health Parity Coalition Focus Group Themes**	**African American Health Equity Coalition Focus Group Themes**	**Chicano Latino Indigena Health Equity Coalition Focus Group Themes**
Education	• Education and collaboration that builds capacity	• Resources for education	• Inform us about the importance of health
Safety	• Ensuring safe and livable communities	• Safe community (community building)	• Keep the city clean and safe • Provide clean, safe, accessible and well-equipped places for all
Care	• Addressing quality gaps in patient experience • Culturally competent and responsive system of care	• Medical outreach • Effective face to face strategies	• Provide medical services regardless of citizenship that are sensible and accessible for all (free or low cost) • Secure food and nutrition programs for all
Community	• Education and collaboration that builds capacity	• Empowering healthy community • Community investment	• Support community groups
Environment	• Ensuring safe and livable communities	• Environmental justice and improvement	• Keep the city clean and safe • Provide accessible housing for people of low/medium income
Funding	• Policy and funding for health equity	• Resources for education • Community Investment	• Support community groups

African American Health Equity Coalition Focus Group

Empowering Healthy Community	Medical Outreach	Environmental Justice and Improvement	Effective Face to Face Strategies	Resources for Education	Safe Community (Community Building)	Community Investment	(Other input)
Keep our health programs on the legislators agenda Remain politically active Become activist to motivate community	Mobile clinic(s) in the heart of the community Free health screenings; free health fairs; vans to go to neighborhood New doctors to tour community – know!	No new homes on shipyard Environmental improvement Clean-up the toxic lands, air, and water More free solar! Clean up ship yard	Community please participate in programs Educate community resources available Door to door outreach	Higher wages for educators, teachers, and kids start early with tech resources education Reach out to more age groups Have safe place for kids to work in their own area!	Love and trust Community Safety Community policing Body cam for police turned on Allow us to govern ourselves Safety clean up street APP Citizen.com safety in your neighborhood Community togetherness (village) Trust and investment Community building Reclaim our roles – mother father grandfather Culture competency Small town San Francisco feel No doors locked	Activate the community employ locals with permanent jobs, not just pilot programs; don't just use the community member to break the ice. Create a structure where they can thrive and continue to thrive Cultural competency Fair hiring – Opportunity in SFDPH for AA/Blacks from the community No red lining Build pipline for community Entrepreneurship	Reparations for all the people sickened by pollution More police need to walk on 3rd Street

Asian Pacific Islander Health Parity Coalition Focus Group

Education and Collaboration that Builds Capacity	Respecting Data Equity for Diverse API Populations	Culturally Competent and Responsive System of Care	Addressing Quality Gaps in Patient Experience	Policy and Funding for Health Equity	Ensuring Safe and Livable Communities
Education Collaborate Engage these groups in efforts Develop policies for education and engagement of these groups Go where the community is Different value system self-advocacy Educate groups on health issues Gardening – more community gardens; workshop Community health workshops / education Cooking demo at Food Pantry Centralize calendar for community health events	Disaggregate data to learn needs of specific population Disaggregate the data Health priorities based on health needs, not volume (numbers or counts) Equitable data collection and reporting Terminology	More accessible services in languages and culturally appropriate Culturally responsive prevention programs Support caregivers who are LEP (Limited English Proficiency) Build a pipeline of bilingual bicultural healthcare workers Translator / language Representation in healthcare providers Culture as a health value	Continuum of care from hospital to home continuity of care Improving time management Walk-ins services Staffing at emergency / urgent care room Improved coordination of general / specific health / wellness services Support current health / wellness providers with appropriate referrals Centralize resources for access	Mental health assessment Funding specific health / wellness needs of different populations Develop policies for engagement Health in all policies! Equitable funding for CBOs (Community Based Organizations)	Eliminate Homelessness Transportation Cleaner and Safer Neighborhoods More Affordable Housing

Chicano/Latino/Indigena Health Equity Coalition Focus Group

Overarching theme: Do it and not just say it							
Inform Us About the Importance of Health	**Provide Clean, Safe, Accessible and Well Equipped Places for All**	**Provide Water Stations for The Entire City**	**Secure Food and Nutrition Programs for All**	**Provide Medical Service Regardless Citizenship that are Sensible and Accessible for All (Free or Low Cost)**	**Keep the City Clean and Safe**	**Support Community Groups**	**Provide Accessible Housing for People of Low/Medium Income**
Clear Health topics More education regarding healthy habits Take a self-care approach Take control on what you choose to eat at home Bring awareness to children, youth and adults about chronic illnesses Create health campaigns Provide more information about Support groups Be positive, have a better outlook on life Have more classes accessible in cost, time, and location	Have more safe places to be able to exercise More accessible places for the community to exercise Accessible places to exercise that are fully equipped Exercise x3 Exercise more Walking as exercise Walk to improve our health Oportunities to walk more Create more activities involving the community with firemen, policemen (walks/competitions)	Drink enough water Drink more water Drink natural water not sweetened drinks For unhealthy beverages to be more expensive	For fruits and vegetables to be more accessible in Price and variety Have food accessible for the community that does not increase in price Keep healthy eating habits and drink water Eat well Eat healthy Have discipline in the way we feed our family x2 Change eating habits at home Eat more vegetables and less fat x2 Don't eat food with too much sugar More food banks Being able to afford to buy what it is needed because it is not enough Give food stamps to all	Cheaper medical services More access to affordable doctors (medical insurance)) Go to the doctor x3 Visit doctor, keep appointments, have medication Evaluate my Health, the way I feel I case of an emergency go to the nearest hospital	Keep the City clean More security on the streets Safer parks so more families can come and exercise in them Public transportation that is on time and clean More trash cans	Taking leadership by facilitating groups in your city Teach our children the importance of eating well and exercise More groups where one lives because many people are sick Work with groups like Niños Unidos Free and accessible spaces for community groups More funds for groups	For the City to help so housing and food would not to be so expensive Fort rents not to increase so much, it doesn't leave enough to buy anything else Provide accessible housing for everybody including those with low to medium income Increase the income cap

Food Insecure Pregnant Women. Four focus groups were conducted with women who experienced food insecurity while pregnant. Each focus group focused on a different group of women: Spanish, Chinese, multi-ethnic English speakers, and African American. The question to respond to was, "What actions can we take to improve your food needs?"

Spanish Speaking Mothers

What Actions Can We Take -including you, community groups and HPP to improve your food needs						
Funding for community programs		**Education**	**Transportation Assistance**	**Health Fairs**	**Employment**	**Policies procedures**
More funds for organizations		Classes that teach how to grow food	Assistance in taking food to pregnant woman's home.	Community support	Job Opportunities	When applying for food assistance program participant would want them to consider the net income instead of gross income.
Increase the frequency of food bags distributions, at least 2 or 3 times week in each site.		Cooking classes that can teach us how to cook nutritious food that can help our children be successful in school	Home delivery of food	More organizations involved in Health fair events.	Programs that encourage and support professional development	Tax reduction on healthy food
Have more organizations that can support Food programs (food needs.)		Food Classes		Provide more information about programs that can support with food.		
		Classes to teach how to feed your family.				
		Finance Classes so we can learn to manage our income.				

Chinese Speaking Mothers

What Actions Can We Take -including you, community groups and HPP to improve your food needs

Provide More Locations:	Provide Different Kind of Food	Provide More Food Information:	Increase The Amount for Fruit and Vegetable Voucher	Change the Qualification
There should be more convenient locations to use vouchers, WIC and access food pantry	More different kind of food	More agency to provide vegetables and fruits	WIC should increase the amount for fruit voucher	Change the qualification for low income and median income families
Increase transits/accessibility, more easy to get there	WIC can also provide eggs	Let people know if there are more agency to get free food	The fruit voucher should be more	
There should be a specific place and time for pregnant moms to pick up food for food pantry/food banks	Add more food such as vegetables, fruits and eggs for WIC	Provide more places to get free food		
There should be a convenient place for pregnant moms to pick up WIC check	Provide liquid milk for babies	Share more resources on where to get food (Food Pantry, Community Gardens)		
Don't set a specific location to get food	WIC can provide meat	Increase frequency or schedule for when to pick up food		
Food or grocery delivery services	Food can be healthier, For example, Juice contains a lot of sugar we can use different drinks to replace. Milk can use soy milk to replace.	More information about what type of food is healthier to eat or need during pregnancy		
	Fresh fruits, vegetable and meat for food pantry			

African American Mothers

What Actions Can We Take -including you, community groups and HPP to improve your food needs		
Community Cooking and Education	**Resources**	**$$$**
Create a community kitchen; shared kitchen	Meat donations; discounted meats; vouchers for meat	Increase income for eligibility for Food Stamps
Cook-outs	More meat from local food banks	More financial services
Community events providing food	More food resources,	More money from WIC for fruits, veggies, and bread
Fresh Fruit Friday	Meat markets willing to donate	WIC to provide meat and more veggies
Hot meals	Focus group with Safeway; group meetings	
Teaching fathers how to grocery shop and prepare meals	Grocery gift cards	
Cooking classes	Healthier food instead of junk food	
	Free transportation to food	
	Emergency food vouchers	
	Food delivery	
	More mental, physical, and emotional support	

English-Speaking Mothers

What Actions Can We Take -including you, community groups and HPP to improve your food needs

Nutrition	Information Resources	Healthy Food	Take-out Food	Operations	More Service Hours
Health apps to download on phone	Updated resources	More food		More services	More services
Less expired food	Resource database	Healthier good		Represent at all meeting (be there)	More food banks
Kids cooking classes	A database that records every family's food preferences and allergies so you can get specific items when going to pantries	Food boxes for children that are kid-friendly		More hours for food that is good	Banks for food on weekends -- weekend hours
Address health needs (barriers)				Hot meals for families, like Glide and St. Anthony's, but just for families	Food pantries in all communities
				Information groups. Food resources or people with power have to ask for input.	

Kaiser. Kaiser conducted four focus groups, one each with Kaiser Permanente leadership, Kaiser Permanente staff, Spanish-speaking parents on youth healthy eating and active living, and homeless and/or HIV positive youth.

- Access to coordinated, culturally and linguistically appropriate care: Participants cited a need for more culturally appropriate care and a trauma-informed approach that recognizes the presence of trauma symptoms and acknowledges the role that trauma has played in people's lives. They also discussed the need for a more flexible and adaptable healthcare system that could provide equitable and inclusive services. Service providers also noted that low pay and a high-stress working environment has created a shortage of providers, including case workers, who can serve as a connection between the community and crucial services. Finally, community members discussed the location of services, affordability, and not feeling respected by providers as barriers to accessing care.
- HIV/AIDS/STDs: In general, participants reported that San Francisco has done a good job of responding to the HIV/AIDs epidemic over the last 30 years. Participants noted that equity issues still exist in the treatment and care of those living with HIV, including knowledge of prevention options in communities of color, and services for the homeless, including homeless youth.
- Homelessness: Participants reported that homelessness has a cascading effect on other health issues including access to care, HIV/AIDs, mental health, overall health, substance abuse, and healthy eating/active living. The instability and trauma of homelessness is a significant barrier to addressing other acute and chronic health needs.
- Mental health: Participants discussed mental health issues relating to trauma, especially amongst veterans, youth, and the homeless. They also pointed to isolation amongst the elderly as a mental health issue. Often, participants discussed mental health in connection with other health areas, including substance abuse and anxiety related to overall health issues.
- Obesity/healthy eating—Active Living/Diabetes: The affordability of food was the number one concern in this category cited both by providers and community members. While community members reported that they understand basic healthy eating, they struggle to find affordable fresh foods. This, in turn, has resulted in diabetes and childhood obesity for their family members. While some programs in the city exist to provide healthy food to low-income communities, providers acknowledged that there could be more.
- Overall health: Providers discussed the need for holistic care to improve overall health. They recognized the challenges of addressing a multitude of health issues to improve overall health, including homelessness, mental health issues, substance abuse, and lack of access to healthy foods.
- Substance abuse/tobacco: Participants identified substance abuse as an exacerbating factor to other health needs. Some discussed the importance of safe injection sites for supporting those with substance abuse issues and as a place for providing connections to other services.

As part of the focus groups, service providers and community members were also asked about community assets that contribute toward health. Participants recognized strong social networks, connections to friends and family, and resilience as contributing factors to health. They also named systems and providers, such as school districts, local champions, government funding, and community-based programs that have had a positive impact.

APPENDIX E
COMMUNITY ASSETS ASSESSMENT

Resources, Assets, Strengths
and
Challenges and Barriers

Table of Contents

INTRODUCTION

The following pages include two basic but significant questions for the 2019 San Francisco Community Health Needs Assessment (CHNA). The first question seeks to understand, from the community's perspective, what the resources, assets and strengths are that support the community's health, and secondly, to learn about the challenges and barriers each community is facing and the impacts on their health.

The report is divided into three parts. Part I includes responses from key informants. The San Francisco Department of Public Health convened a key informant stakeholder focus group representing:
- Tenderloin Health Improvement Partnership
- Chinese Hospital
- University of California San Francisco
- Asian Pacific Islander Health Parity Coalition
- San Francisco Community Clinic Consortium

- Metta Fund
- San Francisco Department of Public Health
- African American Community Health Equity Council
- Chicano/Latino/Indigena Health Equity Coalition
- Dignity Health
- Sutter Health California Pacific Medical Center

Part II includes the Asian Pacific Islander Health Parity Coalition, the African American Community Health Equity Council, and the Chicano/Latino/Indigena Health Equity Coalition. Part III includes responses from four different focus groups of pregnant women experiencing food insecurity, which were all convened by Homeless Prenatal Program. Those groups include: Spanish-speaking pregnant women, African American pregnant women, Chinese-speaking pregnant women, and multi-ethnic, English-speaking pregnant women.

Participants provided important feedback about issues affecting their health. Some of the assets and resources were the role of community, places of worship, family, access to food resources, education, and resilience and perseverance as positive impacts. Among the barriers to their community's health, responses highlighted cost of living, limited resources, safety concerns, behavioral and health conditions, feelings of shame and neglect, and racism/discrimination.

PART I. KEY INFORMANT FOCUS GROUP NOTES

SAN FRANCISCO HEALTH IMPROVEMENT PARTNERSHIP (SFHIP)
KEY INFORMANT FOCUS GROUP NOTES—SEPTEMBER 20, 2018

Tenderloin Health Improvement Partnership

What are the healthiest characteristics of this community? What supports people to live healthier lives?

- Access to care: More Tenderloin residents have insurance as a result of the Affordable Care Act. Healthy San Francisco enrollment dropped from 75 to 85 percent between 2010 and 2015, both in the Tenderloin and citywide, indicating more individuals moved to Medi-Cal or health insurance through the exchange. About 4 percent of Tenderloin residents were still enrolled in Healthy San Francisco as of December 2015. Integrated service provision, i.e., co-location of services like housing and health clinics (e.g., Tom Waddell Urban Health Clinic at TNDC's Kelly Cullen Community building).

- Access to Healthy Food: There is significant momentum to increase healthy food access for all residents of the Tenderloin. The Healthy Retail SF Program has worked to convert five corner stores into retailers that sell affordable food and minimize the visibility of alcohol and tobacco products. Fifty-seven percent of retailers accept CalFresh benefits, compared to 40 percent for San Francisco.

- Access to Open Space and Physical Activity: Since reopening since 2015, Boeddeker Park is a safe and active community hub. Represents one acre of land in the Tenderloin serving over 70,000 visitors and providing more than 3,400 hours of activities through a partnership between Boys &

Girls Club of San Francisco, YMCA, Safe Passage, and the San Francisco Police Department. Tenderloin Community Benefit District Safe Passage program creates a safe corridor for children and seniors to and from community programs and school.

- Access to Behavioral/Mental Health Services (overdose prevention services): Working with community partners—needle exchange, outreach services to people who are publicly injecting. Presented by the Safer Inside community and the Tenderloin Health Improvement Partnership (TLHIP), designed by Capital One Design Pro Bono, and hosted by GLIDE. Advocacy continues to ensure policy gets approved by Governor Brown that will allow San Francisco to open a pilot site for safe injections.

- Community Connections: Ethnically diverse, thriving mixed-income neighborhood. Over 100 non-profit and businesses. People support one another, support residents by starting with what they're already good at and deeply care about (e.g., TLCBD). Safety, advocacy, environmental design. "4 Corner Friday" is an example of a community-wide event launched by a neighborhood safety group. This effort has helped visibly change two of the most challenged blocks of Golden Gate and move negative and criminal activity out of the corridor and create a space for neighbors to connect and build relationships with each other, co-funded with private partners. Block safety groups empower residents and connect directly with city agencies (e.g., DPH, OEWD, SFMTA, Department of Homelessness.) Partnering with City Agencies.

- La Voz Latina

- Code Tenderloin, TLCBD, Downtown streets

What are the biggest health issues and/or conditions your community struggles with? What do you think creates those issues?

- Residents (housed, unhoused) who have experienced trauma or being chronically homeless/marginally housed for many years.
- Highest density housing with limited affordable housing.
- Poverty: 520 families living below poverty level (11.49 percent compared to 7.45 percent of families CCSF).
- Highest rate of severe and fatal pedestrian injuries in the city, with 50 per 100 road miles versus 8 per 100 road miles in San Francisco.
- Drug dealing/drug using.
- Crime and Safety: systemic issues stemming from the lack of safety, opportunities for healthy choices, community connections, social inequities, institutional inequities, living conditions, (physical, social/economic/work, service environment), risk behaviors, disease and injury, mortality.
- Underfunding neighborhood, lack of investment in coordinated social services and public spaces.
- These conditions ultimately influence death in the Tenderloin due to accidental poisoning and exposure to noxious substances, followed by ischemic heart diseases, lung/trachea/bronchial cancer, hypertensive disease, dementias, Alzheimer's, and other degenerative diseases of the nervous system (CDPH, Death Statistical Master File, 2011–2015). Mental health and substance use disorder are top health issues for Tenderloin residents. Tenderloin residents are hospitalized more often for ambulatory care sensitive chronic diseases, 148.1 hospitalizations age-adjusted

rate per 10,000 residents, compared to 60.6 hospitalizations age-adjusted rate per 10,000 residents for San Francisco (OSHPD, Hospital Discharge Data, 2012–2014).

Chinese Hospital

What are the healthiest characteristics of this community? What supports people to live healthier lives?

- Desire to learn
- Value Education
- Respect for the elderly
- Family-oriented
- Child-centered within the family
- Diligent
- Social support among Benevolent Associations' members
- Using traditional exercises (such as Tai chi, Chi Gong, ballroom dancing) for physical activity
- Using food to promote wellness (Chinese food therapy)

What are the biggest health issues and/or conditions your community struggles with? What do you think creates those issues?

- Chronic diseases
- Stigma associated with mental health disorders
- Low usage of mental health services
- Caregiver burden and stress
- Lack of awareness and stigma associated with advance healthcare planning
- Lack of awareness about palliative care
- Low participation in clinical trials
- Late detection of cancers
- Osteoporosis
- Poor oral health particularly among children
- Gambling
- Smoking
- Domestic violence
- Senior loneliness
- Insufficient culturally competent educational campaigns
- Lack of funding

University of California San Francisco

What are the healthiest characteristics of this community? What supports people to live healthier lives?

- Housing
- Legal services
- Transportation
- Community

What are the biggest health issues and/or conditions your community struggles with?

- Mental health
- Substance abuse
- Social isolation/conditions
- Mobility challenges

Asian Pacific Islander Health Parity Coalition

What are the healthiest characteristics of this community? What supports people to live healthier lives?

- Many people walk in this large city, unless environments are not safe.
- Many of our immigrants and cultural communities work to assist each other alongside community organizations.
- Community organizations as well as accessible public services support them.
- Activism is the antidote to trauma.

What are the biggest health issues and/or conditions your community struggles with?

- Behavioral—access to services
- Trauma of migration
- Socioeconomic disparities
- Limited access to food
- Living conditions
- Homelessness/housing instability

San Francisco Community Clinic Consortium

What are the healthiest characteristics of this community? What supports people to live healthier lives?

- Our community is so diverse. We cannot specify, but each of our clinics focuses on language and cultural needs of its community, for example Mission Neighborhood Health Center holds mono-lingual Spanish support groups.

What are the biggest health issues and/or conditions your community struggles with? What do you think creates those issues?

- We serve a lot of homeless/marginally housed.
- Big city struggles: immigration status, housing, mental health, substance use.
- I believe that the long history of racism and disrespect for low-income immigrants caused problems, exacerbated by lack of affordable housing, and housing insecurity.

Metta Fund

What are the healthiest characteristics of this community? What supports people to live healthier lives?

- Social norms that appreciate outdoor activities/weather.

- Joint aging and disability partnership/Area Agency on Aging.
- Strong activism/community action.
- Strong culture of CBO/community solutions.

What are the biggest health issues and/or conditions your community struggles with? What do you think creates those issues?

- Racial segregation/out-migration of POCs.
- Income inequality/poverty.
- Housing costs/homelessness.
- Social isolation/maintaining healthy and supportive environment.
- Threat to public safety net supports.
- Mental health/substance abuse.

San Francisco Department of Public Health

What are the healthiest characteristics of this community? What supports people to live healthier lives?

- Social connections/social support
- Social cohesion
- Resilience
- Spirituality
- Perseverance
- Community resources
- Good jobs
- Housing

What are the biggest health issues and/or conditions your community struggles with? What do you think creates those issues?

- Poverty
- Racism/institutional racism
- Trauma (historical, structural, etc.)
- Displacement
- Housing insecurity
- Food insecurity
- Socioeconomic insecurity
- Discrimination
- Unemployment/job insecurity
- Mental health
- Substance use
- Violence
- Physical illnesses
- Inequities of work conditions
- Toxic stress relative to poverty
- High cost of living

African American Community Health Equity Council

What are the healthiest characteristics of this community? What supports people to live healthier lives?

- Stories
- Language
- Music
- Art
- Culture
- Grit
- Self-determination
- Kinesthetics
- Spirit

What are the biggest health issues and/or conditions your community struggles with? What do you think creates those issues?

- Structural racism
- Toxic stress
- Poverty
- Trauma
- Social determinants of health
- Structural, instructional displacement

PART II. COMMUNITY FOCUS GROUPS

Asian Pacific Islander Health Parity Coalition, Focus Group Notes—September 27, 2018

What are the strengths, resources, and assets of the Asian Pacific Islander community?

- Family
- Community
- Language access
- Follow-up
- People and organizations who provide health and social services to community.
- Formal and informal institutions are respectful of the cultures of the communities.
- Formal: hospitals with high-quality healthcare and triage.
- Informal: nonprofits/community groups that provide programs in appropriate language.

What are the barriers that contribute to population health issues for the Asian Pacific Islander community?

- When not connected to culture, feel lost.
- Fear of immigration status and federal acts coming.
- Anxiety, fear, stress, trauma.
- Hard to get to transportation.
- Elderly don't drive.
- Groups with small numbers get left out, don't know where resources are.
- API group generalized to largest group—Chinese.

- High percentage of Samoans have diabetes.
- Chinese immigrants go to ER, provider does not speak Chinese.
- ER quality of care.
- Medical appointments not needed in China.
- Limited English proficiency.
- Safety
- Housing
- Mental health
- Funding is continually being cut.
- Equitable funding for CBOs, employees get poached by city, CBO employees need comparable pay.

African American Health Equity Coalition, Focus Group Notes—October 6, 2018

What are the strengths, resources, and assets of the African American community?

- Rafiki
- YMCA
- The Bayview
- George W. Davis Senior Center
- Providence Baptist Church, homeless shelter
- UCSF hospital
- SCIU
- Martin Luther King swimming pool
- City College
- IT Bookman Senior Center
- Wellness Center at SFGH
- When we come together we can have joy and fun and laughter and hope.
- [We] get some big hugs and give some big hugs.
- Kaiser Hospital health education department
- On Lok Senior Center
- 5600 Armstrong: ex-offenders program, black box that helps with food; a lot of men are in prison and, when they get out, they don't have anywhere to go, so they help them get back on their feet.
- NACA helps first-time homebuyers, no money down, they help you through the process
- Dr. Monique LeSarre
- Integrity of our community. We're protective of our history, we don't like people saying anything negative. There's a lot of success.
- Mission Neighborhood Center
- Bayview Opera Center
- Opera Coleman Center has mental health programs.

What are the barriers that contribute to population health issues for the African American community?

- Reach out
- Need to clean up the Hunter's Point Ship Yard.
- How do we get business to come to the neighborhood, like Whole Foods, like tax breaks can bring in resources.

- Encourage healthy businesses to come into community.
- Grant developments
- Cost of medicine
- "Patients not looked at as sick patients, seen as sick clients."
- Racism
- Overmedication

Chicano/Latina/Indigena Health Equity Coalition, Focus Group Notes—October 10, 2018

What are the strengths, resources, and assets of the Latino, Chicano, Indigena community?

- Organizations that provide resources that help us develop a healthy lifestyle.
- Community clinics
- Health services
- Support groups
- Free and healthy cooking classes
- Nutrition classes
- Food banks
- Access to healthy foods.
- Health promoters
- Access to vaccines

What are the barriers that contribute to population health issues for the Latino, Chicano, Indigena community?

- People pooping in the middle of the street
- Trash
- Greasy foods
- Healthy food more expensive than junk food
- Community safety
- Unsafe spaces
- Access to doctors
- Access to medical care
- Health insurance
- Public transportation
- Doctors treat us as a 'number' rather than human

PART III. PREGNANT WOMEN EXPERIENCING FOOD INSECURITY

Spanish-speaking Pregnant Women Experiencing Food Insecurity, Focus Group Notes—September 20, 2018

What are the strengths and resources you and your family have to support your food needs?

- I have faith that organizations can help us with food.
- My kids give me strength, and the support from CalFresh.
- Support I get at the food bank; it helps me with the basic vegetables and chicken.
- I get strength from my kids, also a food bag at my kid's school once a week.
- I think finding support without being ashamed can help me to get food.

- WIC and food banks that help us eat healthy food, and government assistance.

What makes it hard to address you and your family's food needs?

- Not knowing about the different resources in the community.
- I do not have reliable transportation to support me in getting food. I would say transportation is an issue.
- I'm not financially stable. First the rent and the bills come, then whatever money is left is for food.
- I would say transportation as well. It's really challenging for us to go on the bus with a lot of bags plus the stroller. I do not have money for the bus. If I get on the bus without paying, I get a fat ticket.
- I also have a problem with buses. The bus drivers won't let the mothers go in with big strollers. That makes it really difficult to carry food like that.
- I do not have money for transportation and it's more expensive to get an expensive ticket.
- I prefer to pay all the rent and the house bills and then I focus on the food.
- I had a difficult pregnancy. When I did not feel good, I couldn't cook. I felt really sick and tired.

<u>African American Pregnant Women Experiencing Food Insecurity</u>, Focus Group Notes— October 5, 2018

What are the strengths and resources you and your family have to support your food needs?

- Family or acquaintance; I don't think people allow their family to starve.
- You guys and everybody.
- I have my mom. She likes to try different things and makes a lot when she cooks and gives to her and brother.
- Dependent on spouse, other organizations. WIC, food stamps, try to talk to HPP and us, and another on Cole Street Huckleberry by Haight Ashbury, they advocate to get housing.
- My parents, church helps a lot as well, and I just try to budget. I go to a bunch of food banks in San Francisco, and lots of churches have food banks as well. Every week I'm going to a new church, I'm not trying to be like I'm begging, but I'm homeless and need food, and they support—especially if you believe in God.

What makes it hard to address you and your family's food needs?

- It's embarrassing.
- Shame
- Not being able to provide for yourself
- Doing everything by yourself
- You're communicating but really feel they don't care.
- Criticism
- Feeling the shame
- Judgement
- That's a F*up feeling to have, you can't get what you need.
- You feel like they think, "Why are you even pregnant then?" When you're reaching out for help, you don't have the time.

<u>Multi-ethnic English-speaking Pregnant Women Experiencing Food Insecurity</u>, Focus Group Notes—October 11, 2018

What are the strengths and resources you and your family have to support your food needs?

- We budget
- Food Stamps and WIC
- Eat SF
- Neighborhood Resource Center that gives a box of food, a ton of food. Some months, food doesn't last.
- St. Anthony or GLIDE for lunch
- YMCA
- Outpatient treatment resources
- Every day that you attend, they prepare food. Breakfast and food pantry. HealthRIGHT. Project Adapt and Woodward. It's important for people to work on recovery with a full stomach. Coffee, water, snacks, always food available. People can't drop in, but it is a resource. Don't have to pack lunch during the day.
- Ask a worker at CalWORKs. They can get a box dropped off at my house by the next day. You don't get to pick what it is. But boxes of food and $300 worth of groceries. CalWORKs has a contract with the Food Bank. But you can only get it once a year. It's a lot of food—vegetables, bread, meat. If your partner has a different last name, you can maybe get two.

What makes it hard to address you and your family's food needs?

Having to take food box on the bus is hard—the box is heavy.

- I don't have CalWORKs or food stamps or anything as resource.
- We need more places to eat. Not everyone eats the same thing.
- To stay healthy, we need more choice.
- [Too many vouchers for inappropriate food.] What am I going to do with 15 vouchers for beans? Just wait another month for next vouchers for milk.

<u>Chinese-speaking Pregnant Women Experiencing Food Insecurity</u>, Focus Group Notes—October 17, 2018

What are the strengths and resources you and your family have to support your food needs?

- WIC
- Voucher program
- Food Pantry
- APA
- Food Bank
- Food Stamps

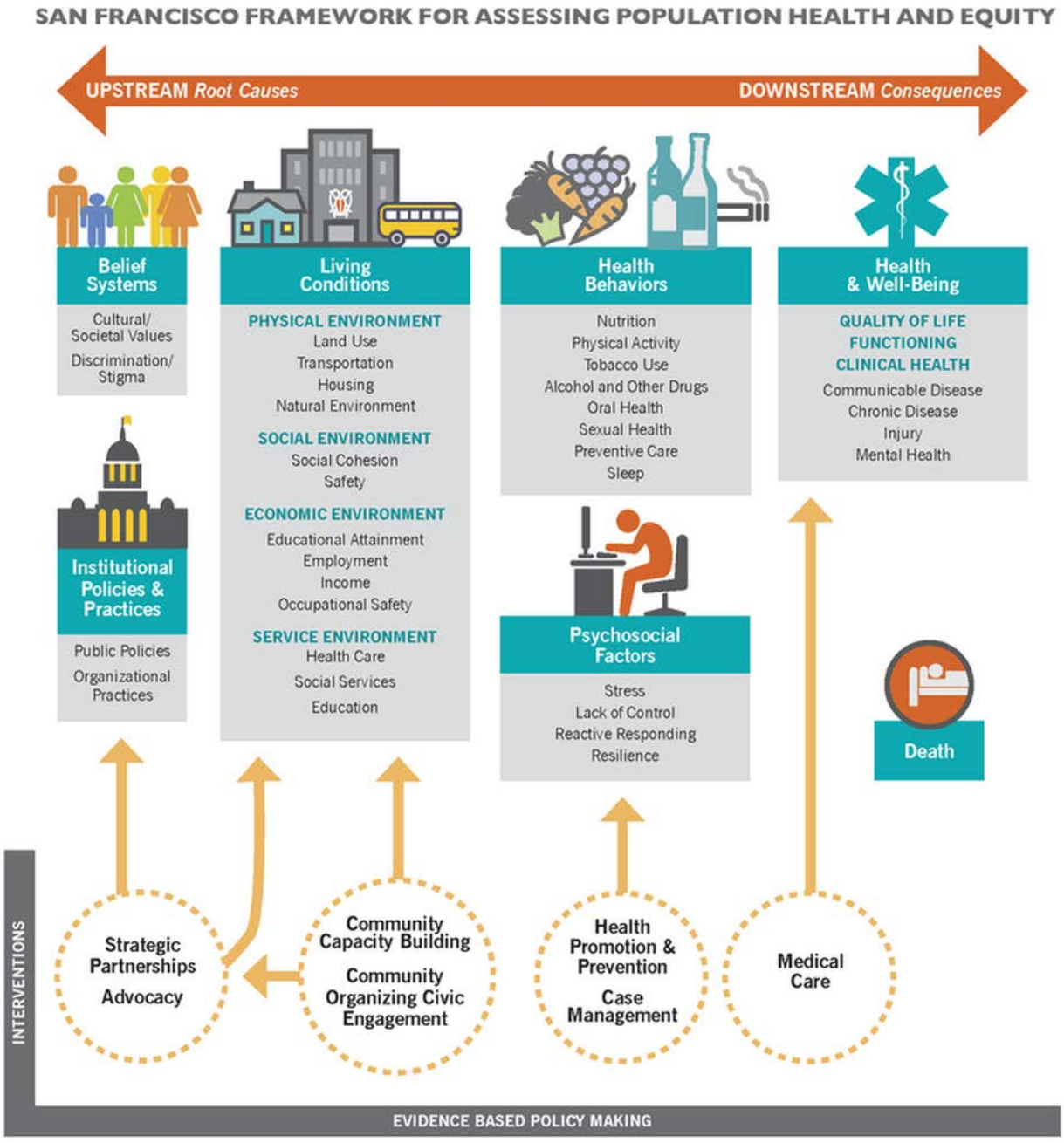
What makes it hard to address you and your family's food needs?

- WIC provides $11. Food choices are limited. We might/can get only two boxes of fruit.

- Low benefit levels.
- Inconvenient locations to pick up WIC vouchers.
- Inconvenient times/days for food pantries.
- WIC doesn’t provide enough eggs and doesn’t provide meat.
- Lack of food options with WIC.
- Income levels to qualify for WIC is too low.

APPENDIX F
SAN FRANCISCO FRAMEWORK FOR ASSESSING POPULATION HEALTH AND EQUITY

Recognizing the essential role social determinants of health play in the health of San Franciscans, the Community Health Needs Assessment examines population-level health determinant and outcome variables. To guide breadth of variable selection, we use the San Francisco Framework for Assessing Population Health and Equity, which is a modified version of the Public Health Framework for Reducing Health Inequities published by the Bay Area Regional Health Inequities Initiative.



TERMS AND DEFINITIONS

Upstream	Upstream health factors are the root causes of health inequities. Public health interventions targeting upstream factors are important in eliminating inequitable social structure, providing access to resources, and removing impediments in and adding support for conditions that support health.
Downstream	Downstream factors are the consequences of health inequity. Public health interventions targeting downstream health factors are important to relieve the effects of health inequities.

Factors Affecting Health

Belief Systems	A set of mutually supportive beliefs (around ideology, religion, philosophy, or a combination) that shapes an individual's or society's knowledge, point of view, and interactions with the world.
Cultural and Societal Values	Commonly held standards of what is acceptable or unacceptable, important or unimportant, right or wrong, and so on, in a community or society. These values may not be static. The increase in support from 1992 to 2007 for smoking bans in restaurants (from 45 to 64 percent), bars (from 24 to 44 percent), and sports arenas (from 67 to 79 percent) is an example of changing cultural values.
Discrimination and Stigma	Unjust or prejudicial attitudes toward or treatment of an individual or group of individuals based on their actual or perceived membership in a certain group or category.
Institutional Policies and Practices	Institutional policies are written guidelines or rules about how to reach a particular goal. A person or body invested with authority develops policies. A number of factors may affect policy development, including underlying values or assumptions, wider concerns, research, consultation processes, and current events. Institutional practice is the organized way in which associated individuals or groups carry out a particular activity. Guidelines or laws may frame practice, but ultimately it is the result of individual actions.
Organizational Practices and Policies	An organization's routine use of knowledge for conducting a particular function that has evolved over time under the influence of the organization's history, people, interests, and actions. Organizational practices and policies define the day-to-day experiences of community members and shape the cultures in which they work and learn.

	The Ontario Association of Food Banks developed a program to salvage potentially wasted food. The food is made into soup by "chefs in training"—19 former street youth interested in developing cooking and job skills—make the food into soup. The organization freezes the soups and trucks them to food banks across Ontario. This is an example of organizational practices and policies in action.
Public Policy	An intentional course of action that a government institution or officials follow to resolve an issue of public concern. The institution must manifest such a course of action in laws, public statements, official regulations, or widely accepted and publicly visible patterns of behavior. Public policy is rooted in law and in the authority associated with law. Intentional courses of action include decisions made not to take a certain action. The Healthy Food Retailer Ordinance is an example of a public policy adopted in San Francisco. This 2013 ordinance established the Healthy Food Retailer Incentives Program to increase access to healthy food; reduce the availability of unhealthy options such as tobacco, alcohol, and processed foods high in salt, fat, and sugar in underserved parts of the city; and stimulate economic development and job creation by creating incentives for Healthy Food Retailers to open or expand in those underserved areas.
Living Conditions	The circumstances in which someone lives.
Economic Environment	Opportunities available to an individual to prepare for and obtain work, safe work environments, and income.
Educational Attainment	The highest degree of education an adult 25 years of age or over has completed.
Employment	The condition of having paid work.
Income	Money that a person earns from work, investments, business, and other sources.
Occupational Safety	Workplace conditions that affect the safety, health, and well-being of people engaged in work.
Physical Environment	The natural or artificial physical features of the world with which humans interact, such as parks, housing, streets, buildings, air, products, and art.
Housing	Human shelter-related issues include volume, quality, safety, and affordability of spaces for human shelter.
Land Use	The human use of land. Land use involves the management and modification of natural environment or wilderness into built environment.
Natural Environment	Environmental features such as natural land, water, air, and the atmosphere. Related issues include access to and preservation of the environment.

Transportation	The movement of people and goods. Related issues include accessibility, safety, and sustainability of systems that enable movement of people and goods.
Service Environment	The availability of and access to essential services such as medical care and education in a community.
Healthcare	Access to high-quality healthcare.
Education	Access to high-quality educational opportunities.
Social Services	Government services provided for the benefit of the community such as subsidized food and housing.
Social Environment	The community in which one lives and/or identifies or interacts with.
Safety	The condition or perception of being safe from experiencing or causing physical or emotional violence. The ability to walk in one's neighborhood without the threat of violence is a characteristic of a safe environment.
Social Cohesion	A cohesive society works towards the well-being of all its members, fights exclusion and marginalization, creates a sense of belonging, promotes trust, and offers its members the opportunity of upward mobility. The components of social cohesion include social capital, social isolation, and social support.

Health Behaviors	Individual behaviors that affect health and well-being or help to prevent or detect disease.
Use of Alcohol and Other Drugs	Any chemical substance (legal or illegal) that changes a person's mental state when consumed, and that may have potentially harmful effects, such as poisoning, organ damage, dependence, or even death, in the event of improper, short- or long-term use. Ethanol is an example of alcohol. Amphetamines, cocaine, heroin, and prescription drugs such as Vicodin are examples of drugs.
Nutrition	The intake of food and drink, considered in relation to the body's dietary needs. Good nutrition—an adequate, well-balanced diet—is a cornerstone of good health, along with regular physical activity. (World Health Organization)
Oral Health	A state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and tooth loss, and other diseases and disorders that affect the oral cavity. (World Health Organization)
Physical Activity	Any bodily movement produced by skeletal muscles that requires energy expenditure. Physical inactivity has been identified as the fourth leading risk factor for global mortality, causing an estimated 3.2 million deaths globally. (World Health Organization)
Preventive Care	A variety of healthcare services that prevent sickness and detect health problems before they become more serious.

Sexual Health	A state of physical, emotional, mental, and social well-being in relation to sexuality, not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence. Attaining and maintaining sexual health requires respect, protection, and fulfillment of the sexual rights of all persons. (World Health Organization)
Sleep	Sleep is as important to our health as eating, drinking, and breathing. It allows our bodies to repair themselves and our brains to consolidate our memories and process information. Poor sleep is linked to physical problems such as a weakened immune system and mental health problems such as anxiety and depression. While adults need seven to nine hours of sleep per night, one-year-olds need roughly 13 hours, school-age children around 11 hours, and teenagers a little over nine hours.
Tobacco Use	Consumption of products made entirely or partly of leaf tobacco as raw material and intended to be smoked, sucked, chewed, or snuffed. All contain a highly addictive psychoactive ingredient, nicotine. Tobacco use is one of the main risk factors for a number of chronic diseases, including cancer, lung diseases, and cardiovascular diseases. (World Health Organization) Electronic cigarette (e-cig or e-cigarette), personal vaporizer, or electronic nicotine delivery system devices that simulate tobacco smoking by producing an aerosol, usually contain a mixture of chemicals that may include nicotine. There is growing concern that these devices may cause addiction among non-smokers and reverse decades of work to de-normalize smoking.
Gene Expression (not shown)	Gene expression is the process by which genetic information gives rise to proteins that play a role in the functioning of our bodies. Gene expression is a result of both one's genetic makeup (genotype) and the mechanisms that are used to increase or decrease the gene products (proteins). Environmentally induced changes in the expression of one's genes can be both transient (for example, a response to an infectious disease), or permanent and heritable (epigenetics) such as a woman who is a BRCA1 gene carrier but does not develop breast cancer.
Psycho-Social Factors	Pertaining to the influence of social factors on an individual's mind or behavior, and to the interrelation of behavioral and social factors.
Lack of Control or Perceived Control	A lack of power or authority to affect the circumstances under which one lives and works.

	A simple example of lack of control is when an employee is called in to work on her or his day off but cannot deny the request as he or he fears doing so will lead to dismissal.
Reactive Responding	Reactive responding is a type of response that occurs as a result of stress or emotional upset.
Resilience	The capacity to adapt successfully in the presence of risk and adversity, and to recover from or adjust to misfortune or change.
Stress	A process in which environmental demands strain a person's adaptive capacity, resulting in both psychological and biological changes that could place a person at risk of illness. The term stress describes the ways in which the body copes with or adapts to psychological, environmental, and physical challenges. Chronic or repeated stress may contribute to poor health. The coping or biologic mechanisms through which stress manifest is also referred to as allostasis and allostatic load.—The MacArthur Foundation, Research Network on Socioeconomic Status and & Health. Stress may result from major life events such as the death of a loved one, the loss of a job, getting a divorce, moving, or going to court, or environmental stressors such as exposure to violence or trauma, noise pollution, and so on.
Health And Well-Being	Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. (WHO) Well-being can be described as judging life positively and feeling good, as well as feeling healthy and full of energy. —Center for Disease Control and Prevention
Clinical Health	Clinical Health conditions that can be classified under the ICD-10 medical classification list.
Chronic Disease	A non-communicable diseases of long duration and generally slow progression. The four main types of non-communicable diseases are cardiovascular diseases (such as heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma), and diabetes. (WHO) Chronic diseases are the nation's leading causes of death and disability, and result in compromised quality of life and increased healthcare costs.
Communicable Disease	Disease that can be caught from another person or animal through direct or indirect contact. West Nile virus is an example of a communicable disease that can be caught indirectly through a mosquito vector. Tuberculosis is an example of a disease that can spread from person to person through the air.
Injury	Damage to a person's body.

	Injuries resulting from accidents, such as traffic collisions, drowning, poisoning, falls, or burns, together with injuries resulting from violence, such as assault, self-inflicted violence, or acts of war, kill more than 5 million people worldwide annually and cause harm to millions more. (WHO)
Mental Health	Not just the absence of mental disorder but a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to her or his community. (WHO)
Functioning	An individual's ability to perform activities required in her or his daily life. Deficiencies in physical, cognitive, or emotional functioning can have interdependent negative consequences on health and well-being. Walking or mobility as well as activities of daily living, such as running errands or opening containers, are examples of physical functioning.
Quality of Life	An individual's perception of her or his position in life in the context of the culture and value systems in which she or he lives and in relation to her or his goals, expectations, standards, and concerns. It is a broad-ranging concept that interacts in a complex way with the person's physical health, psychological state, personal beliefs, social relationships, and relationship to her or his environment. (WHO)
Death	Premature deaths are deaths that occur before a person reaches an expected age: for instance, age 75. Many of these deaths are considered to be preventable.

Intervention Strategies

Intervention	The act or a method of interfering with the outcome or course, especially of a condition or process. An example of an intervention is directly observed therapy (DOT) for tuberculosis. DOT assures that patients take medications correctly, thereby enhancing treatment for the patient and preventing spread to others.
Advocacy	A political process by which an individual or group aims to influence public policy and resource allocations decisions within political, economic, and social systems and institutions.
Case Management	A collaborative process that assesses, plans, implements, coordinates, monitors, and evaluates the options and services required to meet the client's health and human service needs.

Civic Engagement	Individual and collective actions designed to identify and address issues of public concern. Civic engagement can take many forms, from individual voluntarism to organizational involvement to electoral participation. It can include efforts to directly address an issue, work with others in a community to solve a problem, or interact with the institutions of representative democracy. Civic engagement encompasses a range of specific activities, such as working in a soup kitchen, serving on a neighborhood association, writing a letter to an elected official, or voting. An underlying principal of our approach is that an engaged citizen should have the ability, agency, and opportunity to move comfortably among these various types of civic acts. (American Psychological Association) A resident practicing civic engagement is one who is working to make a difference in the civic life of her or his community while developing a combination of knowledge, skills, values, and motivation to make that difference. An individual can affect the quality of life in a community, through both political and nonpolitical processes. Neighborhood groups who petition to add crosswalks or stop signs or take other measures to make walking safe in their neighborhood are civically engaged.
Community Capacity Building	Activities, resources, and support that strengthen the skills and abilities of people and community groups to take effective action and leading roles in the development of their communities.
Community Organizing	A process by which people come together, engage with other community members in identifying shared problems and desired solutions, and form organizations that act in the shared self-interest of the group.
Coordinating Services and Resources	The alignment and promotion of social services and resources in order to better serve the population.
Health Promotion and Prevention	Activities intended to promote the adoption of healthy habits in order to prevent rather than treat illness.
Medical Care	Treatment and prevention of disease by trained and licensed professionals.
Strategic Partnerships	An arrangement between two companies or organizations to help each other or work together so that each can achieve the things they want to achieve.

APPENDIX G
DEMOGRAPHICS

Variables

- Total population
- Sex
- Age
- Ethnicity
- Ethnic diversity
- English proficiency
- Household types
- Households with children
- Single parents

Overview

- San Francisco's population is expected to grow to 983,000 by 2030 and to 1.2 million by 2060.
- San Francisco is expected to see a 38 percent increase in the number of residents 65 years and over by 2030—more than any age group.
- Fifty-eight percent of San Francisco's population is non-White and the ethnic diversity score is increasing.
- Twenty-four percent of San Francisco residents 5 years and older have limited English proficiency; 57 percent of those persons speak Chinese.
- The percentage of persons living in family households and households with unrelated roommates is increasing, while the percentage of people living alone is decreasing.

What is it?

Demographics are statistical information about a population, such as age, ethnicity, language, and family relationships.

Why is it important for health?

Tracking demographic information is extremely important for planning for the present and future needs of a population. For example, measuring the age of the population informs planning for age-specific resources like schools and senior care facilities. Following trends in race/ethnicity has informed initiatives such as the African American Community Empowerment Initiative (AACEI), which was launched in 2012 to address, prevent and remediate the negative impact of the out-migration of the African American community in San Francisco. Lastly, measuring languages spoken at home helps us appropriately plan for language access programs.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Total Population: Between survey years 2007–2011 and 2012–2016, there was a 6.6 percent increase in the total population from 797,983 to 850,282. During the same period, California experienced a 4.5 percent population increase. The Sunset neighborhood has the largest number of residents, while the

Tenderloin, Nob Hill, and Chinatown have the highest numbers of residents per square mile. When examined by Areas of Vulnerability (a measure of the density of socioeconomically disadvantaged populations), areas that are not AOVs have a greater number of residents, but the AOV areas have greater population density. San Francisco's population is expected to total about 1 million by 2040, and nearly 1.2 million by 2060.

Age and sex: The age structure of a population is important in planning for community needs. For example, a younger population may have greater demands for education and childcare services, while an older population may have increasing healthcare needs as they age. Between survey years 2007–2011 and 2012–2016, the percentage of the population that was aged 25 to 54 and 65 and older increased, while the percentage of the population that was 18 to 24 decreased. In 2016, the median age in San Francisco was 38 years old, compared to 36.4 years in California. Sixty-three percent of San Franciscans are between the ages of 25 and 64 years. The neighborhoods with the highest percentage of youth under 18 include Seacliff, Presidio, and Bayview Hunters Point. Lincoln Park (which contains the VA), Japantown, and Chinatown have the highest percentage of persons that are 65 and older. The parts of the city that are considered Areas of Vulnerability have higher percentages of both youth and seniors. Population projections through 2060 by age demonstrate that the greatest population growth is expected to come from persons 65 and older (134 percent increase between 2018 and 2060). Similarly, California is expected see a 128 percent increase in the population 65 and older. At the same time, population projections suggest that the percentage of prime working-age residents in San Francisco will decrease from 49 percent of the total population in 2018 to 43 percent in 2030 and 40 percent in 2060. This has important implications for the San Francisco tax base and the provision of public services as the tax base shrinks.

Overall, there are slightly more males (51 percent) than females (49 percent) in San Francisco. In 2018, males outnumbered females between the ages of 35 and 64, while females outnumbered males among those aged 65 years and older. Neighborhoods that have a higher male population include Lincoln Park (which houses the VA), Tenderloin, and Castro/Upper Market, which all have over 60 percent male population. Higher female populations are found in Japantown and McLaren Park, which have almost 60 percent female residents; both have higher senior populations, which tend to be more female. Areas that are considered Areas of Vulnerability have a slightly denser male population than areas that are not.

Race and ethnicity: San Francisco is a majority-minority city. People of color account for 58 percent of the city's total population, while Whites account for 42 percent. Asians represent the largest minority group (33.5 percent) followed by Latinos (15.3 percent). Communities with a high percentage of Black/African American residents include Bayview Hunters Point, Western Addition, and Treasure Island, which all have 20 to 27 percent Black/African American residents. In most neighborhoods, Asian residents comprise more that 20 percent of the population apart from central neighborhoods such as Castro, Mission, Glen Park, and Noe Valley. Dense Latino communities are found in the neighborhoods that border Mission Street. Neighborhoods that have predominantly White residents include central and northern neighborhoods.

Between 2018 and 2060, multi-ethnic residents are expected to see a 25 percent increase (from 4 to 5 percent) and White residents are expected to increase by 9.5 percent (from 42 to 46 percent). Conversely, Black/African American residents are expected to see a 40 percent decline from 5 to 3 percent, while the percentage of Asians and Latinos is also expected to decline. It should be noted that

this trend among Whites is the opposite of that expected statewide, where there is a projected decrease in the percentage of the population that is White, and significant growth in the Latino population.

The ethnic diversity score is the probability that any two people chosen at random from a given study area (e.g., neighborhood) will be of different races or ethnicities. Between American Community Survey (ACS) survey years 2007–2011 and 2012–2016, San Francisco's ethnic diversity score increased from 71.75 to 74.11. The neighborhoods with the greatest diversity are along the eastern and southern sides of the city. When examined by Areas of Vulnerability, parts of the city with an AOV designation have a higher diversity score than the city as a whole, while non-AOVs have a score lower than the city's.

Language: Roughly 24 percent of San Franciscans 5 years and older have a limited ability to speak English. In 2016, among residents that have limited English proficiency, Chinese (Mandarin, Cantonese, and others) and Spanish are the most prevalent non-English languages, with 56.5 and 20.9 percent of the limited English speaking population, respectively, speaking these languages. Tagalog (5.6 percent), Vietnamese (4.1 percent), and Russian (3.5 percent) are the next most widely spoken languages among limited English speakers.

The neighborhood with the highest percentage of residents with limited English proficiency is Chinatown, where 71 percent of the population does not speak English very well. Other neighborhoods with a high percentage of people who speak a language other than English at home and speak English less than very well include Visitacion Valley, Excelsior, Portola, the Outer Mission, and Oceanview/Merced/Ingleside, which all have greater than 35 percent of residents with limited English proficiency. Having limited English proficiency is more prevalent among seniors. In 2016, 40.8 percent of adults 65 and older, 17.8 percent of adults 18 to 64, and 8.7 percent of youth 5 to 17 had limited English speaking abilities. This highlights the need for translation services, particularly for older populations, so that they can access services.

Household structure: Between survey years 2007–2011 and 2012–2016, there were statistically significant changes in the distribution of household types in San Francisco. Roommate and family households increased, while the percentage of people living alone decreased. At the same time, there were no significant changes in the percentage of households that contained children under the age of 18 or the percentage of children with unmarried parents. Family households are most prevalent in the southern neighborhoods in San Francisco, with Portola, Seacliff, and Visitacion Valley all being over 75 percent family households. Roommate households are most common in Treasure Island, Castro/Upper Market, and Presidio, where they comprise at least 30 percent of the household mix. Single person households are the most common in the northeastern part of San Francisco, with the Tenderloin, Japantown, Nob Hill, Marina, Pacific Heights, and SOMA all having over 55 percent of residents living alone. When examined by Areas of Vulnerability, AOVs have a higher percentage of households that are in families or single persons, while non-AOVs have a higher percentage of non-related roommate households.

Visitacion Valley, Bayview Hunters Point, Outer Mission, and Excelsior all have the highest proportion of households containing youth (all over 35 percent). Hayes Valley has the highest percentage of children living with unmarried parents. AOVs have a higher percentage of households that contain minor children and a higher percentage of children with unmarried parents than non-AOVs.

Data Sources

ACS American Community Survey. https://www.census.gov/programs-surveys/acs/

CADOF California Department of Finance, Demographic Projections.
http://www.dof.ca.gov/Forecasting/Demographics/Projections/

Methods and Limitations

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

Areas of Vulnerability: Areas of Vulnerability (AOV) were created as a way to examine geographic data in relation to populations of concentrated socioeconomic disadvantage. The criteria to be designated as an AOV were:

- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for persons of color, OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for youth or seniors (65+), OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for two other categories (unemployment, completing high school or less, limited English proficiency persons, linguistically isolated households, or disability).

Tracts that had unstable data for an indicator were automatically given zero credit for that indicator.

APPENDIX H
LIVING CONDITIONS

CHILDCARE AND EDUCATION

Variables

- Licensed childcare relative to child population
- Unmet need for childcare subsidies
- Childcare costs relative to household income
- 3- to 4-year-olds enrolled in preschool
- Kindergarten and high school readiness
- Regular school attendance
- Suspension and expulsion rates
- Third-grade language arts proficiency and high school graduation rates

Overview

- There are 6.8 infants who are 0 to 2 years old for every licensed childcare slot.
- The annual mean cost of infant childcare in a licensed center is $21,384—18 percent of the median family income for households with minor children.
- The number of children receiving childcare subsidies has decreased.
- The percentage of 3- to 4-year-olds enrolled in preschool has been increasing—up to 70 percent in 2016.
- Educational outcomes are the poorest for Black/African American students across all measures reported here.
- The percentage of students who are "ready" for kindergarten and high school has been increasing.
- The percentage of SFUSD students with regular attendance has decreased slightly.
- Overall rates for suspension and expulsion in San Francisco public schools have decreased since the 2012–2013 school year, but disparities exist by sex and ethnicity.
- Sixty percent of Black/African American SFUSD third-grade students do not meet state standards for English language arts/literacy.
- SFUSD cohort graduation rates have increased to 87 percent, but not all ethnic groups have experienced this rise.

What is it?

The following metrics for childcare and education measure access, enrollment, attendance, and performance in early childhood, primary, and secondary education settings.

Why is it important for health?

Quality childcare, as well as early childhood, primary, and secondary education are all important social determinants of health.[1,2] There are multiple pathways for childcare and education's impact on health. When parents have quality, affordable childcare, it allows them to remain in the workforce and earn money to support their family's basic needs, including food, housing, and healthcare. Ninety percent of the brain's capacity develops between the ages of 0 and 5 years, with the majority taking place between ages 0 and 3 years.[3] Licensed providers of infant, toddler, and preschool childcare with experience in early childhood education can support kindergarten readiness and increased lifetime achievement.[4,5] Childcare and education also provide an environment where health risk factors can be identified and addressed early on, including problems with hearing, speech, vision, oral health, nutrition, and other issues of medical and mental health.[6,7,8] This sets the stage for future academic, socio-emotional, and professional success.[9] On the other hand, lower educational attainment is a risk factor for poor physical, mental, and socio-emotional health.[9,10,11]

At the center of education's mission and purpose are opportunities for physical, intellectual, and emotional development. Those entering kindergarten with a strong foundation of skills such as basic numeracy and the ability to get along with others experience higher levels of accomplishment in school than those with weaker skills.[12] Children enrolled in high-quality early care and education programs before kindergarten, score higher on math and reading standardized skill assessments, as well as on socio-emotional development tests.[12] Quality curricula also impart skills and knowledge such as critical thinking and decision-making, which make options for healthier lifestyles possible.[6,13]

Continued success through primary and secondary school supports high school graduation and further academic progress. Research shows that one in six children who are not reading proficiently in third grade will fail to graduate from high school on time, four times the rate among children who read proficiently in third grade.[14] Absences from school and missed instructional time have a significant impact on academic performance. Chronically absent refers to students who miss 10 percent or more of instructional days. By sixth grade, chronic absence becomes a leading indicator that a student will drop out of high school.[15] High school graduation is associated with better health, lower medical costs (compared to non-graduates), increases in average lifespan, lower levels of criminality, reduced reliance on government healthcare and public assistance, more employment opportunities, and the likelihood of raising healthier children.[2,12]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

CHILDCARE AND PRESCHOOL ACCESS

Availability of licensed childcare: Despite 8 percent growth in the number of licensed childcare slots between 2006 and 2016, San Francisco still struggles to meet the potential need for licensed childcare for the city's families, particularly for infants (children 0 to 2 years).[16] In 2016, there were 6.8 infants per licensed slot. The ratio of children to slots for preschool-aged youth (ages 3 to 5 years) is more encouraging, with the ratio being 1.1 children per slot. However, availability is not equally distributed in San Francisco geographically. Interestingly, the more affluent parts of San Francisco, including the

Marina, Castro, Glen Park and Forrest Hill, have some of the highest ratios of children to slots. In fact, there is no licensed care for infants in ZIP code 94114 (Glen Park/Castro) to serve the over 900 infants who live in that ZIP code. The ZIP codes that cover downtown have the lowest ratios, likely due to the supply of worksite childcare and low child populations.

Childcare affordability: In 2016, the annual mean costs of full-time infant care at a childcare center was $21,384; at a family-based childcare home it was $14,076.[17] The cost of full-time infant care in a licensed childcare center would consume over 50 percent of a family's household income in neighborhoods like the Tenderloin, South of Market, and Bayview.

As of 2016, a family of four can earn up to $71,064 and qualify for a subsidy.[18] The high cost of childcare is a burden on middle-class and low-income families in San Francisco. Many middle-class San Francisco families cannot readily afford the high costs of quality childcare but earn too much to qualify for subsidies. And despite the existence of childcare subsidy programs, accessibility and affordability remain a problem for low-income families as well. Unfortunately, between 2012 and 2016, the number of children receiving subsidies decreased under most subsidy programs.[16] In 2016, there were 3,574 eligible families of children ages 0 to 11 years waiting for subsidies in San Francisco. The majority of these families are concentrated in the southeastern neighborhoods, Mission, South of Market, and the Tenderloin.

Preschool and kindergarten enrollment and early childhood development: Between 2012 and 2016, about 70 percent of children ages 3 to 4 in San Francisco were enrolled in an early education program, compared to about 50 percent in California. Between 2007–2011 and 2012–2016, there was a significant increase in the number of children enrolled in San Francisco, but not statewide. This was most notably true for low-income children. However, Latino and Asian/Pacific Islander children continued to have the lowest enrollment rates in San Francisco.

PRIMARY AND SECONDARY EDUCATION OUTCOMES

School readiness amongst kindergarteners and ninth-grade students: Between 2012 and 2016, there was an increase in the percentage of incoming kindergarten students who tested as "ready" for school, from 41 to 55 percent.[16] Increases were more moderate for high school students, increasing from 63 to 66 percent between 2014 and 2016. Latino and Black/African American students had the lowest readiness rates for both kindergarten and high school.

School attendance: Chronic absenteeism is defined as missing more than 15 days of school in a year. Here we define "regular school attendance" as not being chronically absent. Between the 2014–2015 school year and the 2016–2017 school year, the number of students with regular attendance dropped from 91 to 89 percent. A decrease was seen among most demographic groups; however, Black/African American students have notably lower regular attendance rates that other groups.

Suspension and expulsion rates: Overall rates for suspension and expulsion in San Francisco public schools have decreased since the 2012–2013 school year. However, suspension rates differ by gender and ethnicity. Male students have a suspension rate of 2 percent, while female students have a rate of 1 percent. Likewise, Black/African American and Pacific Islander students have suspension rates over 5 percent, while the rate for Asian students was less than 1 percent. While the racial/ethnic distribution of students in SFUSD varies greatly from that of the general population in San Francisco, data suggests Black/African American and Latino students are being suspended or sent out of the classroom by

teachers (classroom referrals) at disproportionately high rates. At SFUSD schools during the 2016-2017 school year, nearly 40 percent of all students who received at least one suspension were Black/African American, despite making up only 11 percent of the student population.

Elementary year metrics—third-grade students who do not meet state standards for English language arts: Each year, California public school student students participate in state standardized testing for English language arts/literacy and math. As mentioned above, third-grade reading proficiency is often considered a predictor of lifetime educational outcomes. According to the California Assessment of Student Progress and Performance (CAASPP) website, students that fall into the category of "Standard Not Met" for English language arts "[need] substantial improvement to demonstrate the knowledge and skills in English language arts/literacy needed for likely success in future coursework."[19] When examined by ethnicity, 60 percent of Black/African American and 45 percent of Latino third-grade students did not meet state standards in the 2016–2017 school year, compared to 11 percent of White and 14 percent of Asian third-grade students. Black/African American and Latino students are also faring slightly worse in San Francisco than their counterparts in California (48 percent and 40 percent, respectively). Poorer performance for San Francisco's Black/African American and Latino children exists despite San Francisco having an overall lower percentage of children who do not meet state standards than California (27 percent vs. 32 percent). Grouped by socioeconomic status, 31 percent of non-economically disadvantaged students failed to meet state standards, while 38 percent of economically disadvantaged third-graders missed the same mark.

High school graduation: The 2015-2016 school year high school graduation rate in San Francisco was 87 percent. As with other education measures, there is great variation in graduation rates by demographics. Ninety-five percent of Asian students in the 2015–2016 cohort graduated, while 71 percent of Black/African American students graduated. There has been a modest increase in graduation rates for all students—from 82 percent in 2012 to 87 percent in 2016—though rates for Black/African American students remained the same at 71 percent. Pacific Islander and Latino students saw notable increases between 2012 and 2016.

Data Sources

ACS American Community Survey, 5-year data
https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml

CDE California Department of Education. http://dq.cde.ca.gov/dataquest/

CPAC Child Care Planning & Advisory Council. Early Care & Education Community Needs Assessment.
http://sfcpac.org/ece-resources/community-partner-resources/

OCOFC Data Report for Our Children, Our Families Council. 2017
http://www.ourchildrenourfamilies.org/ocof-evaluation-report-year-1/

SFUSD San Francisco Unified School District.
http://web.sfusd.edu/Services/research_public/201617%20District%20Data%20Summary%20Newsletters/Forms/AllItems.aspx

Methods and Limitations

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

Areas of Vulnerability: Areas of Vulnerability (AOV) were created as a way to examine geographic data in relation to populations of concentrated socioeconomic disadvantage. The criteria to be designated as an AOV were:

- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for persons of color, OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for youth or seniors (65+), OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for two other categories (unemployment, completing high school or less, limited English proficiency persons, linguistically isolated households, or disability).

Tracts that had unstable data for an indicator were automatically given zero credit for that indicator.

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[11] M. A. Winkleby, D. E. Jatulis, E. Frank, and S. P. Fortmann. "Socioeconomic status and health: how education, income, and occupation contribute to risk factors for cardiovascular disease.," American journal of public health, vol. 82, no. 6, pp. 816–820, Jun. 1992.

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[14] D. J. Hernandez. "Double Jeopardy: How Third-Grade Reading Skills and Poverty Influence High School Graduation," Annie E. Casey Foundation, 2012.

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[16] San Francisco Child Care Planning & Advisory Council. "San Francisco Early Care and Education Needs Assessment," resreport, 2017.

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CIVIC PARTICIPATION

Variables

- Voter turnout
- Neighborhood block parties
- Adults who met informally with others to deal with community problems
- Adults who served as a volunteer on any local board, council, or organization that deals with community problems

Overview

- Voter turnout is lower in more socioeconomically disadvantaged neighborhoods.
- The number of neighborhood block party permits has been increasing over time.
- Around 20 percent of San Francisco adults report meeting with others to deal with community problems, and 10 to 14 percent report volunteering with a community organization.

What is it?

The American Psychological Association defines civic participation as "individual and collective action designed to identify and address issues of public concern."[1] It can include efforts to directly address an issue, collaboration with other community members to solve a problem, or interaction with the institutions of representative democracy. The indicators included here measure volunteer service, community organization involvement, and voting patterns.

Why is it important for health?

Civic participation influences the health of the community in various ways. Most acutely, civic participation can affect community members through the implementation of social or economic policies that are passed by elected officials, city boards, or voted on directly.[2] Disparities in demographic representation among elected officials, city boards, and those voting may impact political outcomes and resulting policies, with disparate impacts among residents. For example, lower representation of poorer voters could result in reductions in funding for social programs. Individuals who volunteer have been found to have lower mortality rates, greater functional ability, and lower rates of depression later in life compared to those who do not volunteer.[3] In general, civic participation can be an indirect measure of social capital.[3] Studies have documented positive associations between social capital and both lower mortality rates and higher health ratings.[4,5]

Many interrelated factors impact whether individuals engage in civic activities. With regards to participation in elections, these can include educational attainment, income or class, race/ethnicity, family history of voting, age, language spoken, trust in government, access to transportation and childcare, exposure to get-out-the-vote mobilization efforts, awareness of candidate and ballot initiatives, and clarity (or lack of clarity) of ballot initiative language. Similarly, participation in civic committees or volunteer organizations is also influenced by numerous factors. Resources like income, wealth, education, and health, as well as high levels of social and cultural capital enable volunteering, while low levels of resources and capital hinder it.[6]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Voter turnout: Between 1996 and 2016, the percentage of registered voters that voted in November elections was 52 percent, with the average being 73 percent for presidential elections and 44 percent for midterm elections. The 2012 and 2016 presidential elections recorded the highest election turnout over the past 20 years, with more than 80 percent of registered voters participating. Voter turnout is not even across all neighborhoods in San Francisco. Chinatown, Tenderloin, Bayview, and Visitacion Valley often have the lowest turnout, while the wealthier central neighborhoods have consistently higher turnout. When examined by Areas of Vulnerability (a measure of the geographic density of socioeconomic disadvantage), parts of the city that are designated as AOVs have a consistently lower voting rate in all elections.

Block parties: Another spatial measure of civic and community engagement is the number of block parties (with special event street closure permits from the MTA) per square mile. Since 2014, there has been a citywide increase in the number of block parties. When examined by analysis neighborhood, more affluent neighborhoods including Bernal Heights, Glen Park, Noe Valley, Lone Mountain, and Seacliff have the highest density of block parties. Areas of the city that are not designated as AOVs also have a block party density typically about three times as high as areas that are designated as AOVs.

Meeting and volunteering to address community problems: On average, about 20 percent of San Francisco adults report that they meet informally with others to address community problems. Between 2011 and 2016, 10 to 14 percent of adults volunteered with a group to address community problems. For both measures, no significant differences were apparent when data was stratified by time, gender, age, income, or ethnicity.

Data Sources

SFDOE San Francisco Department of Elections.
http://ask.chis.ucla.edu/main/default.asp

SFMTA San Francisco Metropolitan Transportation Agency, Special Event Street Closures.
https://www.sfmta.com/permits/special-event-street-closures#Neighborhood

CHIS UCLA Center for Health Policy Research, “California Health Interview Survey.”
https://sfelections.sfgov.org/results

Methods and Limitations

Voter turnout: Voter turnout was calculated by dividing the number of persons that voted by the number of registered voters. For summarization by analysis neighborhoods and Areas of Vulnerability, voting precincts were assigned to the larger geography that their centroid fell within.

In California, eligible voters are people who are citizens of the U.S.; residents of California; 18 years of age or older on Election Day; not in prison, on parole, serving a state prison sentence in county jail,

serving a sentence for a felony pursuant to subdivision (h) of Penal Code section 1170, or on post release community; and not found by a court to be mentally incompetent.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

Areas of Vulnerability: Areas of Vulnerability (AOV) were created as a way to examine geographic data in relation to populations of concentrated socioeconomic disadvantage. The criteria to be designated as an AOV were:

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- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for two other categories (unemployment, completing high school or less, limited English proficiency persons, linguistically isolated households, or disability).

Tracts that had unstable data for an indicator were automatically given zero credit for that indicator.

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CLIMATE AND THE NATURAL ENVIRONMENT

Variables

- Days with good air quality
- Population in air pollution exposure zone
- Tree canopy
- Greenhouse gas emissions
- Heat vulnerability
- Flood vulnerability

Overview

- The annual number of days with "Good" air quality has increased since 2009 to a high of 310 in 2016; however, there is no clear indication that the trend toward improvement is permanent, and more frequent wild fires may jeopardize progress.
- The South of Market neighborhood is the most impacted by air pollution exposure.
- San Francisco lags behind peer cities in tree canopy coverage; some neighborhoods have less than 5 percent coverage.
- San Francisco has made significant progress towards greenhouse gas reduction goals, largely due to reducing residential and landfill organics emissions.
- Neighborhoods with the greatest extreme heat vulnerability include Chinatown, Tenderloin, South of Market, Japantown, and Mission.
- The neighborhoods that are most vulnerable to the negative health effects associated with flooding include South of Market, Bayview, Tenderloin, and North Beach.

What is it?

Climate and Natural Environment refers to both 1) the preservation and protection of San Francisco's natural features such as land, water, air, and atmosphere, and; 2) the impact of extreme weather events on human health and well-being.

Why is it important for health?

Human health is affected by the natural environment. Burning fossil fuels—coal, oil, gas—releases greenhouse gases (GHGs) into the atmosphere, which traps heat and causes temperatures to increase. This causes more variable weather: heat waves, extreme storms and sea-level rise, droughts, air pollution, and wildfires. These weather events have significant and cascading impacts on public health.

Air quality: Air quality impacts public health.[1] These health impacts are largely influenced by proximity to high-traffic corridors and industrial areas. Density influences air quality. Large buildings block wind and prevent the dissipation of pollution. Urban heat islands can accelerate the creation of ground-level ozone. Ground-level ozone increases rates of asthma attacks, shortness of breath, coughing, chest

tightness, irritated mucus membranes, pulmonary inflammation, and respiratory illnesses and diseases. PM2.5 concentration (particulate matter in the air where particles are 2.5 micrometers—about one ten-thousandth of an inch—or less in diameter) exacerbates asthma, bronchitis, and acute and chronic respiratory disease. These ailments will especially affect children because their lungs are still developing, and because their faster breathing rates increase their exposure to pollutants. In adults, worsened air quality from ground-level ozone or other pollutants could increase rates of chronic lung disease such as emphysema, as well as premature death.

Climate change is anticipated to impact local air quality. Drought can impact air quality as wildfires in adjacent counties can increase concentrations of ozone and particulate matter in San Francisco. Heat influences the creation of ground-level ozone and the city should expect a small increase in these ozone levels. Communities that are currently most exposed will suffer the worst of the changes. Groups that are less physically capable of dealing with the health impacts, such as children and older adults, as well as those who have little protection from outdoor air such as homeless people, are most vulnerable to changes in air quality.

Tree canopy: Tree Canopy (UTC) is defined as the layer of leaves, branches and stems of trees that cover the ground when viewed from above. Trees provide a wealth of benefits: they create natural cooling by shading streets and buildings, which lowers the risk of skin cancer by reducing exposure to ultra-violet (UV) radiation; they reduce energy demand and consumption; they capture air pollutants; they reduce atmospheric carbon dioxide; they produce oxygen; they help capture storm-water runoff and filter the water, lowering the amount of mercury, oil, and lead flowing into the Bay.[2] Trees can also serve as buffers between pedestrians and auto traffic, potentially reducing pedestrian injuries. Several studies indicate that forests, trees and other vegetation provide psychological benefits as well: for adults they can improve recovery from mental fatigue.[3,4] This in turn can reduce socially unacceptable behaviors and crime, which can help reduce behavior problems among children.

Greenhouse gas emissions: Greenhouse gases (GHGs) capture heat from the sun in the earth's atmosphere, warming the earth's land surface and bodies of water. GHGs present in the atmosphere include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). Anthropogenic (human-generated) emissions of these gases has increased their prevalence in the atmosphere since the start of the Industrial Revolution. GHGs contribute to climate change, which directly and indirectly impacts public health.[5] Many strategies that can reduce GHG emissions also serve to promote good health. Substituting active transportation—walking, bicycling, using mass transit—for driving cars would have a major impact on GHG emissions, since the transportation sector overall contributes the second-largest share of greenhouse gas emissions. Vegetable-based diets that limit meat, dairy, and poultry, and rely more on fresh rather than processed foods result in better health outcomes, including lower rates of cardiovascular disease, Type 2 diabetes, and some cancers. The Food and Agriculture Organization of the United Nations estimates that livestock production alone may account for 18 percent of global greenhouse gas emissions. Due to the resource intensiveness of processing food and producing meat, a largely plant-based diet is also better for the environment.

Extreme heat: An extreme heat event is defined as a day where temperatures reach the 98th percentile of temperatures of all days for that specific location. In San Francisco, of all days between 1961 and 1990, the 98th percentile of temperatures equals about 85 degrees Fahrenheit. Currently, San Francisco averages about five to six extreme heat days per year. This number is expected to reach 17 by the end of the century and is prone to year-to-year fluctuations.[5] Direct impacts of extreme heat includes increases

in heat-related illnesses such as heat stroke, dehydration, and heat-related mortality such as heart disease. High temperatures can also exacerbate the impact of pre-existing conditions such as diabetes, renal disease, and many mental health conditions. An analysis of the 2006 California heat wave found significant increases in a wide range of morbidities statewide, with the highest increase in rates of emergency room visits for heat-related illness in cooler climates like San Francisco. San Francisco is a temperate city with housing and infrastructure built for a coastal climate. As San Francisco has not historically experienced extreme heat events or heat waves, San Franciscans have a more difficult time thermo-regulating. As a result, San Franciscans are also at higher risk for largely preventable heat-related illnesses. While everyone is vulnerable to heat-related illness, certain populations are more at risk, including the elderly, low-income, and those with chronic mental health disorders and pre-existing medical conditions.

Flooding and extreme storms: As the atmosphere warms, both the melting of the polar ice caps and the thermal expansion of the oceans will cause sea levels to rise. Additionally, climate models predict storms to become more frequent and extreme. These extreme storms are associated with high storm surge and heavy precipitation and will cause flooding along San Francisco's coast and in the city's interior. Extreme storms, sea-level rise, and flood inundation are associated with many direct health outcomes including respiratory illnesses from in-home dampness and mold, waterborne illness from direct contact with floodwaters, and physical injuries.[6] However, extreme storms may have a greater impact indirectly as power outages associated with extreme storms negatively impact a broad range of health, household, and economic needs.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

MEASURES OF CLIMATE AND THE NATURAL ENVIRONMENT

Air quality: Between 2000 and 2007, the number of "Good" air quality days remained relatively steady, between 244 and 291, and then fell to a low of 197 in 2009. The annual number of days with "Good" air quality has increased since then to a high of 310 in 2016; however, there is no clear indication that the trend toward improvement is permanent. The number of days with "Good" air quality was 276 in 2017. During the 2017 fires in Napa and Sonoma counties, San Francisco's AQI reached 127 and 136, which are "unhealthy for sensitive groups." This demonstrates that as wildfires in surrounding areas become more frequent because of climate change, air quality may decline even as we reduce local emissions. More information on how San Francisco's air quality compares to peer cities can be found on the Controller's Office Benchmarking Website.

Air pollution exposure is not evenly distributed across San Francisco. Neighborhoods with heavily trafficked roads are more impacted. An air pollution exposure zone (APEZ) map was developed to show areas within the city with elevated air pollution levels. In 2008, San Francisco Health Code Article 38 was adopted to require new residential construction projects located in the APEZ to install enhanced ventilation to protect residents from the respiratory, heart, and other health effects of living in a poor air quality area. The APEZ is based on modeled concentrations of fine particulate matter (PM2.5), and excess cancer risk from toxic air contaminants (TACs), and a health vulnerability layer. The model includes mobile sources (cars, trucks, rail emissions, and marine sources) as well as stationary source

emission from permitted sources (such as gas stations, autobody shops, and diesel generators). South of Market has by far the highest level of exposure, with 94 percent of residents living in the APEZ. Other neighborhoods with high exposure include Financial District/South Beach (76 percent), Tenderloin (48 percent), and Mission Bay (40 percent). When comparing air pollution exposure by Areas of Vulnerability (AOV), about 21 percent of residents living in areas designated as an AOV are in the APEZ, compared to 7 percent of residents in the rest of the city.

Tree canopy: Approximately 13.7 percent of the surface area in San Francisco is covered by trees. This compares to 21 percent in Los Angeles, 24 percent in New York City, 17 percent in Chicago, and 23 percent in Seattle.[2] In San Francisco, the neighborhoods on the eastern side of the city have the lowest tree canopy coverage. Mission Bay, South of Market, and Tenderloin all have less than 5 percent canopy coverage. Parts of the city that are designated as Areas of Vulnerability (AOV) have only about 11 percent tree canopy, compared to 16 percent in the rest of the city.

Greenhouse gas emissions: Compared to the nine Bay Area counties, San Francisco has the lowest per capita greenhouse gas emissions.[7] The low per capita GHG emission rate is largely a result of lower surface transportation emissions and non-residential natural gas consumption. San Francisco has an ambitious goal to achieve zero greenhouse gas emissions by 2050. Since 2000, there has been a steady decrease in emissions and the city is on its way towards meeting that goal. The biggest emissions reductions have come through reducing emissions generated by buildings and landfill organics.

Heat vulnerability: The Heat Vulnerability Index uses socioeconomic and demographic, exposure, health, and infrastructure indicators to identify communities most likely to be affected by the health impacts of extreme heat. In 2013, the neighborhoods that had the greatest extreme heat vulnerability included Chinatown, Tenderloin, South of Market, Japantown, and Mission. For more information, visit the San Francisco Climate and Health Program (https://sfclimatehealth.org/).

Flood vulnerability: The Flood Health Vulnerability Index uses socioeconomic and demographic, exposure, health, and housing indicators to identify communities most likely to be affected by the health impacts of flooding, sea-level rise, and extreme storms. In 2016, the neighborhoods that were most vulnerable to the negative health effects associated with flooding included South of Market, Bayview, Tenderloin, and North Beach. For more information, visit the San Francisco Climate and Health Program (https://sfclimatehealth.org/).

Data Sources

USEPA United States Environmental Protection Agency. "Air Quality Index Report." http://www3.epa.gov/airdata/ad_rep_aqi.html

SFDPH San Francisco Department of Public Health, Air Quality Enforcement Program. https://www.sfdph.org/dph/EH/Air/Article38.asp

SFDOE San Francisco Department of Environment. https://sfenvironment.org/carbon-footprint

SFP San Francisco Planning Department, via DataSF. https://data.sfgov.org/Energy-and-Environment/San-Francisco-Urban-Tree-Canopy/w9tk-3w8c

SFDPH San Francisco Department of Public Health, Climate and Health Program. https://sfclimatehealth.org/

Methods and Limitations

Areas of Vulnerability: Areas of Vulnerability (AOV) were created as a way to examine geographic data in relation to populations of concentrated socioeconomic disadvantage. The criteria to be designated as an AOV were:

- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for persons of color, OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for youth or seniors (65+), OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for two other categories (unemployment, completing high school or less, limited English proficiency persons, linguistically isolated households, or disability).

Tracts that had unstable data for an indicator were automatically given zero credit for that indicator.

Air quality index: The air quality index (AQI) is based on the relative levels of and federal standards for each of the six major air pollutants: ozone, particulate matter 2.5, sulfur dioxide, nitrogen dioxide, particulate matter 10, and carbon monoxide. AQI ratings below 100 (ratings of "good" and "moderate") should not affect the health of the general public, although a "moderate" rating (50-100 AQI) may affect unusually sensitive people.

Heat and flood vulnerability: Information on how the heat and flood vulnerability indexes were generated can be found at https://sfclimatehealth.org/.

Hospitalizations and emergency room visits:
Hospitalization and ER rates measure the number of admissions or visits, not the number of residents who are hospitalized. Admissions records may include multiple admissions by the same person.

In October 2015, the diagnosis coding standard for Hospitalizations and Emergency Room visits was changed from ICD-9 to ICD-10. Caution should be used in comparing data using the two different standards.

The following ICD-9 and ICD-10 codes were used to identify visits due to heat:
ICD-9: 9920, 9921, 9922, 9923, 9924, 9925, 9926, 9927, 9928, 9929, E9000, E9009
ICD-10: T670, T671, T672, T673, T674, T675, T676, T677, T678, T679, X30X
Estimates for heat as the primary cause were obtained by searching the primary diagnosis field only while estimate for heat as the primary, co-morbid, or coexisting cause was obtained by searching all available diagnosis fields.

Population estimates for rates:

- State of California, Department of Finance, *Race/Hispanics Population with Age and Gender Detail, 2000–2010.* Sacramento, California, September 2012.
- California Department of Finance. Demographic Research Unit. 2018. State and county population projections 2010-2060 [computer file]. Sacramento: California Department of Finance. February 2017.

Standard Population for age adjustment:

- Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050. U.S. Department of Commerce, Economics and Statistics Administration, BUREAU OF THE CENSUS.

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CRIME AND SAFETY

Variables

- Crime rates (violent, property, drug, other)
- Perceptions of safety (day, night)
- Substantiated child maltreatment
- Students bullied at school or electronically
- Youth dating violence
- Juvenile hall bookings
- Emergency room visit rate for assault

Overview

- There was an increase in all crime types, except for drug crime, between 2013 and 2015.
- Asian, Black/African American, and Latino residents have significantly lower perceptions of safety during the day and night compared to White residents.
- Despite citywide decreases, a large disparity in the rate of substantiated child maltreatment cases for Black/African American children continues to exist, with a rate 17 times higher than for Asian/Pacific Islander children or White children.
- Rates of at-school and electronic bullying are the highest for middle and high school students that do not identify as heterosexual.
- Middle and high school students who identify as gay, lesbian, or bisexual experienced at least twice as much dating violence as their heterosexual peers.
- Black/African American youth make up over 57 percent of the youth booked at Juvenile Hall, even though they make up only 6 percent of the youth population.
- Both male and female Black/African American and Pacific Islander residents experience higher levels of ER admission for assault compared to other ethnic groups.

What is it?

Like food, water, rest, and shelter, safety is one of our basic needs in life. Safety is the condition of being safe from undergoing or causing hurt, injury, or loss. Safety is important in all environments—home, school, work, and public spaces. Low perceptions of safety can result from witnessing, experiencing, or fearing numerous types of events, including violence, property crime or other forms of social disorder, emotional abuse, threats to financial security, or other threats to an individual's sense of control over their life. In this analysis, we measure safety primarily by tracking the prevalence of reported crimes or violent events that necessitate medical care.

Crime and violence are rarely caused by a single risk factor, but rather by the presence of multiple risk factors and the absence of protective (or resiliency) factors. Risk factors for crime and violence include

poverty and economic disparity, illiteracy and school failure, alcohol and other drugs, firearms, negative family dynamics, mental illness, incarceration, community deterioration, discrimination and oppression, power and control, exposure to media violence, experiencing and witnessing violence, and gender socialization.[1] Safety can be promoted through environmental interventions, including ensuring access to quality housing, reliable transportation to services and jobs, and opportunities for positive recreation (e.g. sports and libraries), while decreasing access to harmful influences such as tobacco, firearms, and alcohol.[1,2]

Why is it important for health?

Injury, death, and emotional trauma are adverse and often direct health outcomes resulting from physical assaults, homicides, and sexual assaults. In many marginalized communities, homicides account for the largest number of avoidable years of life lost, because of their disproportionate occurrence among young men. Witnessing and experiencing violence disrupts early brain development and causes longer term behavioral, physical, and emotional problems in children and youth, including perpetrating or being a victim of violence, depression, suicide ideation and attempts, smoking, obesity, high-risk sexual behaviors, school absenteeism, unintended pregnancy, eating disorders, and alcohol and drug abuse.[3,4,5,6]

Community violence decreases the real and perceived safety of a neighborhood, inhibiting social interactions and adversely affecting social cohesion.[7,8] This can create a vicious circle, as social cohesion can be a valuable tool in decreasing crime.[9] Studies have found a negative relationship between neighborhood residents' levels of mutual trust/willingness to take action and levels of violent crime.[8,10] In addition, the level of safety perceived by residents of a neighborhood may differ from objective measures of the level of safety (e.g., crime rates), and may be influenced by the residents' feelings of integration into the social fabric of the neighborhood, or by other aspects of social cohesion.[11,12]

Residents' worries about safety in their neighborhoods can be a cause of chronic stress and can also be a disincentive to engage in physical activity outdoors, particularly among women, children, and older persons.[10,13,14,15,16,17] A study in Baltimore, Maryland, ranked 65 neighborhoods on the Neighborhood Psychosocial Hazards Scale, a combined measure of social disorganization, public safety, physical disorder, and economic deprivation. The researchers then linked the neighborhood measures with health data for a sample of residents. Regardless of age, gender, race, education, smoking or medical history (e.g., hypertension, diabetes), residents were more likely to have had a heart attack if they lived in the most hazardous neighborhoods compared to the least hazardous neighborhoods.[18] In a separate study using the same data, researchers found that living in the most hazardous neighborhoods increased the odds of being obese compared to living in the least hazardous neighborhoods of Baltimore.[18] More importantly, this relationship could not be explained away by differences in resident demographics, wealth, education, alcohol consumption, tobacco use, diet, or physical activity.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Crime rates and perceptions of safety: Between 2013 and 2017, all crime rates increased, with the exception of drug crime. Increases primarily occurred between 2013 and 2015, with rates plateauing or

declining between 2015 and 2017. Among all crime types, property crime has the highest rate and has experienced the most significant increase. By neighborhood, South of Market, Tenderloin, Financial District, Mission, and Bayview have the highest violent crime rates. Property crime rates are mostly concentrated in neighborhoods with heavy tourist activity, including South of Market (this includes Westfield shopping center), Financial District/South Beach, North Beach, and Japantown. Drug crime rates are heavily concentrated in Tenderloin and South of Market. All crime rate types are higher in parts of the city defined as Areas of Vulnerability compared to the rest of the city.

Perceptions of safety are measured through the San Francisco City Survey. Between 2001 and 2017, there do not appear to have been any significant changes in the percent of residents that feel safe walking alone in their neighborhood during the day or at night. The percentage of residents that feel safe at night is consistently lower than the percent during the day. Perceptions of safety are lower in the eastern neighborhoods compared to the western side of the city. The ZIP codes with the lowest perceptions of safety during the day or night include 94102, 94103, 94124, and 94134—roughly covering Tenderloin, South of Market, Bayview, Visitacion Valley, and Portola neighborhoods. Asian, Black/ African American, and Latino residents have significantly lower perceptions of safety during the day and night compared to White residents.

YOUTH VIOLENCE AND CRIME

Child maltreatment: Over the past decade, substantiated cases of child maltreatment has decreased from 9.8 to 4 incidents per 1,000 children citywide. Despite this citywide decrease, a large disparity in the rate of substantiated child maltreatment cases for Black/African American children continues to exist, with a rate 17 times higher than for Asian/Pacific Islander children or White children. In fact, the disparity in the rates has increased in recent years as the rates for White and API children decreased by over 55 percent while rates decreased by only 38 percent for Black/African American children. The rate for Latino children has remained about four times as high as the rate for White children between 2007 and 2017.

Bullying: Nearly 30 percent of all middle school students reported being bullied on school property, while 15 percent report being bullied electronically. Those rates drop in high school to 13 percent and 11 percent respectively. By gender, significantly more middle school girls report being electronically bullied compared to boys (18 percent vs. 12 percent). By ethnicity, a greater percentage of White middle school students have experienced bullying on school property compared to Chinese students. Comparisons between other ethnic groups were not significant.

In middle school, a greater percentage of students that identify as bisexual report being bullied on school property compared to heterosexual-identified students (53 percent vs. 28 percent). In high school, a higher percent of all students that do not identify as heterosexual experience bullying, both on school property and electronically (at school: bisexual 20 percent; gay/lesbian 29 percent; unsure 21 percent; heterosexual 12 percent) (electronic: bisexual 19 percent; gay/lesbian 29 percent; unsure 17 percent; heterosexual 10 percent).

Youth dating violence: Between survey periods 2009–2011 and 2015–2017, the percentage of middle school youth reporting that they had experienced physical violence from someone they were dating dropped from 7 to 3 percent. There also appears to have been a drop among high school youth, but this is not significant. By gender, more male middle school students reported experiencing dating violence from 2009 to 2013 compared to female students (8 percent vs. 6 percent). Gay-, lesbian-, and bisexual-

identified middle and high school students also experienced at least twice as much dating violence as their heterosexual peers—around 15 to 20 percent in middle school and 10 to 30 percent in high school. Chinese students have the lowest rate of dating violence at around 1 to 3 percent in middle school and 4 to 5 percent in high school—significantly lower than the rate for Latino and Black/African American students. Comparisons between other ethnic groups were not significant.

Youth Juvenile Hall bookings: Between 2006 and 2015, there was a 71 percent drop in the number of Juvenile Hall bookings in San Francisco. While this drop is impressive, there are ethnic and gender disparities in the youth population that gets booked. Black/African American youth make up over 57 percent of the youth booked, even though they make up only 6 percent of the youth population. Similarly, Samoan youth make up 3 percent of the bookings, but only account for less than 1 percent of the youth population. Boys are similarly over represented—76 percent of bookings in 2017. The majority of youth booked at Juvenile Hall reside in the southeastern part of the city, the Mission, South of Market, or Western Addition neighborhoods. ZIP code 94124, which roughly covers the Bayview neighborhood, was home to nearly 22 percent of all of the youth booked at Juvenile Hall in 2017.

EMERGENCY ROOM VISIT RATES FOR ASSAULT

Assault: Between 2005 and 2016, there appears to have been a slight increase in the age-adjusted rate of emergency room visits for assault, from 40.3 in 2005–2009 to 47.5 in 2012–2016. This increase is more pronounced for adults alone, while youth experienced a decrease in their ER visit rate for assault. The visit rate for males is about twice the rate for females. By ethnicity, Black/African American San Franciscan's have by far the highest ER visit rate for assault—255 per 10,000 compared to 13 for Asian residents and 36 for White residents. Pacific Islanders have the second highest rate at 131. The disparity between males and females is also lower for Black/African American and Pacific Islander residents. While the visit rates for Asian, Latino, and White males are about twice as high as the rates for females, the rate for Black/African American men is only 1.29 times higher, and for Pacific Islanders the rates are nearly the same.

When the ER visit rate is calculated for specific age groups, transitional-aged youth (18 to 24) have the highest rate among both males and females. When examined by race, Black/African American adults ages 25 to 34 have the highest rate for their ethnicity (447), while Pacific Islanders ages 45 to 54 have the highest rate within their ethnic group (270). The ZIP codes with the highest rates of residents being admitted to the ER for assault are 94102 (Tenderloin), 94103 (SOMA), and 94124 (Bayview). When examined just for youth, 94124 has by far the highest rate.

What is currently being done in San Francisco to improve health?

In 2014, SFUSD completed a Memorandum of Understanding limiting police presence on school campuses[35] and the Board of Education adopted a resolution to end suspensions for "willful defiance," which accounted for more than 80 percent of suspension of Black/African American and Latino students.[36]

Data Sources

SFPD San Francisco Police Department. https://data.sfgov.org/Public-Safety/Police-Department-Incident-Reports-Historical-2003/tmnf-yvry

SFC San Francisco Controller's Office, "San Francisco City Survey," http://sfcitysurvey.weebly.com/

UCB University of California at Berkeley, "California Child Welfare Indicators Project." http://cssr.berkeley.edu/ucb_childwelfare/allegations.aspx

YRBS "Youth Risk Behavior Surveillance survey," http://www.cdc.gov/healthyyouth/data/yrbs/index.htm

SFJPD San Francisco Juvenile Probation Department, "2017 Statistical Report," https://sfgov.org/juvprobation/sites/default/files/2017AnnualReport_Statistics.pdf

OSHPD Office of Statewide Health Planning and Development. http://www.oshpd.ca.gov/

Methods and Limitations

Violent crime and drug crime: Crime rates are calculated based only on crimes that are reported to the San Francisco Police Department. Violent crime includes 1) forcible sexual offenses, 2) robbery, and 3) assault. Homicide data is excluded because it was not publicly available. Property crimes include 4) burglary, 5) larceny/theft, 6) vehicle theft, and 7) arson. Drug crimes include incidents coded as 8) drug/narcotic. All other crimes fall in the "other" category. Because crime incidents may include multiple crime categories, incidents were coded with the most severe crime category listed (1 to 8 listed previously).

Perceived safety: San Francisco City Survey respondents were asked to categorize their level of safety as very safe, safe, neither safe nor unsafe, unsafe, or very unsafe when walking alone in their neighborhood during the day or night. In 2015, the survey methodology changed from mail to phone in order to reach a more representative sample of San Francisco residents. This included changes to ethnic groupings—in 2015, Pacific Islander (previously included in Asian) and Middle Eastern became distinct groups. Thus, prior to 2015, Asian should be interpreted as Asian/Pacific Islander. Because of these methodological changes, data before and after 2015 should be compared with caution.

Substantiated child abuse: Rates of substantiated child maltreatment include cases of physical, sexual, and emotional abuse, as well as child neglect, exploitation, caretaker absence/incapacity, at-risk siblings, and allegations of substantial risk. Rates were calculated per 1,000 children using CA Department of Finance population estimates.

Bullying: Students were asked the following questions: During the past 12 months, have you ever been bullied on school property? During the past 12 months, have you ever been electronically bullied?

Dating violence: Students were asked the following question: During the past 12 months, how many times did someone you were dating or going out with physically hurt you on purpose? The denominator for dating violence rates is the number of youth that dated someone in the past 12 months.

Juvenile Hall bookings: Juvenile Hall bookings indicate that a youth (under 18) was detained for a criminal offense. Both duplicated and unduplicated Juvenile Hall bookings are presented. Duplicated bookings count each booking instance, even if it is for the same youth. Unduplicated counts each youth only once, even if they are booked multiple times.

Emergency room visits due to assault: Emergency room visits among San Francisco residents due to assault were identified with the following list of primary injury codes (E-Codes): E960, E961, E962, E963, E964, E965, E966, E967, E968.

Hospitalizations and emergency room visits:
Hospitalization and ER rates measure the number of admissions or visits, not the number of residents who are hospitalized. Admissions records may include multiple admissions by the same person.

In October 2015, the diagnosis coding standard for Hospitalizations and Emergency Room visits was changed from ICD-9 to ICD-10. Caution should be used in comparing data using the two different standards.

ICD-9 and ICD-10 codes for assault were obtained from the CDPH Safe and Active Communities Branch.[19] Records with ICD-9 code E967 or ICD-10 codes Y060, Y061, or Y07 indicated domestic abuse.

Estimates for assault as the primary cause were obtained by searching the primary diagnosis field only, while estimate for assault as the primary, co-morbid, or coexisting cause was obtained by searching all available diagnosis fields. Similarly, a primary diagnosis of domestic abuse was defined as an associated code in the primary diagnosis field or, where assault was the primary diagnosis, in any diagnosis field. A domestic abuse code in any diagnosis filed, regardless of assault as the primary cause, indicated domestic abuse as primary, co-morbid, or co-existing.

Population estimates for rates:

- State of California, Department of Finance, *Race/Hispanics Population with Age and Gender Detail, 2000–2010.* Sacramento, California, September 2012.
- California Department of Finance. Demographic Research Unit. 2018. State and county population projections 2010-2060 [computer file]. Sacramento: California Department of Finance. February 2017.

Standard Population for age adjustment:

- Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050. U.S. Department of Commerce, Economics and Statistics Administration, BUREAU OF THE CENSUS.

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ECONOMIC ENVIRONMENT

Variables

- Self-sufficiency income
- Educational attainment
- Labor force participation
- Employment rate
- Poverty
- Median household income
- Income inequality

Overview

- The self-sufficiency income in 2014 for two adults, one infant, and one school-aged child in San Francisco was $83,522.
- Seventy-two percent of 25- to 35-year-old residents in San Francisco have a bachelors degree or higher.
- Black/African American residents have the lowest labor force participation (55 percent) of any ethnic group (compared to Whites at 76 percent and Latinos at 72 percent).
- Forty-six percent of residents 75 years and older live below 200 percent of the federal poverty level.
- The median household income in Areas of Vulnerability (AOV) is half ($50,000) that of areas that are not AOVs ($111,000).
- San Francisco has the second highest income inequality in the Bay Area.

What is it?

In this assessment, economic environment refers to measures that illustrate the educational, employment, earning, and self-sufficiency status of the adult population.

Why is it important for health?

Researchers have consistently found that a person's social class is the most important predictor of health.[1] Education, occupation, income, and wealth are all elements of social class that impact health, because in the U.S. they generally determine the extent to which individuals and communities can access and consume resources that build health, such as healthcare, healthy food, and the ability to live in a safe and clean neighborhood.[2,3,4] Additionally, and perhaps even more importantly, higher social class often confers on individuals a greater sense of control over their lives, which reduces the overall burden of stress on their bodies.[3,5]

Education is foundational for developing the knowledge and skills that are needed for gainful employment. In the adult working-age population, education is typically measured as "educational attainment," or the years or level of overall schooling a person has achieved. In general, college graduates can expect to live five years longer than individuals who have not finished high school.[2] Educational attainment impacts health in many ways, including by influencing a person's employment and income. Americans with lower educational attainment are more likely to be affected by fluctuations in the economy and to experience unemployment. In 2009, unemployment rates were 15.5 percent for

adults without a high school diploma, but 4.7 percent for college graduates.[2] When employed, workers with less formal education are more likely to be employed in hazardous jobs, receive less health-related benefits and earn lower incomes.[2] Additionally, less-educated, low-paid workers are less likely to have control over many aspects of their working conditions, including hours and schedules, the balance between effort and rewards, decision latitude, organizational justice, and social support at work.[3] These factors can all contribute to physical and psychological stress that impedes health.

The influence of income on health begins early in life. Income has been linked to rates of low birth weight, which has been linked to child development and chronic disease later in life.[4] Children in lower-income families are also more likely to experience asthma, heart conditions, digestive disorders, and have elevated blood lead levels.[4] Poor adults are nearly five times as likely to report being in poor or fair health as adults with incomes over 400 percent of the federal poverty level (FPL).[4]

Wealth is the amount of financial assets that an individual has to draw upon minus debts owed. While less studied in relation to health than income, wealth is an important aspect of economic well-being because it allows individuals and families to weather storms like unemployment, medical issues, or other catastrophes. In addition, wealth (most often in the form of home ownership) tends to be passed down from generation to generation. Institutionalized racism, such as discriminatory housing policies and predatory lending practices, have had generational impacts by preventing the accumulation of wealth in many communities of color.[6] Income and wealth influence health through multiple pathways, including access to health-promoting goods and services, such as healthy food, safe housing and timely medical care; the psychosocial effects linked with economic resources, including control over working conditions and the ability to pay for basic needs; and the cumulative impact of economic deprivation during critical periods like pregnancy and childhood.[4]

In addition to individual- and family-level impacts, numerous studies have shown that income inequality, the extent to which income is distributed in an uneven manner among a population, is strongly and independently associated with decreased life expectancy and higher mortality, as well as reduced self-rated health status.[7] The effects of income inequality are likely mediated financially by means of public investments in shared goods and services, and socially by means of social cohesion, intrapersonal trust, and reciprocity. Accordingly, places with relatively more egalitarian distributions of income would have a higher average life expectancy irrespective of the average level of income.[8]

For more information on the impacts of food security and housing affordability, please see the Nutrition and Housing sections of this assessment.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

MEASURES OF ECONOMIC ENVIRONMENT

Based on per capita income, gross domestic product, median household income, and other indicators, the San Francisco Bay Area is one of the most prosperous in the nation.[9] In 2016, the median household income in San Francisco was $103,801, ranking 14th among all U.S. counties with a population of 65,000 or more.[10] However, the increasing cost of living along with inequitable economic opportunity means

that many in San Francisco are struggling to meet their basic needs.

Cost of living: Because many social services are available only to those earning less than 180 to 200 percent of FPL, the high cost of living in San Francisco means that a significant number of those who do not qualify for social services are in need. The Family Economic Self-Sufficiency Standard measures how much income is needed for a family, precisely defined and located in a particular county, to adequately meet its minimal basic needs. It is based on the costs families face on a daily basis—housing, food, childcare, out-of-pocket medical expenses, transportation, and other necessary spending—and provides a complete picture of what it takes for families to make ends meet. The average 2014 California self-sufficient standard for two adults and two children (one preschooler, one school-aged child) was $63,979, above the federal poverty guideline of $23,850.[11] In San Francisco, the self-sufficient standard for two adults, one infant, and one school-aged child was $83,522. On May 1, 2015, hourly minimum wage in San Francisco was increased to $12.25 and on November 4, 2014, San Francisco voters passed Proposition J, raising the minimum wage to $15.00 by 2018. Even with the increases, those earning minimum wage in 2018 will earn significantly less than is needed to live in San Francisco.

Housing and childcare represent the most significant living costs for many San Franciscans. Please see the Housing and Childcare and Education data pages for more information about the economic burdens of these expenses for San Francisco families.

Educational attainment: On average, children from less economically privileged households have lower levels of educational attainment than their higher-income peers, and this association has important implications for equality of opportunity.[12] Educational attainment is related to both income level and employment rate; those with higher educational attainment earn more and are less likely to be unemployed.[2] Overall, San Franciscans have high educational attainment; a greater percentage of adults 25 and over (57 percent) have a bachelor's degree or higher than in California (33 percent). Overall, males and females have similar educational attainment in San Francisco. However, educational attainment varies by ethnicity, age, and poverty level. A lower percentage of Asian, Black/African American, and Latino adults have at least a bachelor's degree compared to Whites. Younger generations are more likely to have a bachelor's degree or more—72 percent of 25- to 35-year-olds have a bachelor's degree or more, compared to 29 percent of 55- to 64-year-olds. About 26 percent of individuals living below 200 percent of the federal poverty level have a bachelor's degree or higher, whereas 62 percent of persons living at or above 200 percent of the poverty level have a bachelor's degree or higher. The neighborhoods with the lowest percentage of residents with a bachelor's degree or more are Chinatown, Visitacion Valley, Bayview, Excelsior, Portola, and OMI, which all have under 30 percent. Areas that are not designated as an Area of Vulnerability (AOV) have 65 percent of residents with a bachelor's degree or more, while 36 percent of residents that are in an AOV have advanced education.

Employment: A steady job in safe working conditions means more than simply a paycheck. Employment can also bring the income, benefits, and stability necessary for good health. Conversely, job loss and unemployment is associated with a variety of negative health effects. In terms of measuring participation in the workforce, there are two measures to track: 1) labor force participation, or the percentage of the population 16 years and older that is either working or looking for work; and, 2) employment/unemployment rates. The employment rate is calculated by dividing the number of people that are working by the population that is in the labor force (e.g., retired persons and persons that do not want to work are left out). The years 2006, 2011, and 2012 represent low points for labor force participation in San Francisco; however, since 2013 labor force participation has been above 70 percent.

In 2016, the unemployment rate in San Francisco was 4.5 percent—the lowest it has been in the past 10 years. When examined by gender, a lower percentage of females are in the labor force than males, but equal percentages of men and women are employed. Black/African American and Asian residents have the lowest labor force participation—55 percent of Black/African American residents are in the labor force and 64 percent of Asian residents are, compared to 76 percent of White residents and 72 percent of Latino residents. Similarly, Black/African American and Pacific Islander residents have the lowest employment rates (83 percent and 84 percent respectively), while all other ethnic groups have employment rates over 90 percent. When examined by age group, the trends are what would be expected—higher percentages of people between the ages of 25 and 54 are in the labor force, after which labor force participation drops off. However, across ages the employment rate is similar. Only about 47 percent of persons living under 200 percent of the FPL are in the labor market, compared to 79 percent of the population living at 200 percent FPL or higher. The neighborhoods with the lowest labor force participation are Chinatown, Seacliff, Tenderloin, Lakeshore, and South of Market, which all have less than 60 percent participation. However, the neighborhoods with the lowest employment rates are Bayview, Lakeshore, OMI, and Visitacion Valley, which all have employment rates of less than 90 percent. Areas designated as an Area of Vulnerability have both lower labor force participation and employment rates.

Poverty: Federal poverty level (FPL) is a widely used indicator of poverty and is often used to determine eligibility for public services. In 2016, the FPL was $27,950 for a family of four. In San Francisco in 2016, 10 percent of residents lived below 100 percent of the federal poverty level and more than one in five residents lived below 200 percent FPL. In recent years, the percentage of the population living below 200 percent of the poverty level has significantly declined, from a high of 30 percent in 2011 to 22 percent in 2016. When examined by gender, there is not a significant difference. Black/African American and Latino residents have the highest proportion of residents living below 200 percent FPL—54 percent of Black/African American residents and 36 percent of Asian residents are, compared to 16 percent of White residents. When examined by age group, persons 75 years and older have the highest percent of persons living below 200 percent FPL (46 percent). The neighborhoods with the highest proportion of residents living below 200 percent FPL are Chinatown, Tenderloin, Lakeshore, McLaren Park, and Treasure Island, which all have more than 50 percent very-low-income residents. High proportions of low-income residents in Lakeshore are likely related to a high density of SF State students living there, and many of the residents in the McLaren Park analysis neighborhood live in the Sunnydale public housing development. The percentage of residents living below 200 percent FPL is over twice as high in Areas of Vulnerability (41 percent) than elsewhere (17 percent).

Median income: In recent years, there has been a rapid increase in the median household income in San Francisco—from $69,894 in 2011 to $103,891 in 2016. This makes San Francisco one of the most affluent counties in the country. The neighborhoods with the lowest median household income are Chinatown, Tenderloin, South of Market, Lakeshore, and Treasure Island, which all have median household incomes of under $50,000. The neighborhoods with the highest household incomes are Seacliff, Presidio, and Potrero Hill, which all have median household incomes over $150,000. Areas that are not designated as an Area of Vulnerability (AOV) have a median household income twice as high as areas that are designated as AOVs.

Income inequality: Income inequality metrics aim to describe inequalities in the distribution of income in a specific population. Some measures like the Gini coefficient are based on the entire distribution of income; others capture relative differences in incomes at specific points in the distribution or between different populations. There is significant income inequality in San Francisco. The Bay Area, and

San Francisco in particular, have some of the highest income disparities in the U.S.[13] In 2016, San Francisco had the second highest Gini coefficient (50) among the nine Bay Area counties, after Marin County (52).

Data Sources

ACS American Community Survey. https://factfinder.census.gov/

ICCD Insight Center for Community Development, Self-Sufficiency Standard Tool for California. https://insightcced.org/tools-metrics/self-sufficiency-standard-tool-for-california/

Methods and Limitations

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

Areas of Vulnerability: Areas of Vulnerability (AOV) were created as a way to examine geographic data in relation to populations of concentrated socioeconomic disadvantage. The criteria to be designated as an AOV were:

- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for persons of color, OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for youth or seniors (65+), OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for two other categories (unemployment, completing high school or less, limited English proficiency persons, linguistically isolated households, or disability).

Tracts that had unstable data for an indicator were automatically given zero credit for that indicator.

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[12] Owen Thompson, "Economic Background and Educational Attainment–The Role of Gene-Environment Interactions." https://pantherfile.uwm.edu/thompsoo/www/JHR.pdf

[13] Bloomberg 2014, "Most Income Inequality: US Cities." http://www.bloomberg.com/visual-data/best-and-worst//most-income-inequality-us-cities

HEALTHCARE ACCESS AND QUALITY

Variables

- Health insurance and San Francisco healthcare access program participation
- Delayed/unable to obtain needed medical care
- Have a usual source of medical care
- Childcare health program coverage
- Transit access to nonprofit healthcare facilities
- Ethnic and linguistic match ratio between physicians and residents
- Preventable emergency room visits
- Preventable hospitalizations

Overview

- The percentage of San Franciscans that lack health insurance has fallen dramatically since 2010, to a low of 3 percent in 2016.
- Females 18 to 24, persons earning less than $50,000 per year, Black/African American and Latino residents, and persons living in Areas of Vulnerability are more likely to not have health insurance.
- Adults 25 to 44 years had a significantly higher rate of delaying medical care compared to adults 65 and over during the 2011–2012 survey period.
- Outlying neighborhoods, including Lakeshore, Visitacion Valley, and Treasure Island have significantly lower transit access to healthcare facilities.
- Asian, Black/African American, and Latino physicians are under-represented relative to the San Francisco population.
- There is a shortage of physicians that speak Chinese and Tagalog based on the linguistic composition of the San Francisco population.
- Preventable emergency room rates are higher for females than males, and higher for Black/ African American and Pacific Islander residents compared to other ethnicities.
- ZIP codes 94130, 94102, 94103, and 94124 have the highest preventable emergency room rates.

What is it?

Healthy People 2020 defines healthcare access as the timely use of personal health services.[1] Healthcare access requires: having the financial means to access healthcare including health insurance or other coverage; services in locations and at times reachable by those who need them; and services that meet the language and cultural needs of the user. Additionally, trust and respect between healthcare providers and users and also between the healthcare systems and the user are essential both in accessing services and ensuring the quality of services provided.

Health insurance is a type of insurance coverage that covers the cost of an insured individual's medical and surgical expenses. Healthy San Francisco is a program operated by the San Francisco Department of Public Health that is designed to make healthcare services available and affordable to San Francisco residents who do not have health insurance, regardless of immigration status, employment status, or pre-existing medical condition.[4] The San Francisco Health Plan (SFHP) is a licensed community health plan that provides healthcare coverage to low- and moderate-income families.[5]

The San Francisco Health Network (SFHN) comprises the direct health services provided by the San Francisco Department of Public Health to insured and uninsured residents of San Francisco. Services provided include primary care clinics, behavioral health services; dental care; acute care; skilled nursing care, and other home- and community-based services.[4]

Why is it important for health?

Access to healthcare affects physical, social, and mental health. Healthcare can prevent disease and disability, detect and treat illnesses, maintain quality of life, delay death, and extend life expectancy. Pre-pregnancy healthcare for young adults is particularly important as it can reduce rates of unintended pregnancy, poor birth outcomes, and lifetime disease risk for both mother and child. Regular access to quality healthcare and primary care services also reduces the number of unnecessary emergency room visits and hospitalizations.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Health insurance coverage: In 2016, only 3.3 percent of San Franciscans lacked health insurance, and another 1.64 percent were enrolled in a citywide health access program (Healthy San Francisco, Healthy Kids). There was a dramatic decrease in the percent of San Francisco's population that was uninsured from 12 to 3 percent between 2010 and 2016. Similarly, a significant decline in the percentage of residents enrolled in San Francisco's health access programs began in 2014. These two decreases can likely be attributed to improving economic conditions after the Great Recession and the implementation of the Affordable Care Act (ACA). The ACA greatly increased access to health insurance through two provisions that became effective January 1, 2014:

1. Expanded Medicaid eligibility to include all individuals earning below 138 percent of the federal poverty level (FPL), and
2. Federal subsidies for those earning up to 400 percent FPL to buy insurance on the new health insurance marketplaces.[2]

Accordingly, over 97,000 San Franciscans gained insurance in 2014, with nearly 41,000 enrolling in plans through Covered California, and another 56,000 newly enrolling in Medicaid. Coinciding with the increase in insurance enrollment, Healthy San Francisco participation dropped by nearly 60 percent by the end of 2014.[5] Decreasing enrollment in this program indicates more people gaining health insurance through other means.

When health insurance coverage is stratified by age and gender, we can see that young adults are the most likely to be without health insurance as of 2016. Females 18 to 24 are more likely to lack health insurance than any other female age group. For males, there are no significant differences between age

groups or when compared to females. By income group, people earning under $50,000 per year are the least likely to have health insurance compared to higher-income groups. In general, the more money people make, the more likely they are to be insured. By ethnicity, Latino and Black/African American residents are the most likely to lack health insurance. By neighborhood, Treasure Island, Tenderloin, Mission, Portola, Excelsior, and OMI have the highest percentage of residents without health insurance, as estimates for 2012–2016 are all above 10 percent. Parts of the city that are designated as Areas of Vulnerability (AOV) have twice the rate of uninsured residents as the rest of the city.

Access to healthcare: Health insurance is an important measure of access and affordability of healthcare; however, there are other factors that impact access to necessary medical care. Between 2007 and 2016, between 10 and 16 percent of adult residents reported that they had delayed needed medical treatment. There were no significant variations over that time period. However, persons 25 to 44 had a significantly higher rate of delaying medical care compared to persons 65 and over during 2011–2012. Also during 2007–2016, between 84 and 88 percent of adult residents reported having a usual source of medical care. Again, there were no significant variations over time. Females had a significantly higher rate of usual care source in survey period 2013–2014. By age, persons 18 to 24 had a significantly lower rate of usual care source in 2007–2009 and 2013–2014 compared to persons 65 and older.

Childcare offers a unique opportunity to reach children in the community and ensure that they have necessary health screenings and treatment. San Francisco's Child Care Health Program provides health screening in targeted neighborhoods. The program had its highest percentage of children with a physical exam during the 2012–2013 school year, but that percent declined during subsequent years. However, the exam rate seems to have been increasing in recent years.

Another factor that influences access to healthcare services is transportation. During 2012–2016, roughly 30 percent of San Francisco households did not have a personal vehicle (see the Transportation data page). These residents must rely on transit, walking, biking, ride-sharing, and other forms of transportation to get to their destinations. Due to both the density of healthcare service and transit options in the northeast quadrant of the city, healthcare transit access is the highest in the Tenderloin, SOMA, Hayes Valley, Western Addition, and Castro/Upper Market neighborhoods. The neighborhoods with the lowest healthcare transit access include Lakeshore, Treasure Island, Seacliff, Lincoln Park, Visitacion Valley, and Sunset/Parkside.

Lastly, patients may feel more or less likely to seek medical care when there is an ethnic or linguistic match. The 2013 Physician Survey by the Medical Board of San Francisco showed that there are a higher percentage of White and other race physicians compared to the population overall. Asian, Black/African American, and Latino physicians were under-represented relative to the resident population composition. Linguistically, there is a notable shortage in the percentage of physicians that speak Chinese and Tagalog relative to the resident population, while there is a higher percentage of physicians that speak Spanish than the population overall.

Preventable emergency room visits: High rates of preventable emergency room visits can be considered an indication of inadequate access to primary care. Between 2015 and 2016, the preventable emergency room rate per 10,000 residents was 265. The rates are higher for adults than youth and higher in females than males. Rates are the highest for Black/African American and Pacific Islander residents compared to White, Latino, and Asian residents. The ZIP codes with the highest preventable emergency

room rates are 94130 (Treasure Island), 94102 (Tenderloin), 94103 (SOMA), and 94124 (Bayview) for both adults and youth.

Preventable hospitalizations: Preventable hospitalizations are those which can be prevented through access to high-quality outpatient care. In 2016, the unadjusted rate of preventable hospitalizations in San Francisco was 863 per 100,000 residents. Rates in San Francisco are consistently below that seen statewide. Since 2005, rates have been declining in San Francisco and statewide.

Data Sources

ACS American Community Survey. https://www.census.gov/programs-surveys/acs/

CHIS UCLA Center for Health Policy Research, "California Health Interview Survey." http://ask.chis.ucla.edu/main/default.asp

SFDPH San Francisco Department of Public Health

OSHPD Office of Statewide Health Planning and Development. http://www.oshpd.ca.gov/

Let's Get Healthy California. https://letsgethealthy.ca.gov/goals/redesigning-the-health-system/reducing-preventable-hospitalizations/

Methods and Limitations

Preventable hospitalizations and emergency room visits:
Hospitalization and ER rates measure the number of admissions or visits, not the number of residents who are hospitalized. Admissions records may include multiple admissions by the same person.

Preventable hospitalizations were analyzed by Let's Get Healthy California. Data for 2015 are reported for nine months only due to a coding change from ICD-9 to ICD-10, which began October 1, 2015. ICD-9 comparisons across years should be made with caution since 2011–2014 results are based on 12 months of data, while 2015 rates are based on nine months of data. Comparisons between ICD-9 (Risk-Adjusted Rates, 2005–2015) and ICD-10 (Observed Rates, 2016) should not be made.

Preventable emergency room visits were identified by searching the primary diagnosis field for ICD-9 and ICD-10 codes. ICD-9 codes associated with preventable emergency room visits were obtained from a report, "Statewide collaborative quality improvement project reducing avoidable emergency room visits, Final Remeasurement Report: January 1, 2010–December 31, 2010," published by the California Department of Health Care Services, Medi-Cal Managed Care Division.[6] ICD-10 codes were obtained from a report published by the Oregon Health Authority, Ambulatory Care: Avoidable Emergency Department Visits[7] In October 2015, the diagnosis coding standard for Hospitalizations and Emergency Room visits was changed from ICD-9 to ICD-10. Caution should be used in comparing data (pre-2015 and post-2015) using the two different standards.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for youth or seniors (65+), OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for two other categories (unemployment, completing high school or less, limited English proficiency persons, linguistically isolated households, or disability).

Tracts that had unstable data for an indicator were automatically given zero credit for that indicator.

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HOUSING

Variables

- Housing production by affordability
- Workers living in San Francisco
- Housing tenure
- Excessive rent burden
- Overcrowding
- Eviction notices
- Unsheltered homeless
- Public health housing violations

Overview

- San Francisco falls behind the most in construction of moderate-income housing (80-120 percent AMI)—which has made up only 4 percent of all housing built between 2015 and 2017.
- Between 1990 and 2014–2015, there was a significant decrease in the percentage of low-income San Francisco workers (<80 percent AMI) that lived in San Francisco—suggesting that these workers must contend with higher transportation costs.
- The South of Market Planning District alone accounted for over half of all housing units built between 2015 and 2017.
- Asian residents are the most likely to own their home, while Black/African Americans and Latinos are the least likely.
- In Chinatown, only 71 percent of households live in uncrowded conditions.
- There was a significant decline in eviction notices in 2017.
- Supervisor districts 6 and 10 are home to 65 percent of San Francisco's unsheltered homeless population.

What is it?

These housing variables cover the availability, affordability, stability, and safety of shelter.

Why is it important for health?

Housing is a key social determinant of health. The availability, affordability, quality, stability, and safety of housing in a community has a major impact on the health and well-being of that community.

Availability and affordability: Insufficient supply and high demand, coupled with widening income inequality, have created a housing crisis in the Bay Area and many other cities across the country. When housing costs are high relative to household income, households are less able to afford necessary expenses such as food, utilities, transportation, childcare, and healthcare. Research demonstrates that low-income households that can afford their housing are able to spend nearly five times as much on

healthcare and a third more on food than those severely burdened with housing costs.[1]

Residential stability: In high-pressure housing markets with an insufficient supply of permanently affordable housing, residents may be forced into crowded living conditions, experience evictions, or fall into homelessness, if not displaced from the city completely.

- ***Overcrowding:*** Families and individuals that are evicted from their homes or are unable to afford them may choose to "double-up." Doubling-up is defined as having one or more adults in addition to the head of household and spouse or partner, such as an adult child living at home, two related or unrelated families residing together, or a parent living with an adult child.[2] Oftentimes, these arrangements lead to overcrowding, which is defined as having more than one person per room in the dwelling (this excludes bathrooms and strop/Pullman kitchens).[3] The impacts of overcrowding on health are both direct and indirect. Most immediately, crowding increases risks for respiratory infections such as tuberculosis and ear infection.[4] Overcrowded housing has also been associated with increased mortality rates (particularly for women), meningitis, and Helicobacter pylori bacteria that can cause stomach ailments.[5] Crowded housing conditions also contribute to poor child development and school performance, in part, because overcrowding limits the space and quiet necessary for children to do homework.[6,7] Overcrowding may act cumulatively with other environmental health stressors. For example, one recent study found that crowding combined with noise significantly increases chronic stress hormones in low-income children.[8] Finally, overcrowding affects health indirectly by creating conditions conducive to poor sanitation, high environmental noise, and residential fires.

- ***Eviction:*** Residential stability is correlated with a greater sense of personal well-being in low-income communities. Residents who are forced to move can experience stress from losing social relationships within a community, the difficulties associated with finding affordable new housing, and time, energy and money needed to relocate. The health impacts of housing instability are particularly acute for children and lead to behavioral problems, educational delays, depression, low birth weight, and numerous other health conditions.[9,10,11,12,13]

- ***Homelessness:*** Homelessness is a serious public health issue.[14] Not having a home makes it harder to find a job, stay healthy, and maintain relationships.[15] Those experiencing homelessness are three to four times more likely to die prematurely than their housed counterparts.[16] Homelessness increases the risk of being exposed to communicable disease (e.g., TB, respiratory illnesses, etc.), violence, malnutrition, and harmful weather. Behavioral health issues such as depression or alcoholism often develop or are made worse in such situations. The risk of being homeless is 10 to 20 times higher among individuals with serious mental illness compared to the general population. Additionally, children living in homeless shelters have been found to suffer from depression, have behavioral problems, or severe academic delay. Eviction is a leading cause of homelessness, especially for families with children.[17]

Housing safety: When housing costs are high, people are likely to accept unsafe housing conditions. Environmental health inspectors have found that many tenants are reluctant to complain to landlords about physically unsafe conditions because the tenants fear they will be evicted and will be unable to find other affordable housing in San Francisco. The health and safety of a population are also significantly affected by the quality and maintenance of the housing infrastructure.[18] Older, poorly

maintained buildings are often substandard, and not fully safe for habitation. Inadequate heating or ventilation, along with uncontrolled moisture sources, can promote the growth of mold and provide nourishment to pests such as roaches and dust mites, all contributors to asthma and respiratory allergies. Older housing stock also may have lead-based paint, a source of lead poisoning that is particularly dangerous for young children. Other infrastructure problems include exposed electrical wiring, unsafe heaters, and unprotected windows.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for graphs, charts, and maps containing more detailed data.

AVAILABILITY AND AFFORDABILITY

Housing production: Every eight years, the Association of Bay Area Governments (ABAG) produces a Regional Housing Needs Assessment, which identifies the number of housing units each jurisdiction must accommodate in it Housing Element.[19] The current planning period is 2015 to 2023. The prescribed number of housing units to be built is compared to the number of completed units, with housing affordability calculated as a percentage of the Area Median Income (AMI). Like past trends, San Francisco generally meets or exceeds goals for market-rate housing (>120 percent AMI), but generally has the lowest completion rate for low- and moderate-income housing (50 to 120 percent AMI). Between 2015 and 2017, 69 percent of all housing built was market rate, while only 4 percent was for moderate-income residents. In terms of where new housing is being built, the eastern side of the city, particularly South of Market, is experiencing the greatest increase in housing units. The South of Market Planning District alone accounted for over half of all housing units built between 2015 and 2017. The other areas that saw significant development include Bayview and the Tenderloin/Financial District. From a health perspective, it is important to ensure that considerations are made to address issues that may include transportation safety and sufficiency, air quality, and access to public and retail services.

The affordability and sufficiency of the housing supply has a direct impact on whether people who work in San Francisco are able to also live here. Between 1990 and 2014–2015, there was a significant decrease in the percentage of low-income San Francisco workers (<80 percent AMI) that lived in San Francisco, a moderate decrease in the percentage of middle-income workers (80 to 140 percent AMI) that lived in the city, and a significant increase in the percentage of higher-wage workers (>140 percent AMI) that lived and worked in the City. This shift may have come about for a variety of reasons, including higher growth in low-wage, service sector jobs, but unfortunately means that more of San Francisco's workforce is having to shoulder the burden of higher transportation costs to reach their place of employment

Home ownership: Whether a household rents or owns their home can have important health and social impacts. Owning one's home is associated with reduced physical health problems and a greater sense of control, which leads to improved mental health.[20] Homeowners are also more likely to vote, and home ownership is associated with greater willingness to fix community problems. Perhaps more importantly, owning one's home decreases vulnerability to eviction and displacement. In San Francisco, about 37 percent of households own their home. Home ownership rates are highest in more affluent neighborhoods, like Seacliff and West of Twin Peaks, as well as most of the southern neighborhoods and Sunset/Parkside, which all have over 50 percent home ownership. Areas of Vulnerability have lower

home ownership rates than other areas of the city. There are no differences in home ownership by gender. Asian residents are the most likely to own their home, while Black/African Americans and Latinos are the least likely. Households with incomes 200 percent of the federal poverty level (FPL) or more have a home ownership rate twice that of households with incomes below 200 percent FPL.

Rent burden: For San Francisco households that rent, about 20 percent pay 50 percent or more of their income to rent. The highest rate of excessive rent burden is in the Lakeshore neighborhood, likely because of the density of student housing from San Francisco State University. Other neighborhoods with high levels of excessive rent burden include Chinatown, Tenderloin, OMI, Outer Mission, Excelsior, Visitaction Valley, and Bayview, which all have around 30 percent of households paying 50 percent or more of their income. In Areas of Vulnerability, about 26 percent of households are severely rent burdened compared to 17 percent in the rest of the city. There are no differences by gender. A higher percentage of Asian and Latino households pay more than 50 percent of their income to rent compared to White households. Over 50 percent of households living below 200 percent of the federal poverty level (FPL) pay 50 percent or more of their income to rent. This statistic is particularly troubling, because these households already have limited disposable income for necessary expenses like food and medical care.

HOUSING STABILITY

Overcrowding*:* Overcrowding, as defined by the U.S. Department of Housing and Urban Development (HUD), is more than 1.01 people per habitable room. Severe overcrowding is defined as more than 1.51 people per habitable room. Due to data limitations, crowding statistics are presented as the number of units that are not overcrowded. In 2012–2016, 94 percent of San Francisco households were not overcrowded. The neighborhoods that have the fewest households living in uncrowded conditions are Chinatown, Tenderloin, Visitacion Valley, Portola, Excelsior, and Outer Mission. The situation in Chinatown is particularly bad, with only 71 percent of households living in uncrowded conditions. In Areas of Vulnerability, only 88 percent of households are not overcrowded, compared to 97 percent in the rest of the city. There are no significant differences in overcrowding by gender. Asian and Latino households are significantly less likely to be uncrowded compared to White households. Only 89 percent of household living below 200 percent of the federal poverty level (FPL) live in uncrowded conditions, compared to 96 percent of those living at or above 200 percent FPL.

Eviction notices: In San Francisco, rent control applies to all units built before June 13, 1979, with the exception of single family homes and condo units. This policy establishes acceptable rent increase limits and states that tenants can only be evicted for "just causes." Under the Rent Ordinance, landlords must file a notice with the Rent Board if they intend to evict a tenant (unless it is due to a failure to pay rent). A notice of eviction does not necessarily indicate that the tenant was evicted. In 2017, there were 3.7 eviction notices served per 1,000 rent-controlled (rental properties built before 1980) properties. This represents a notable decline from rates exceeding 10 notices per 1,000 rent-controlled units in previous years and is likely due to the passage of Eviction Protection 2.0 which strengthened eviction protections and went into effect in November 2015.[21] In 2017, the neighborhood with the highest eviction notice rate was Outer Mission, where 30 eviction notices were served at a rate of nearly 16 per 1,000 rent-controlled housing units. While Outer Mission had the highest rate, Sunset/Parkside and the Mission had the highest count of eviction notices in 2017—68 and 67 respectively. In 2015, the neighborhoods with the most eviction notices were Mission (175), Tenderloin (173), Sunset/Parkside (158), and Outer Richmond (133). The neighborhoods with the most notable decrease in evictions between 2015 and 2017 include Marina, Tenderloin, Financial District/South Beach, and Castro/Upper Market. In all years,

the rate of eviction notices served is higher in parts of the city designated as Areas of Vulnerability (AOV) compared to the rest of the city. Decreases in eviction notice rates between 2015 and 2017 were similar for AOVs and non-AOVs.

Homelessness*:* From 2013 to 2017, the number of unsheltered homeless people in San Francisco remained relatively constant. Between 2013 and 2017, about 58 percent of the homeless population was unsheltered.[22] Of those that were sheltered in 2017, 20 percent were in residential programs, jails, and hospitals.[22]

The majority (92 percent) of homeless persons were individuals without children; 8 percent were in families with children.[22] Over time, the number of homeless persons who are living as a family with children has remained consistent. In 2017, 6 percent of those counted were under the age of 18, and 18 percent were between 18 and 24 years.[22]

Homelessness disproportionately affects people of color and is concentrated in the eastern neighborhoods. Despite making up only 6 percent of the general population, 35 percent of the homeless population is Black/African American. Latinos also make up a larger proportion of the homeless population than of the general population (22 percent vs. 15 percent respectively).[22] Only 4 percent of the homeless population is Asian. Supervisorial districts 6 and 10 have the largest unsheltered homeless populations. While the primary cause of homelessness is not always clear, the top three causes include job loss (22 percent), substance use (15 percent), and eviction (12 percent).[22] Top obstacles to obtaining permanent housing include not being able to afford rent (56 percent), lack of income (33 percent), and lack of housing availability (25 percent).[22]

Data Sources

ACS American Communities Survey. https://www.census.gov/programs-surveys/acs/

Planning San Francisco Planning Department. http://sf-planning.org/citywide-policy-reports-and-publications

HSH San Francisco Department of Homelessness and Supportive Housing. http://hsh.sfgov.org/research-reports/san-francisco-homeless-point-in-time-count-reports/

SFDPH San Francisco Department of Public Health. https://www.sfdph.org/dph/EH/Housing/healthy.asp

Rent Board San Francisco Rent Board. https://sfrb.org/annual-eviction-report

Methods and Limitations

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

Areas of Vulnerability: Areas of Vulnerability (AOV) were created as a way to examine geographic data in relation to populations of concentrated socioeconomic disadvantage. The criteria to be designated as an AOV were:

- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for persons of color, OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for youth or seniors (65+), OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for two other categories (unemployment, completing high school or less, limited English proficiency persons, linguistically isolated households, or disability).

Tracts that had unstable data for an indicator were automatically given zero credit for that indicator.

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TRANSPORTATION

Variables

- Muni discount program participation
- Ratio of bike lanes and paths to road miles
- Vehicle access
- Commute mode
- Traffic density (average daily miles of vehicle travel per square km)
- Severe and fatal transportation injuries per 100 road miles

Overview

- The number of enrollees in free Muni programs has been steadily climbing between 2016 and 2018, indicating the programs' ongoing popularity.
- Areas of San Francisco that are designated as Areas of Vulnerability have a slightly lower ratio of bike lanes/paths to street miles (0.18) compared to parts of the city that do not have this designation (0.20).
- Households that live within the borders of the MacLaren Park neighborhood have lower car access compared to the surrounding Visitacion Valley neighborhood, likely because much of the population that falls within its borders lives in the Sunnydale public housing site, where residents may not have the income necessary to have a car. Previous analysis of the Sunnydale site as part of the HOPE SF redevelopment has indicated that public transportation is often challenging for residents, thus Sunnydale residents may struggle with greater transportation challenges than elsewhere in the city.
- Between 2007–2011 and 2012–2016, there was a significant decrease in the percentage of people driving alone (38 to 35 percent), while there were significant increases in the percentage of workers commuting by bike (3 to 4 percent) and those that use other modes such as Lyft/Uber, taxi, and motorcycle (2 to 3 percent).
- The neighborhoods that are most impacted by local traffic density include Tenderloin, Japantown, South of Market, Financial District, Hayes Valley, Chinatown, and Nob Hill, which all have over 70 percent of residents living in the most traffic-dense parts of the city.
- The Tenderloin neighborhood is by far the most impacted by traffic injury—the rate of severe and fatal traffic injuries is nearly six times as high as the city overall. Other highly impacted neighborhoods include all of the

neighborhoods that border the Tenderloin, including South of Market, Nob Hill, Japantown, Western Addition, Mission, and Hayes Valley.

What is it?

Transportation systems include the infrastructure and operation of facilities that help move people who are walking, biking, taking public transit, and traveling by motor vehicles.

Why is it important for health?

Transportation systems affect our health in multiple ways, such as: access to goods and services; neighborhood livability (e.g., physical activity, social engagement or disorder); injuries and fatalities occurring on the transportation system; and environmental quality associated with transportation system operations, particularly with regard to noise, clean air, and clean water.

Transportation system design impacts whether people are able to walk, bike, take public transit, play, access basic needs, and whether they are able to do so safely. Safe transportation systems that support walking, biking, and public transportation can contribute to good health by increasing physical activity and social interactions, and decreasing obesity, depression, cancer, heart disease, diabetes, and other chronic diseases, as well as traffic injury and death. Transportation system policies also impact people's exposure to transportation-related noise and air pollution from motor vehicles, which have an effect on people's ability to sleep, concentrate, communicate, and breathe clean air. These forms of pollution are associated with health-related outcomes including stress, hypertension, high blood pressure, heart disease, learning delays, sleep disturbances, hearing impairment, lung function, asthma, bronchitis, medical visits, and cancer.[1] Large trucks pose increased safety hazards, particularly to people walking and biking, due to their size and with diesel emissions particularly harmful to human health. Vehicle speeds also have significant impacts on safety, with an increase of just one mile per hour impacting whether someone walking is able to survive a crash. Relatedly, transportation system policy and design also impact the amount of greenhouse gas emissions emitted from vehicles—with climate change having a range of significant health impacts including heat-related illness and death, exacerbated air pollution and related illnesses, and potential increases in infectious diseases such as West Nile virus or Lyme disease.[2] Access to reliable public transit is also critical to the health of many seniors, people with disabilities, low-income residents, and other vulnerable populations who rely on public transit to reach grocery stores, healthcare, and other critical goods and services. Significantly, transportation system design—including local safety improvements as well as public transit service—determines who experiences positive or negative impacts, and whether those impacts are disproportionately distributed among communities based on factors such as age, race, ethnicity, income, and immigrant status.[3]

Emerging mobility issues such as autonomous vehicles, electric scooters and bicycles, ride-hail services, and shuttles in San Francisco have the potential to benefit health and also potential negative impacts, depending on whether and how their implementation supports safe transportation, reduces vehicle trips, or addresses inequities in transportation access and safety.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

SUPPORTS FOR SUSTAINABLE TRANSPORTATION

The impact of the transportation system on the health of San Franciscans is assessed through a number of indicators that describe supports for non-auto-dependent transportation, transportation behaviors, and transportation hazards.

Transit subsidy programs: Transit subsidy programs allow low-income residents to utilize San Francisco's public transportation system to meet their needs, without diverting much-needed funds from housing, food, and medical costs. Free Muni for Youth provides low- and moderate-income youth ages 5 to 18 free access to Muni services when using a Clipper card. The Free Muni for Seniors program does the same for adults 65 and older, as does Free Muni for People with Disabilities for persons who have a disability. These programs were launched between 2013 and 2015. The Lifeline program is a 50 percent discount off the standard adult monthly pass price and is available to adults with household incomes at or below 200 percent of the federal poverty level. To estimate the reach of these programs we divided the number of enrollees by the estimated number or residents that may be eligible (see the methods section below for more information). In 2018, an estimated 80 percent of eligible youth, 85 percent of eligible seniors, and 31 percent of eligible adults (Lifeline) participated. Seniors have high participation in ZIP codes on the western, southeastern, and northeastern sides of the city. The youth program has the highest participation in the ZIP codes that cover the Tenderloin, Western Addition, Nob Hill, and South of Market neighborhoods—which are all estimated to have over 100 percent participation. Rates over 100 percent in these neighborhoods are likely due to inaccurate estimates of the eligible population from the American Community Survey. Most other ZIP codes have participation rates for youth at or above 80 percent. Lifeline pass participation is the highest in 94134, which covers the Visitacion Valley neighborhood (and includes the large Sunnydale public housing site). The number of enrollees in free Muni programs has been steadily climbing between 2016 and 2018, indicating the programs' ongoing popularity.

Bicycle network: Well-maintained, highly connected, and safe bicycle routes in San Francisco can support public health by facilitating more cycling for transportation and recreation, a potentially important strategy for increasing physical activity and reducing the negative impacts of auto travel. Overall in San Francisco, there are 0.2 miles of bike lanes and paths per road mile. San Francisco's park lands, including Golden Gate Park, Lake Merced (Lakeshore neighborhood), the Presidio, and Lincoln Park have the highest ratios. Mission Bay, Mission, Japantown, and Financial District/South Beach all have over 0.3 miles of bike lanes/paths per road mile. Pacific Heights has no bike lanes or paths, and Chinatown and Haight Ashbury have only 0.01 miles of lanes/paths per street mile. Areas of San Francisco that are designated as Areas of Vulnerability have a slightly lower ratio of bike lanes/paths to street miles (0.18) compared to parts of the city that do not have this designation (0.20).

TRANSPORTATION BEHAVIORS

Vehicle access: Access to a private automobile can have both positive and negative impacts on public health. Individuals that have access to a personal vehicle may be less likely to walk, bike, or use transit

when possible. However, for individuals that live in parts of the city that are harder to navigate by walking, biking, or taking transit, or who have mobility constraints, lack of access to a car may impact their ability to get to medical care, work, school, or to buy healthy food. In San Francisco, about 30 percent of households do not have access to a personal vehicle, and this has remained consistent between 2007 and 2016. The neighborhoods with the lowest car access include Tenderloin, Chinatown, MacLaren Park, Nob Hill, Japantown, and South of Market, which all have less than 43 percent of households with vehicle access. The low rate of car access in MacLaren Park compared to the surrounding neighborhoods is likely because much of the population that falls within its borders lives in the Sunnydale public housing site, where residents may not have the income necessary to have a car. Parts of the city that are designated as Areas of Vulnerability have lower access to vehicles compared to elsewhere in the city.

Walking, biking, and public transit: Modes of transportation that replace trips made by private auto can have a positive impact on the health of a community, by increasing physical activity through active transportation, and by removing polluting vehicles from local roadways. Approximately 42 percent of San Francisco residents commute to work by car – 35 percent driving alone and 7 percent carpooling. Between 2007–2011 and 2012–2016 there was a significant decrease in the percent of people diving alone (38 to 35 percent). There were also significant increases in the percent of workers commuting by bike (3 to 4 percent) and those that use other modes (including Lyft/Uber, taxi, and motorcycle – 2 to 3 percent). Walking and transit usage also saw some increases. The neighborhoods with the highest proportion of automobile trips are as expected in the southern and western portions of the city. Neighborhoods with a high proportion of residents commuting by transit are predominantly located along BART and Muni rail lines. Commuting by foot is most common downtown, while rates of biking are the highest in the Mission neighborhood where 11 percent of residents bike to work. Other types of transportation, including Lyft/Uber, taxis, Chariot, and motorcycles are most common in the northern central part of San Francisco, including the neighborhoods of Pacific Heights, Russian Hill, Marina, and Haight Ashbury. Working from home is most common in more affluent neighborhoods, including Presidio, Seacliff, and Noe Valley. A slightly higher proportion of residents in areas that are not designated as Areas of Vulnerability commute by car than Areas of Vulnerability. Transit and walking are more common in AOVs, while biking is more common in non-AOVs. AOVs have half the rate of working from home compared to non-AOVs.

TRANSPORTATION HAZARDS

Local traffic density: Traffic density is a general proxy for adverse environmental exposures and health hazards of traffic. For this indicator we are measuring traffic on local streets, and freeways have been excluded. The air quality impacts of highway proximity are best captured in the air quality indicator on the Climate and the Natural Environment page. Local traffic-adverse environmental impacts include risk of transportation injury, noise, and air pollution. For this analysis we used traffic volume data from the San Francisco County Transportation Authority's 2012 CHAMP model, which was released in 2015. In San Francisco, about 30 percent of residents live in parts of the city with the top 20 percent of traffic density. The neighborhoods that are most impacted include Tenderloin, Japantown, South of Market, Financial District, Hayes Valley, Chinatown, and Nob Hill, which all have over 70 percent of residents living in the most traffic-dense parts of the city. Traffic density exposure does not greatly differ by Areas of Vulnerability.

Traffic injuries: Historically, every year in San Francisco about 30 people lose their lives and over 200 people are seriously injured while travelling on city streets. These tragedies are the impetus for

San Francisco's Vision Zero Initiative, which seeks to eliminate traffic deaths on city streets. To better track injury, Vision Zero developed a comprehensive Transportation-related Injury Surveillance System (TISS) linking hospital, police, emergency response, and other data for more accurate, coordinated and timely monitoring of transportation-related injuries and deaths. Using data from TISS from 2013 to 2015, there were about 99 severe or fatal traffic injuries per 100 road miles. The Tenderloin neighborhood is by far the most impacted by traffic injury, and the rate of severe and fatal traffic injuries is nearly six times as high as the city overall (598). Other highly impacted neighborhoods include all of the neighborhoods that border the Tenderloin, including South of Market, Nob Hill, Japantown, Western Addition, Mission, and Hayes Valley. The rate of severe and fatal traffic injuries in parts of the city designated as Areas of Vulnerability is nearly twice as high as elsewhere in the city. The geographic densities of traffic injury are consistent with Vision Zero's High Injury Network, which demonstrates that 75 percent of the severe and fatal traffic injuries in San Francisco occur on just 13 percent of city streets.

What is currently being done in San Francisco to improve health?

Vision Zero SF is San Francisco's policy and commitment to eliminate traffic deaths on San Francisco streets through coordinated actions by multiple city agencies to create safe streets, safe people, and safe vehicles. SFDPH has co-chaired Vision Zero with the San Francisco Municipal Transportation Agency since its adoption in 2014. There were 20 traffic deaths in San Francisco in 2017, the lowest in over 100 years. The San Francisco Municipal Transportation Agency completed 34 miles of engineering improvements on the Vision Zero High Injury Network in 2017, where 13 percent of streets account for 75 percent of severe and fatal injuries in the city.

Data Sources

SFMTA San Francisco Metropolitan Transportation Agency. https://www.sfmta.com/

ACS American Community Survey. https://www.census.gov/programs-surveys/acs/

SFCTA San Francisco County Transportation Authority. https://www.sfcta.org/modeling-and-travel-forecasting

SFDPH San Francisco Department of Public Health. https://www.sfdph.org/dph/EH/PHES/PHES/TransportationandHealth.asp

Methods and Limitations

Muni subsidy programs: The number of participants was collected by SFMTA for the Free Muni for Youth Program, Muni Lifeline Program, Free Muni for Seniors Program, and Free Muni for Persons with Disabilities Program at the ZIP code level.

To estimate the number of eligible residents, numbers were pulled from the American Community Survey. The following criteria were used to calculate the number of eligible residents:

- The Free Muni for Youth Program requires the youth to be aged 5 to 18 with a gross annual family income at or below 100 percent of the Bay Area Median Income level. The comparable income caps from the census are youths aged 6 to 17 at 399 percent of the poverty level or less. This is a conservative estimate.
- For the Lifeline program, eligible individuals are at or below 199 percent of the federal poverty level. Due to new senior and youth programs, they were excluded from the population estimate

for this program. The comparable group from the census are individuals aged 18 to 64 at 199 percent poverty or less.

- The Free Muni for Senior Program requires the senior to be aged 65 or older with a gross annual income at or below 100 percent of the Bay Area Median Income level. The comparable income caps from the census are seniors aged 65 or older at 399 percent of the poverty level or less.
- There is no current data available to determine the number of eligible residents for the Free Muni for People with Disabilities program. The program requires the individual to be a person with a disability and a gross annual family income at or below 100 percent of the Bay Area Median Income level.

The number of program participants was then divided by the estimated eligible population.

Bike lanes and paths: The number of miles of bike lanes and paths were summarized by geography using the SFMTA's bike network files from 2011, 2013, 2015, and 2017. That mileage was then divided by the number of street miles from the city's street centerlines file.

Traffic density: The 24-hour daily vehicle volume per street segment for 2012 was provided by the San Francisco County Transportation Authority from their travel forecasting model, SF CHAMP. Estimated Traffic Density was calculated as a smooth surface over San Francisco using the ArcGIS Kernel Density tool and a 100-meter grid size (with the default search radius of 450 meters). This method calculates the density of traffic on roadways in the neighborhood of each 100-meter cell. A smoothly curved surface is fitted over each street, with its value greatest on the street and diminishing as distance increases from the street (line) reaching zero at the search radius. The surface is defined so the volume under the surface equals the product of street length and the 24-hour vehicle count metric described above. The density at each 100-meter grid cell is calculated by adding the values of all the surfaces where they overlay the grid cell center.

After this grid, called a raster, was created, the average traffic density was calculated for each residential parcel in San Francisco by averaging all of the grid cells that fell inside of the parcel. The average traffic density exposure for each parcel was divided into quintiles and the parcels with the top 20 percent of exposure were flagged. The percent of the neighborhood population falling in that top 20 percent was calculating by dividing the number of persons living in the flagged parcels by the total population of the neighborhood.

The number of people living in each parcel was estimated using dasymetric mapping. Dasymetric mapping involves assigning each residential lot to a Census tract and calculating the total number of residential square feet within the tract. Each parcel's residential square feet is then divided by the total residential square feet in its assigned tract, to approximate the percentage of residential space that each parcel makes up. This percentage is then multiplied by the number of people within the assigned tract, such that we can estimate the number of people living in each parcel. Once we have estimates for the number of people living in each parcel, we assign each lot to the neighborhood that it falls within and calculate the number of people living in each neighborhood

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for youth or seniors (65+), OR
- Top one-third of tracts for < 200 percent FPL or < 400 percent FPL & top one-third for two other categories (unemployment, completing high school or less, limited English proficiency persons, linguistically isolated households, or disability).

Tracts that had unstable data for an indicator were automatically given zero credit for that indicator.

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APPENDIX I
HEALTH & WELL-BEING

ASTHMA AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Variables

- Asthma among adults
- Asthma among high school and middle school students
- Asthma among low-income children in childcare
- Asthma hospitalizations
- COPD hospitalizations

Overview

- The prevalence of asthma among cigarette smoker adults (18 percent) in San Francisco is 63 percent higher than that for non-smokers (11 percent).
- Black/African American and Filipino high school students (27.78 percent and 30.07 percent) and Pacific Islander and Filipino middle school students (28.31 percent and 27.86 percent) are more likely than other ethnicities to have asthma.
- The rates of asthma and COPD hospitalizations are the highest for Black/African Americans and are more than 10 times higher than for Asians; Pacific Islanders have the second highest rates.
- Asthma hospitalization rates among children ages 0 to 4 are much higher than other age groups.
- COPD hospitalization and emergency room visit rates, similar to asthma, are higher in the Tenderloin, South of Market, and Bayview Hunters Point neighborhoods.

What is it?

Asthma and chronic obstructive pulmonary disease (COPD) are chronic conditions affecting the airways. COPD, which is an umbrella term for airway diseases such as chronic bronchitis and emphysema, was the third leading cause of death in the U.S. in 2011.[1] Asthma is the leading chronic condition for children and affects an estimated 10 percent of the U.S. population.[2] Both conditions are characterized by chronic inflammation of the airways, which may result in coughing, wheezing, and shortness of breath. They can also be exacerbated by environmental conditions and exposures to substances such as tobacco smoke, cold air, allergens, and pollution. Chronic stress in childhood is associated with higher risk of asthma potentially by increasing the impact of traffic-related air pollution.[3] Asthma generally presents during childhood, while COPD is usually diagnosed in persons 40 and older.[4] The obstruction caused by asthma is considered reversible, whereas COPD is irreversible.[2] Asthma does not manifest uniformly in all who have the disease, and new research has identified at least nine types (phenotypes). Each asthma type requires unique approaches to treatment and prevention of episodes.[5]

While the exact causes of asthma are still unknown, current medical opinion is that genetics and environmental exposures play a role in the development of the condition. Persons with a family history of asthma or exposure to allergens and pollutants (such as tobacco smoke, ozone, or particulates) at an early age are at a higher risk of developing asthma.[6] The most common cause for COPD is tobacco smoke (first- and second-hand). Exposure to fumes and chemicals (generally in an occupational setting) may contribute to the development of COPD as well.[4] Asthma may also be a risk factor for COPD; children who have severe asthma are 32 times more likely that those with mild asthma to have COPD as adults.[2]

Climate change may modify exposure to the allergens and pollutants that increase risk for asthma and COPD. For example, extreme heat accelerates the creation of ground-level ozone and other fine particulates that can trigger asthma, while flooding from sea-level rise and extreme precipitation events causes household dampness and increases exposure to molds.[7]

Why is it important for health?

Asthma continues to be a major public health concern with a continually increasing prevalence. In 2011, it was estimated that approximately 26 million Americans have asthma, compared with only 20 million in 2001. Asthma is also a cause of lost productivity in adults and children, costing the nation roughly $56 billion annually in healthcare expenses.[8]

COPD is the third leading cause of death in the nation. Additionally, it was estimated in 2010 that COPD-related expenses cost the nation approximately $49.9 billion annually. Death rates due to COPD are typically higher among males than females.[9]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Asthma: The percentage of adults in San Francisco reporting having asthma has hovered around 12 percent since 2011. The prevalence of asthma is highest among cigarette-smoking adults (18 percent) who are 63 percent more likely to report having asthma than non-smokers (11 percent).

In 2015–2017, 18.72 percent of high school students and 17.06 percent of middle school students were told they have asthma. Black/African American and Filipino high school students (27.78 percent and 30.07 percent) and Pacific Islander and Filipino middle school students (28.31 percent and 27.86 percent) were more likely than other ethnicities to have asthma; White and Chinese students were the least likely to report having asthma.

In the 2016–2017 school year, 5.6 percent of low-income children in childcare were found to have asthma experience. This represents a decrease from 7.3 percent in 2013. However, up to 40 percent of children with asthma experience did not have a current asthma action plan on file at their daycare. Having an up-to-date action plan on file is a hallmark of asthma preparedness, key to avoiding ER visits and hospitalizations.

The rates of asthma hospitalizations had been declining significantly since 2012. In 2016, the asthma hospitalization rate was 5.71 per 10,000 residents, and the emergency room visit rate was 34.86 per 100 residents. Consistent with higher prevalence, rate of asthma hospitalizations was the highest for Black/African Americans (186.1 per 10,000 residents) and was more than 10 times higher than for Asians; Pacific Islanders had the second highest rate with 168.8 per 10,000 residents. Asthma hospitalization rates among children ages 0 to 4 are much higher than other age groups.

COPD: In 2016, the hospitalization rate due to COPD in San Francisco was 10.3 per 10,000 residents and the emergency room visit rate was 18.55 per 10,000 residents; both rates had been increasing. Hospitalization rates due to COPD were historically higher among males than females. As is the case with asthma, Black/African Americans had far higher rates of COPD hospitalizations and emergency room visits than all other races. COPD hospitalization and emergency room visit rates, similar to asthma, were higher in the Tenderloin, South of Market, and Bayview Hunters Point neighborhoods. These three neighborhoods historically had higher-than-average minority populations with a lower-than-average socioeconomic status.

Data Sources

CHIS California Health Interview Survey, UCLA Center for Health Policy Research.

OSHPD Office of Statewide Health Planning and Development.

YRBS Youth Risk Behavioral Surveillance System, Centers of Disease Control and Prevention.

CCHP Child Care Health Program, San Francisco Department of Public Health.

Methods and Limitations

Hospitalizations and emergency room visits:
Hospitalization and ER rates measure the number of admissions or visits, not the number of residents who are hospitalized. Admissions records may include multiple admissions by the same person.

Agency for Healthcare Research and Quality's Clinical Classification Software versions 2015 (ICD-9) and 2017 (ICD-10) were used to identify visits with COPD and Asthma primary diagnoses. Records meeting the criteria for Asthma or COPD were excluded if cystic fibrosis or other respiratory anomalies were indicated. Codes for cystic fibrosis and other respiratory anomalies were obtained from the Prevention Quality Indicator Technical Specification for Asthma in younger Adults Admission Rate (PQI 15-March 2015, September 2017) and Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older adults Admission Rate (PQI 05-March 2015, September 2017) published by the Agency for Healthcare Research and Quality.

In October 2015, the diagnosis coding standard for Hospitalizations and Emergency Room visits was changed from ICD-9 to ICD-10. Caution should be used in comparing data (pre-2015 and post-2015) using the two different standards.

Population estimates for rates:

- State of California, Department of Finance, *Race/Hispanics Population with Age and Gender Detail, 2000–2010.* Sacramento, California, September 2012.

- California Department of Finance. Demographic Research Unit. 2018. State and county population projections 2010-2060 [computer file]. Sacramento: California Department of Finance. February 2017.

Standard Population for age adjustment:

- Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050. U.S. Department of Commerce, Economics and Statistics Administration, BUREAU OF THE CENSUS

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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CANCER

Variables

- Invasive cancer incidence
- Invasive cancer mortality

Overview

- The most common cancers in San Francisco are breast (females), prostate, lung/bronchus, colon/rectum, and non-Hodgkin lymphoma.
- The leading types of cancer causing death are lung/bronchus, colon/rectum, liver, pancreas, and breast.
- Between 2010 and 2014, rates of invasive cancer per 100,000 population decreased from 438.24 to 390.17.
- In general, cancer incidence rates are higher among Whites and Black/African Americans as compared to other ethnicities.
- Among males, death rates due to lung/bronchus, prostate, liver, colon/rectum, and pancreas cancers are 85 to 213 percent higher for Black/African Americans than all males citywide.
- Similarly, among females, rates of lung/bronchus, breast, colon/rectum, pancreas, and lymphoma/multiple myeloma are 46 to 132 percent higher for Black/African Americans.

What is it?

Cancer, a collection of more than 100 types of diseases, develops when human cells start to grow and spread out of control, which can result in death. Cancer can start almost anywhere in the human body and, based on where the cancer starts, it is categorized by the organ or tissue type. When old cells become abnormal cells instead of dying, these extra cells may form a mass of tissue called a tumor. Many cancers form tumors, for example, breast cancer, lung cancer, liver cancer, etc.; while some cancers, such as leukemia (cancer of the blood), do not form tumors.

Tumors can be malignant (cancerous) or benign (non-cancerous). Malignant tumors can spread and invade other tissues when the cancer cells travel through the blood or lymph system to form new tumors. We use cancer staging 0 to IV to describe the size and the extent of cancer: stage 0 (carcinoma in situ) indicates the cancer is non-invasive and the cancer cells are contained in one location; stages I to IV indicate the cancer is invasive.[1] Unlike malignant tumors, benign tumors do not spread or invade other tissues and when they get removed, they usually don't come back. However, benign tumors can be life-threatening as well if they press on vital structures such as blood vessels or nerves.[2]

Cancer is caused by gene mutations which affect the DNA that control the cell to function and perform normally. The majority of gene mutations occur after birth, and they can be caused by environmental factors such as tobacco use, obesity, infectious organisms, chemicals, radiation, stress, etc.; the remaining mutations are due to inherited genetics.[3] Gene mutations can act together or independently to initiate or promote the development of cancer. Many years may pass between exposure to external factors and the detection of cancer. However, if cancers are detected and treated at their early stage, many can be cured or put into remission through treatments like surgery, chemotherapy, and radiotherapy.[4]

Why is it important for health?

The American Cancer Society estimates that 1,688,780 new cases of cancer will be diagnosed and 600,920 people will die from cancer in the U.S. in 2017.[5] The four most common cancers nationwide, and in San Francisco, are breast, lung, prostate, and colorectal cancer, which account for 46 percent of all new cases and 45 percent of deaths.[6] Lung cancer is the leading cause of cancer deaths in both men and women; 80 percent of lung cancers deaths are attributable to cigarette smoking. Lung cancer is usually diagnosed in its late stages, which results in a low five-year survival rate—15 percent for men and 21 percent for women.[7] Breast cancer is the most common cancer and the second leading cause of cancer death among women. Early screening by mammography has been proven to be very helpful for reducing mortality.[8] Prostate cancer is the most common cancer among men and can be cured if found in its early stages. Prostate-specific antigen testing is recommended for men beginning at age 50.[9] Colorectal cancer, also known as colon cancer or rectal cancer, is the fourth most common type of cancer diagnosed in the U.S. Deaths from colorectal cancer have decreased with the use of colonoscopies and fecal occult blood tests.[10]

In San Francisco, liver cancer is the fifth-most common cause of cancer death and to a large extent is attributable to hepatitis B and C infection. Liver cancer disproportionally affects Asians, which constitute 35 percent of the population.[11] (See “hepatitis B and C” section for more details.)

According to the American Cancer Society, there is strong evidence that an individual’s risk of developing cancer can be substantially reduced by healthy behavior.[12] They estimate that about 190,500, 32 percent of total cancer deaths in the U.S. in 2017, will be caused by tobacco use alone, and another third can be attributed to poor eating habits, overweight and obesity, and physical inactivity.[13] Moreover, cancer screening increases the chance of finding cancers in their early stages when they are most likely to be cured.[14] Promoting healthy behaviors can reduce or prevent much of the suffering and death caused by cancer.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Invasive cancer incidence: Between 2010 and 2014, rates of invasive cancer per 100,000 population decreased from 438.24 to 390.17. Invasive cancer rates in San Francisco are comparable to California rates (391.94 per 100,000 population in 2014).

The most common cancers in San Francisco were breast (females), prostate, lung/bronchus, colon/rectum, and non-Hodgkin lymphoma. Between 2010 and 2014, rates of prostate cancer decreased. Rates remained stable for all other types.

Ethnic variations are seen in cancer incidence rates. Among men, Black/African Americans had the highest incidence rates of prostate, lung/bronchus, colon/rectum, and liver cancers. Whites were most likely to have non-Hodgkin lymphoma. Latino and Asian Pacific Islander women typically had lower incidences of all cancers. Incidence rates were the highest among Black/African American women for lung/bronchus and colon/rectum cancers, and White women had the highest rates of breast, corpus uteri, and non-Hodgkin lymphoma.

Invasive cancer mortality: Between 2013 and 2017, all-cause cancer death rates in San Francisco remained constant. The death rate for lung cancer, the top cause of death, decreased from 33.45 to 26.09 per 100,000 population. The leading types of cancer causing death were: lung/bronchus, colon/rectum, liver, pancreas, and breast.

Cancer death rates for all of the leading cancers are highest among Black/African Americans. Among males, death rates due to lung/bronchus, prostate, liver, colon/rectum, and pancreas were 85 to 213 percent higher for Black/African Americans than all males citywide. Similarly, among females, rates of lung/bronchus, breast, colon/rectum, pancreas, and lymphoma/multiple myeloma were 46 to 132 percent higher for Black/African Americans.

Data Sources

CCRCAL: California Cancer Registry, California Department of Public Health.

CDPH: Death Statistical Master Files, California Department of Public Health.

Methods and Limitations

Breast and prostate cancer: rates for gender-specific cancers were calculated using the population of only that specific gender. This makes the rates of gender-specific cancers more comparable to other types of cancer that consider the entire San Francisco population.

Invasive cancer: Not all cancer sites are reported due to small sample sizes (fewer than six cases). Rates are per 100,000 and age-adjusted to the 2,000 U.S. Standard Population (19 age groups--Census P25-1130) standard. Incidence rates are dependent on frequency of cancer screening. If one gender, age group, or race/ethnicity is tested more often or thoroughly than another, that group will most likely report a higher incidence rate. This limitation could provide insight on the inconsistency between cancer incidence and mortality rates for specific sites when categorizing by race/ethnicity. For more information on cancer mortality statistics see the Mortality data page of this Assessment.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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[14] American Cancer Society. Cancer screening guidelines. https://www.cancer.org/healthy/find-cancer-early/cancer-screening-guidelines.html, 2017.

CARDIOVASCULAR DISEASE AND STROKE

Variables

- High blood pressure among adults
- Hospitalization due to hypertension
- Heart disease among adults
- Hospitalization due to heart failure
- Medicare beneficiaries treated for stroke

Overview

- 23.4 percent of adults living in San Francisco have been told that they have high blood pressure.
- The prevalence of high blood pressure among males (32.7 percent) is much higher than females (15.7 percent) in San Francisco.
- Black/African Americans have the highest percentage (33.5 percent) with high blood pressure compared to other races.
- The hospitalization rates due to hypertension or heart failure for Black/African Americans are three to five times higher than all other races.
- Hospitalization and emergency room visit rates due to cardiovascular disease are higher among residents in the southeast half of San Francisco.

What is it?

According to the American Heart Association, cardiovascular disease refers to a class of diseases that involves the heart and blood vessels. Many of these diseases are attributed to atherosclerosis, a condition where excess plaque builds up in the inner walls of the arteries. This buildup narrows the arteries and constricts blood flow. Hypertension, also called high blood pressure, is a condition where the force of blood pushing against the vessel walls is higher than normal.[1] Listed below are some common types of cardiovascular disease:

- **Stroke** occurs when a blood vessel leading to the brain is blocked or bursts, causing impairment to that section of the brain and the region of the body it controls. An ischemic stroke (the most common type) is when a blood vessel connected to the brain is blocked, whereas a hemorrhagic stroke happens when a blood vessel within the brain bursts. The most likely causes for these types of strokes are blood clots and uncontrolled hypertension, respectively.
- **Heart attack** occurs when blood flow to the heart is blocked. This could be the result of a blood clot. If the clot persists, the part of the heart muscle supplied by the clogged artery could die.
- **Heart failure** pertains to a heart that is not functioning at its full potential. The heart is still working, but the body is not receiving all of the blood and oxygen it requires.[2]

Why is it important for health?

Cardiovascular disease and stroke are largely preventable yet heart disease and stroke remain the first and third leading causes of death in the U.S., respectively.[3] Eighty percent of deaths due to ischemic heart disease and 50 percent of deaths due to stroke result from preventable factors including obesity,

poor physical activity, drinking alcohol, smoking cigarettes, eating unhealthy foods (especially foods with added sugar), and not controlling blood pressure and cholesterol levels.[4] Conversely, eating well, being physically active, and avoiding alcohol and tobacco protect against cardiovascular disease and stroke. Whether or not someone is able to or desires to adopt healthy behaviors is impacted by institutional policies and practices, and living conditions, especially physical and social environments, which interact to promote or inhibit behaviors. Additional information on nutrition, physical activity, tobacco use, alcohol use, and weight is available in their respective sections of this assessment.

People with metabolic disease and/or diabetes are at increased risk for cardiovascular disease and stroke. Someone has metabolic disease if they have at least three of the following metabolic risk factors: a large waistline, high triglyceride levels, low HDL cholesterol level, high blood pressure, and high fasting blood sugar.[5,6] Adults with diabetes are two to four times more likely to die from heart disease than adults without diabetes.[7] It is possible to prevent, delay or improve metabolic disease, diabetes, and subsequent cardiovascular disease through lifestyle changes.

Black/African Americans, Native Americans and Latinos have higher rates of cardiovascular disease and associated risk factors.[8] Black/African Americans are 30 percent more likely to die from heart disease and two times more likely to have a stroke.[9] Native Americans are twice as likely to die of cardiovascular disease before the age of 65 compared to all Americans.[10] Black/African Americans, Mexican Americans, and Native Americans are more likely to have risk factors associated with cardiovascular disease including high blood pressure, obesity, and diabetes, as well as are more likely to lack access to quality medical care and to live in high-stress, low-opportunity environments than are Whites.[9,11,12,13,14] While risk factors for cardiovascular disease among Asian and Pacific Islanders overall appear to be similar to those of Whites, there is wide variation across Asian and Pacific Islander subgroups. For example, Korean, Vietnamese, and Filipino men have some of the highest smoking rates in the U.S., and the prevalence of Type 2 diabetes is more than twice as high for Asian Indians compared to Chinese or Japanese.[14,15]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

High blood pressure/hypertension: In 2016, 23.4 percent of adults living in San Francisco had been told that they had high blood pressure, compared to 28.4 percent of adults in all of California. The percentage of males (32.7 percent) with high blood pressure was much higher than females (15.7 percent) in 2016, and Black/African Americans (33.5 percent) had the highest percent in 2011–2016.

Hospitalization rates due to hypertension, a major contributor to cardiovascular disease including stroke and chronic heart failure, were fairly stable from 2012 to 2015 in San Francisco, but increased by almost 50 percent in 2016 (9.91 per 10,000 residents), and the emergency room visit rates have been increasing as well. The rates for Black/African Americans were three to five times higher than other races; Pacific islanders had the highest emergency room visit rate (92.9 per 10,000 residents) among all races in 2016.

Heart disease/heart failure: Overall, 5.4 percent of the adults in San Francisco had been told they had any kind of heart disease in 2013–2016, which is slightly lower than 6.1 percent for California. Generally, male adults were more likely to have any kind of heart disease than female adults.

While the hospitalization and emergency room visit rates due to heart failure in San Francisco were fairly stable, the rates for Black/African Americans were the highest among all races.

The impact of cardiovascular disease in terms of hospitalizations and emergency room visits in San Francisco was higher among residents in the southeast half of San Francisco and among those who live in households earning less than 300 percent of the federal poverty level (FPL). Residents living in ZIP codes 94102, 94103, 94124, and 94130 had the highest hospitalization and emergency room visit rates for hypertension and chronic heart failure.

Stroke: In 2015, 3.6 percent of the 69,947 Medicare beneficiaries were treated for stroke in San Francisco. The rate is very close to the rate for California and is ranked the 26th highest county in the state.

Data Sources

CHIS: California Health Interview Survey (CHIS), UCLA Center for Health Policy Research.

Medicare Chronic Conditions Dashboard: http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Dashboard/Chronic-Conditions-County/CC_County_Dashboard.html

OSHPD: Office of Statewide Health Planning and Development (OSHPD).

Methods and Limitations

Hospitalizations and emergency room visits:
Hospitalization and Emergency Room visit rates measure the number of admissions or visits, not the number of residents who are hospitalized. Admissions records may include multiple admissions by the same person.

In October 2015, the diagnosis coding standard for Hospitalizations and Emergency Room visits was changed from ICD-9 to ICD-10. Caution should be used in comparing data using the two different standards.

Hypertension: Agency for Healthcare Research and Quality's Clinical Classification Software versions 2015 (ICD-9) and 2017 (ICD-10) were used to identify hospitalizations with a primary diagnosis of hypertension.

Heart failure: ICD-9 and ICD-10 codes for heart failure were adapted from the PQI 08: Heart Failure Admission Rate (September 2017) and PQI 08 :Heart Failure Admission Rate (March 2015) technical specifications published by the Agency for Healthcare Research and Quality. The case definition used here varies from that in the PQI 08 in that records indicating cardiac procedures were not excluded. A medical visit was determined to be primarily due to heart failure if the primary diagnosis field contained the identified ICD-9-CM (discharges prior to October 2015) or ICD-10 (October 2015 and later) codes.

Population estimates for rates:

- State of California, Department of Finance, *Race/Hispanics Population with Age and Gender Detail, 2000–2010.* Sacramento, California, September 2012.
- California Department of Finance. Demographic Research Unit. 2018. State and county population projections 2010-2060 [computer file]. Sacramento: California Department of Finance. February 2017.

Standard population for age adjustment:

- Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050. U.S. Department of Commerce, Economics and Statistics Administration, BUREAU OF THE CENSUS

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

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Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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CHILDREN'S ORAL HEALTH

Variables

- Percentage of kindergarteners who have experienced caries
- Clinics accepting Denti-Cal for children under age 5
- Number of children referred to dental care and received it who attend Head Start
- Percentage of kindergarteners who have untreated caries
- Percentage of Denti-Cal-eligible children ages 0 to 2 years who received dental care

Overview

- Tooth decay is the most common chronic disease among school-aged children in the U.S. One-third of students in San Francisco public schools have experienced tooth decay by the time they are in kindergarten.
- Eighteen percent of kindergarteners have untreated tooth decay, a leading cause of school absences.
- Dental services to prevent tooth decay reach fewer than 20 percent of Denti-Cal-eligible children ages 1 to 2 years in San Francisco.
- Low-income, Asian, Black/African American, and Latino children are twice as likely to experience tooth decay by the time they are in kindergarten as higher-income and White children.

What is it?

Children's oral health is an important part of a child's overall health.[1,2,3] Healthy teeth are essential for healthy eating, speaking, playing, and learning. Oral health in early childhood paves the way for oral health in adulthood and old age. The American Dental Association formally defines oral health to be a functional, structural, aesthetic, physiologic, and psycho-social state of well-being that is essential to an individual's general health and quality of life[4] and a window into the health of the body, which can show signs of nutritional deficiencies, general infection, or systemic diseases that affect the entire body and first become apparent because of mouth lesions or other oral problems.[5] Children's oral health is a public health priority in San Francisco, where the vision is for "all San Francisco children to be *cavity-free*" (http://www.cavityfreesf.org/).

Tooth decay can be prevented by maintaining a low level of fluoride exposure on teeth.[1,6] Prevention efforts must start before the age at which most of the population already has the disease. In California, prevention is recommended before 2 years of age.[3]

To promote children's oral health, the CDC recommends that parents and caregivers talk to their pediatrician, family doctor, nurse or dentist about putting fluoride varnish on their child's teeth as soon as the first tooth appears in the mouth, and have the child visit a dentist for a first checkup by age 1 year.[2] Fluoride varnish is a type of gel that can be painted on children's teeth with a soft brush. Fluoride varnish helps prevent tooth decay, a disease process also known as "caries", in baby teeth.[4] Fluoridated drinking water, daily tooth brushing with fluoridated toothpaste, and a diet low in sugar and fermentable carbohydrates can also promote healthy teeth.[1,2]

Oral health is a function of community-level factors, including local availability of medical and dental providers, insurance coverage, water supply, available food retail options, and childcare provider resources and practices.[7] Childcare providers can determine a child's access to preventive oral health services, fluoridated drinking water, low-sugar diet, and midday tooth brushing during the school/work day. Children can spend 30 to 50 hours per week in childcare.[8]

Tooth decay is a leading chronic disease of childhood.[2,9,10] Worldwide, 60 to 90 percent of school children have dental caries.[1] Nationally, in 2013–2014, 30 percent of children ages 3 to 5 years and 52 percent of children ages 6 to 9 had experienced at least one cavity in their primary teeth.[11,12] In 2004–2005, 71 percent of third-grade students in California had caries experience, and 29 percent had untreated caries.[10] Low-income and minority children have disproportionately higher tooth decay rates.[2,13] Nationally, in 2011–2014, 21.7 percent of children in households with an income below 100 percent of the federal poverty level had untreated caries, compared to 8.0 percent of children in households with an income at or above 400 percent of the federal poverty level.[14]

Caries prevention is a national health priority. Healthy People (HP) 2020 aims to increase the proportion of low-income children and adolescents who received preventive dental services during the past year from 30 to 33 percent, reduce the proportion of children aged 3 to 5 years with dental caries experience in primary teeth from 33.3 to 30 percent, and reduce the proportion of children aged 3 to 5 years with untreated dental decay in one or more primary teeth from 24 to 21 percent.[15]

Why is it important for health?

Poor oral health can cause pain, infections, school absences, difficulty concentrating, and poor appearance—problems that affect quality of life and ability to learn and interact with others.[1,2,3,16] Children with untreated decay miss more school days and have lower academic achievement.[13,17,18] Caries in baby teeth can lead to chronic infection and deformation or damage of the permanent teeth under the baby teeth.[19] Chronic inflammation due to periodontal disease causes systemic responses that are similar to those triggered by chronic inflammation associated with cardiovascular diseases, diabetes, cancer, and chronic respiratory diseases.[20] Some studies suggest that periodontal infection may magnify systemic inflammation.[21]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Tooth decay remains a prevalent local health problem. Between 2012 and 2017, there were no significant changes in caries experience among kindergarteners in San Francisco. Relative to 2013–2014, untreated decay has increased. In 2016–2017, 33 percent of San Francisco Unified School District (SFUSD) kindergarteners screened had caries experience, 18 percent had untreated decay, and 126 children needed urgent dental care.

Oral health disparities: Income and racial/ethnic disparities in children's oral health persist in San Francisco. In 2012–2017, low-income**,** Black/African American**,** Latino, and Asian children were twice as likely to experience dental decay by the time they reached kindergarten than higher-income and White children.

Caries experience varied by ZIP code. ZIP codes in central and western San Francisco met the national HP 2020 target for caries experience of 30 percent. ZIP codes in southern and eastern San Francisco did not. While 12 percent of kindergarteners living in ZIP code 94114 had caries experience in 2012–2017, over 40 percent of kindergarteners in southern and eastern San Francisco had caries experience.

Caries experience varied by code, *independent of race/ethnicity*. The pattern of higher risk in the southern and eastern ZIP codes was observed for all ethnic groups combined and for Asian and Latino groups, separately**.** *Note that ZIP code-specific data are suppressed for certain ZIP codes and for Black/African American, Pacific Islander, and White children due to small numbers***.**

In 2012–2017, rates of untreated dental decay did not meet the HP 2020 target of 21 percent in southern and eastern San Francisco ZIP codes. The highest rates of untreated decay were observed in ZIP code 94133, where 27 percent of kindergarteners had untreated decay. ZIP code differences in untreated decay were primarily seen for Asian children. Among Asian children, depending on the ZIP code of residence, rates of untreated decay varied from 14 to 34 percent. Among Latino children, rates of untreated decay were below 21 percent across all ZIP codes.

Few children ages 1 to 2 years visit the dentist: Between 2013 and 2015, less than 20 percent of Denti-Cal-eligible children ages 1 to 2 visited a dentist.

Limited availability of Denti-Cal providers: Citywide, in 2016, there were 42 Full-Time-Equivalent dentists for about 18,342 Denti-Cal-eligible children ages 0 to 5 years. The estimated shortage of Full-Time-Equivalent dentists in San Francisco to serve 18,342 Denti-Cal-eligible children ages 0 to 5 years is 34 dentists.[22] Only some ZIP codes in San Francisco had dental clinics that accept Denti-Cal-eligible children. According to a 2018 survey of San Francisco dental clinics serving Denti-Cal-eligible patients, nine out of 18 respondents reported a wait-time of 30 days or more for a third available dental appointment for child aged 0 to 2. Only one clinic reported offering treatment for pediatric dental patients with all types of special healthcare needs.[22] Between 2012 and 2016, there were 3,015 SFUSD kindergarteners living in the 94112 ZIP code and only one clinic accepting patients with Denti-Cal insurance. In the 94124 ZIP code, the ratio of clinics accepting patients with Denti-Cal insurance to kindergartners was 2:1019. Local Head Start childcare centers report lack of dentist availability or long wait-time for appointment as reason why children who were referred for treatment did not receive treatment during the school year.

Limited Denti-Cal reimbursement: California has had among the lowest Medicaid fee-for-service reimbursement rates for child dental care services, nationally, for many years.[23] In 2017, due to additional reimbursements from Proposition 56 Tobacco Tax measures, reimbursement for many Denti-Cal procedures increased temporarily by almost 40 percent. The increase was extended into 2018. In spite of this increase, Medi-Cal dental reimbursement remains less than half of what private dental insurers reimburse.[24]

Limited childcare center case management for children ages 3 to 4 years: Between 2012 and 2014, decreases in access to dental care for low-income children ages 3 to 4 years coincided with a national transition in Head Start childcare center administration. The data suggest that access to care for local children is dependent on national and statewide childcare policy and practice. Access to dental care for children enrolled in Head Start decreased nationally and statewide between 2012 and 2014.[25,26] In San Francisco, the proportion of low-income children enrolled in Head Start who needed

dental services, who received dental services, decreased sharply from 93 percent in 2012 to 53 percent in 2014.

Few preventive dental services in medical clinics for children ages 0 to 5 years: The availability of preventive dental services, such as fluoride varnish application, in settings outside of dental clinics can buffer against limited access to dentists. In 2014, only 11.8 percent of San Francisco Health Network (SFHN) patients ages 0 to 5 years received a fluoride varnish application at a medical visit. Although this number increased by about five-fold between 2014 and 2018, over 40 percent of SFHN patients ages 0 to 5 years remain to be reached.

What is currently being done in San Francisco to improve oral health?

Beginning in 2012, a citywide collaborative now known as CavityFree SF formed to reduce children's caries experience and disparities. CavityFree SF developed the San Francisco Children's Oral Health Strategic Plan 2014–2017, which aimed to "increase awareness and practice of optimal children's oral health behaviors among diverse communities", "increase access to oral health services", and "integrate oral health with overall health."[27]

Implementation of the strategic plan resulted in 16 additional medical clinics, in three large medical systems, providing fluoride varnish applications at pediatric well-child visits for children under age 6. In 2016, fluoride varnish applications were administered to 1,752 children through primary care clinics.[28]

With funding from California Department of Public Health (CDPH) Oral Health Program, California Department of Health Care Services (DHCS) Prop 56, and Dental Transformation Initiative and in collaboration with Our Children Our Families, CavityFree SF aims to reduce caries experience from 39 to 27 percent; reduce untreated decay from 18 to 8 percent; reduce the difference in caries experience between Asian, Black, and Hispanic/Latino kindergarteners and White kindergarteners from 20 to 15 percentage points; reduce the racial/ethnic disparity in untreated decay from 8 to 6 percentage points; and increase the percentage of Denti-Cal-eligible children who have seen a dental provider by age 2 from 27 to 31 percent, all by 2020. San Francisco Dental Transformation Initiative Local Dental Pilot Program, working with CavityFree SF, will implement five pilot projects to increase access to dental services, increase dental care coordination, develop health promotion messages, increase interprofessional collaboration, and incentivize FQHC dual-users.[29,30,31,32]

Data Sources

San Francisco Unified School District (SFUSD)-San Francisco Department of Public Health (SFDPH) Dental Services. Kindergarten Oral Health Screening Program.

California Department of Health Care Services (DHCS), Medi-Cal Management Information System/Decision Support System, 2012.

Head Start PIR (Program Information Report) data 2008 to 2016.

CHDP Children's Dental Referral Directory available at https://www.sfhp.org/programs/medi-cal/benefits/dental-services/

San Francisco Department of Public Health, San Francisco Denti-Cal Clinic Capacity Survey.

San Francisco Health Network program data, Fluoride Varnish Applications for Children Age 0-5 Years, 2014–2018.

Methods and Limitations

Caries experience is defined as having one or more untreated or treated (filled) cavity. Low income is defined at or below 200 percent of the federal poverty level.

Between 2007–2008 and 2016–2017, the SFDPH Dental Services offered annual oral health screening to all children enrolled in kindergarten classes in the San Francisco Unified School District, excluding children in charter schools. Approximately 4,000 children were screened each year. Families were notified of the date of the oral health screening by flyer and a note sent home with each child. Children who were absent or who did not assent to screening on the date specified were not screened.

Forty to fifty licensed, volunteer dentists from the San Francisco Dental Society (SFDS) conducted the dental screenings. The program annually gave the dentists a written training module detailing the clinical data to collect and the diagnostic criteria to use. The oral health information collected for each child included the number of primary and permanent teeth with untreated or treated decay and treatment need. The diagnostic criteria defined treatment need in terms of Class I, Class II, and Class III categories:

Class I: No visible dental problems. Individuals apparently require no dental treatment.

Class II: Mild dental problems. Individuals require treatment, but not of an urgent nature. Class II problems include pinhead-size cavities that are not generalized or advanced, moderate plaque and calculus accumulation indicating the need for oral prophylaxis, or other oral conditions requiring corrective or preventive measures.

Class III: Severe or emergency dental problems. Individuals require treatment of cavities as large as a green pea, extensive pinhead cavities, chronic abscess(es), acute or chronic oral infection, heavy calculus accumulation, insufficient number of teeth for mastication, injuries, and/or painful conditions.

The San Francisco indicator may underestimate the prevalence of caries experience. To allow comparison of local data with national caries experience estimates, the San Francisco indicator does not include extracted teeth or count caries in permanent teeth. The HP 2020 target focuses on caries experience in primary teeth. The National Health and Nutrition Examination Survey does not capture data on extracted or missing primary teeth.

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DIABETES

Variables

- Diabetes among adults
- Gestational diabetes among pregnant women
- Hospitalization due to diabetes (primary and co-morbidity)
- Hospitalization charge due to diabetes (primary and co-morbidity)

Overview

- Diabetes is the eighth leading cause of death in San Francisco. It is a major contributor to cardiovascular disease, which is the leading cause of death, and is the leading cause of kidney failure and need for dialysis.
- Women who are diagnosed with gestational diabetes are 7.4 times more likely to develop diabetes within about 10 years after pregnancy than other women. In San Francisco, the prevalence of gestational diabetes increased significantly from 5.4 (5.2-5.7) to 7.1 (6.9-7.4) percent of live births between 2007–2011 and 2012–2016.
- Over the past 30 years the prevalence of diabetes among Black/African Americans quadrupled. Black/African Americans are 70 percent more likely to develop diabetes than Whites. In San Francisco, rates of hospitalization are three to six times higher and rates of death are two to three times higher among Black/African Americans compared to all other races/ethnicities.
- People living in households earning less than 200 percent of the federal poverty level (FPL) are three times more likely to have diabetes than those who earn more in San Francisco.
- Residents in the eastern ZIP codes (94102, 94110, 94115, 94124, and 94130) are more likely to be hospitalized due to diabetes than those living elsewhere in San Francisco. The hospitalization charge due to diabetes as a primary cause in 2016 was $85,000,000, and the number was 15.8 times higher for diabetes as an underlying cause.
- In 2016, diabetes resulted in more than $87 million in hospitalization charges in San Francisco. Diabetic patients may require a higher level of care resulting in increased hospitalization costs; hospitalization costs for diabetes patient hospitalizations in the 2011 California study were estimated to be $2,200

higher than costs for non-diabetic hospitalizations.

What is it?

According to the Centers for Disease Control and Prevention (CDC), diabetes is the condition in which the body does not properly process food for use as energy. Most of the food we eat is turned into glucose, or sugar, for our bodies to use for energy. The pancreas, an organ that lies near the stomach, makes a hormone called insulin to help glucose get into the cells of our bodies. When you have diabetes, your body either doesn't make enough insulin or can't use its own insulin as well as it should. This causes glucose to build up in your blood.

The two main types of diabetes are Type 1 diabetes and Type 2 diabetes.[1] Type 1 diabetes, previously called insulin-dependent diabetes mellitus or juvenile onset diabetes, accounts for 5 to 10 percent of all diagnosed cases of diabetes. Autoimmune, genetic, and environmental factors are involved in the development of this type of diabetes.

Type 2 diabetes, previously called non-insulin-dependent diabetes mellitus or adult-onset diabetes, accounts for about 90 to 95 percent of all diagnosed cases of diabetes. Type 2 diabetes, once known as adult-onset diabetes, is now recognized as a growing problem among young adults and youth.[2] Individual risk factors for Type 2 diabetes include obesity, family history of diabetes, prior history of gestational diabetes, gestational diabetes in the mother, low birthweight, impaired glucose tolerance, unhealthy diet especially consumption of sugary foods, and physical inactivity.[3,4] Living conditions, personal belief systems, and institutional policies and practices contribute to Type 2 diabetes by limiting the options for healthy lifestyle choices. For example, overweight and obesity, the biggest predictor of diabetes, is affected by barriers to physical activity (e.g., safety, costs, location of facilities), limited healthy food options (e.g., food insecurity, food deserts, not being breastfed), and poverty.[5] The social determinants of health, including Physical Activity, Nutrition, and Economic Environment, are discussed in further detail throughout this assessment. Asians, Black/African Americans, Native Americans, Latinos, and those with a lower socioeconomic status are more likely to have diagnosed or undiagnosed Type 2 diabetes.[6] Contributors to the racial and ethnic disparities seen in Type 2 diabetes include inferior neighborhood conditions; biological causes such as differences in glucose metabolism and the development of insulin resistance; behavioral causes including higher smoking rates and increased consumption of refined sugars; and other factors such as higher obesity rates, higher depression rates, increased rates of gestational diabetes, and increased abdominal fat.[7,8]

Black/African Americans are at particularly high risk for Type 2 diabetes. Over the past 30 years the prevalence of diabetes among Black/African Americans has quadrupled, and Black/African Americans are 1.7 times as likely to develop diabetes as Whites.[9] One out of every two Black/African American children born after 2000 will have Type 2 diabetes in their lifetime. Black/African Americans are not only more likely than Whites to develop diabetes but also experience greater disability from diabetes-related complications such as amputations, adult blindness, kidney failure, and increased risk of heart disease and stroke; death rates for Black/African Americans with diabetes are 27 percent higher than for Whites.

A third type of diabetes, gestational diabetes, develops in 2 to 5 percent of all pregnancies but usually disappears when a pregnancy is over.[1] Women who have gestational diabetes during pregnancy have a 7.5-fold increased risk for the development of Type 2 diabetes.[10] Gestational diabetes occurs more frequently in Black/African Americans, Latinas, Native Americans, and people with a family history of diabetes than in other groups. Obesity is associated with higher risk.

Prediabetes, also referred to as impaired glucose tolerance or impaired fasting glucose, is a condition in which blood glucose levels are higher than normal but not high enough for a diagnosis of diabetes. People with prediabetes have a much higher risk of developing Type 2 diabetes, as well as an increased risk for cardiovascular disease.[11] Without intervention efforts, up to 30 percent of people with prediabetes will develop Type 2 diabetes within five years, and up to 70 percent will develop diabetes within their lifetime.[12] In California, more than 13 million adults (46 percent of all adults in the state) are estimated to have prediabetes or undiagnosed diabetes in addition to the approximate 2.5 million with diagnosed diabetes. Rates of prediabetes are disproportionately high among young adults of color, with more than one-third of Latino, Pacific Islander, Native American, Black/African-American, and multi-racial Californians ages 18 to 39 estimated to have prediabetes.[13]

Why is it important for health?

Type 2 diabetes, which accounts for 90 to 95 percent of all diabetes, can be prevented or delayed through moderate weight loss, exercise, and improved nutrition, yet diabetes impacts health and health spending significantly.[14,15] Diabetes is the seventh leading cause of death in the United States.[1] It is a major contributor to cardiovascular disease, which is the leading cause of death, and is the leading cause of kidney failure and need for dialysis.[16,17,18] Diabetes can cause other serious health complications including blindness and lower-extremity amputations. And, while less than 2 percent of hospitalizations in California indicate diabetes as the primary diagnosis for hospitalization, more than 30 percent of all hospitalizations in California in 2011 among patients 35 and over had diabetes.[18] Diabetic patients may require a higher level of care resulting in increased hospitalization costs; hospitalizations costs among diabetes patient hospitalizations in the 2011 California study were estimated to be $2,200 higher than among non-diabetic hospitalizations.[19,20,21]

Gestational diabetes may have long-term health impacts for babies born to mothers with gestational diabetes. Many may suffer from excessive birthweight, preterm birth, respiratory distress syndrome, low blood sugar, and Type 2 diabetes later in life.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Diabetes prevalence: An estimated 5.9 percent of San Franciscans had been told they had diabetes in 2014–2016, which increased from 4.5 percent in 2011–2013 but it was still lower than California state level 9.3 percent. People living in households earning less than 200 percent of the federal poverty level (FPL) were three times more likely to have diabetes than those who earn more.

Gestational diabetes: In San Francisco, the prevalence of gestational diabetes increased significantly from 5.4 (5.2-5.7) to 7.1 (6.9-7.4) percent of live births between 2007–2011 and 2012–2016. Residents

living in the Sunset and southeast neighborhoods of San Francisco were at highest risk of gestational diabetes.

Hospitalizations: In 2016, the age-adjusted rates of hospitalizations and emergency room visits due to diabetes were 14.5 and 14.2 per 10,000 residents. Research indicates that the true burden of diabetes may be substantially higher; analyses considering underlying causes of hospitalization instead of primary cause alone have found diabetes to be associated with up to a third of all hospitalizations in California.[18] The rates for diabetes as a primary or co-morbid cause were more than 10 times higher than as primary cause alone for both hospitalizations and emergency room visits. The rates in 2016 were significantly higher among Black/African Americans than all other races. Hospitalization rate was also higher among residents in the 35 to 44 age group besides the 75 and older age group in 2016. Residents in the eastern ZIP codes (94102, 94110, 94115, 94124, and 94130) are more likely to be hospitalized or visit emergency room due to diabetes than those living elsewhere in San Francisco.

The total hospitalization charge due to diabetes as a primary cause in 2016 was $85,000,000, and the number was 15.8 times higher for diabetes as an underlying cause.

Data Sources

CHIS California Health Interview Survey (CHIS), UCLA Center for Health Policy Research.

CDPH Birth Statistical Master File, California Department of Public Health (CDPH).

OSHPD California Office of Statewide Health Planning and Development (OSHPD).

Methods and Limitations

Hospitalizations and emergency room visits:
ICD-9 and ICD-10 codes for Diabetes were obtained from the PQI 93: Prevention Quality Diabetes Composite (September 2017) and PQI 16: Lower-Extremity Amputation among Patients with Diabetes Rate (March 2015) technical specifications published by the Agency for Healthcare Research and Quality. A medical visit was determined to be primarily due to diabetes if the primary diagnosis field contained on the identified ICD-9-CM (discharges prior to October 2015) or ICD-10 (October 2015 and later) codes. To identify visits where diabetes was the primary cause, a co-morbidity, or coexisting with another primary cause, all 25 diagnosis fields were searched.

Population estimates for rates:

- State of California, Department of Finance. *Race/Hispanics Population with Age and Gender Detail, 2000–2010.* Sacramento, California, September 2012.
- California Department of Finance. Demographic Research Unit. 2018. State and county population projections 2010–2060 [computer file]. Sacramento: California Department of Finance. February 2017.

Standard population for age adjustment:

- Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050. U.S. Department of Commerce, Economics and Statistics Administration, BUREAU OF THE CENSUS.

Hospitalization and ER rates measure the number of admissions or visits, not the number of residents who are hospitalized. Admissions records may include multiple admissions by the same person.

In October 2015, the diagnosis coding standard for Hospitalizations and Emergency Room visits was changed from ICD-9 to ICD-10. Caution should be used in comparing data using the two different standards.

Gestational diabetes: Information about diagnosis of gestational diabetes is obtained within 10 days of a live birth from chart review and/or in-person interview after delivery in hospital. Trends in gestational diabetes may reflect changes in definition, screening or referral protocol.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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ENTERIC DISEASES

Variables

- Salmonellosis
- Shigellosis

Overview

- Salmonellosis incidence rates in San Francisco are consistently above the HP 2020 target of 11.4 cases per 100,000 residents.
- The rate of salmonellosis is highest among Asians and Pacific Islanders.
- Rates are highest among children under 5 years of age.
- Rates of shigellosis in San Francisco are consistently one of the highest in the state, with an incidence rate of 21.4 cases per 100,000 residents in 2016.
- Generally, shigellosis rates among men are significantly higher than women in San Francisco. This is primarily attributed to sexual transmission among men who have sex with men.

What is it?

Enteric diseases can be caused by bacteria, parasites, or viruses, and can include a range of symptoms, such as diarrhea and vomiting. They are generally transmitted by consuming contaminated food or beverages or having direct contact with contaminated feces or vomit. In San Francisco, salmonellosis and shigellosis are two of the most common enteric diseases caused by bacteria. Other common enteric diseases are campylobacteriosis, shigatoxin-producing *E. coli* (STEC), hepatitis A, and vibriosis.[1] Although anyone can get an enteric infection, those age 50 and older and those with reduced immunity are at a greater risk for hospitalizations and death.[2] Safe food handling, frequent and careful handwashing with soap, as well as other hygiene measures can prevent salmonellosis, shigellosis, and other enteric diseases.

Why is it important for health?

Each year in the U.S., *Salmonella* infections cause approximately 1.2 million illnesses, with 23,000 hospitalizations and 450 deaths.[3] It accounts for $365 million in direct medical costs each year.[4] *Salmonella* has been responsible for numerous multi-state foodborne outbreaks and food recalls.[5] While *E. coli* infections have declined in the U.S. since 1997, salmonellosis incidence has not.[4] Healthy People 2020 (HP 2020) calls for reducing the incidence rate of infections caused by *Salmonella* species to 11.4 cases per 100,000 residents.[2]

Approximately 131,000 *Shigella* infections are estimated to occur each year in the U.S., with 20 percent requiring hospitalizations.[6] *Shigella* is extremely infectious, with only a small amount of bacteria needed

to cause disease.[7] Because the bacteria is easily transmitted from person to person and through sexual activity, outbreaks of shigellosis have occurred in the U.S. among different communities, such as the homeless/marginally housed and men who have sex with men.[7,8] Antibiotic resistance is a growing concern, with an estimated 27,000 antibiotic resistant *Shigella* infections in the U.S. each year.[9] Antibiotic-resistant shigellosis is harder to treat, can increase the cost of treatment, and can lengthen the duration of sickness, increasing the chances of spreading the disease.[9]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Salmonellosis: Salmonellosis incidence rates in San Francisco were consistently above the HP 2020 target of 11.4 cases per 100,000 population. Between 2014 and 2016, the average annual incidence of salmonellosis in San Francisco was 20.3 cases per 100,000 population. The rate of salmonellosis was the highest among Asians and Pacific Islanders and children under five years of age.

Shigellosis: Rates of shigellosis in San Francisco were consistently one of the highest in the state, with an incidence rate of 21.4 cases per 100,000 residents in 2016.[10,11] In 2014 to 2015, rates of shigellosis increased compared to the previous years due to several local outbreaks, including a citywide outbreak of ciprofloxacin-resistant shigellosis that disproportionately affected homeless and marginally housed individuals in San Francisco. Generally, rates among men are significantly higher than women in San Francisco. This is primarily attributed to sexual transmission among men who have sex with men.[12]

Data Sources

SFDPH Communicable Disease Control & Prevention, San Francisco Department of Public Health (SFDPH).

Methods and Limitations

Data shown for a given year is by the date of report of the salmonellosis or shigellosis case to SFPDH. Data excludes *Salmonella typhi*, which causes typhoid fever. Rates reported likely underestimate the burden of salmonellosis and shigellosis in San Francisco since most people do not go to the doctor when they get a diarrheal illness.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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HEPATITIS B AND C

Variables

- Newly reported past or present hepatitis C infection
- Newly reported chronic hepatitis B infection

Overview

- San Francisco has the highest rate of liver cancer in the country, which is mostly caused by viral hepatitis.
- Asians and Pacific Islanders in San Francisco are disproportionately affected by hepatitis B (HBV), comprising one-third of San Francisco's population but representing nearly 90 percent of reported cases.
- Black/African Americans in San Francisco are disproportionately affected by hepatitis C (HCV), comprising almost 8 percent of San Francisco's population but representing over 30 percent of reported cases.
- Viral hepatitis is a health equity issue; End Hep C SF and SF Hep B Free have emerged as innovative campaigns to increase awareness of HCV and HBV, and ultimately eliminate HCV and HBV as public health threats in San Francisco.

What is it?

Viral hepatitis is an inflammation of the liver caused by a viral infection. Both hepatitis B and hepatitis C are spread through contact with bodily fluids, primarily blood in the case of hepatitis C, and blood and/or sexual fluids in the case of hepatitis B. Hepatitis D infection may coexist with hepatitis B infection.

Hepatitis C: Although 15 to 25 percent of people who contract hepatitis C virus (HCV) clear the virus on their own within six months after infection, most people (75 to 85 percent) who get HCV will develop chronic infection. Currently, sharing needles or other equipment to inject drugs is the main source of HCV infection. HCV can also spread through needle-stick injuries or use of unsterile equipment in healthcare settings, through birth from a mother who has hepatitis C, and through blood transfusions and organ transplants. (The latter has rarely occurred in the U.S. since widespread screening of the blood supply began in 1992.) Less commonly, HCV can also be spread through sexual contact with an HCV-infected person or through sharing personal items contaminated with infectious blood.[1]

Hepatitis B: Hepatitis B virus (HBV) causes a liver infection that can range from an acute, mild illness to a serious, lifelong chronic infection. HBV-infected women pass the infection to their babies during the birth process. People can also become infected with HBV by sharing needles for injection drug use; through sexual contact with an infected person; by an accidental needle stick with a contaminated needle; or from improperly sterilized medical, acupuncture, piercing, or tattooing equipment. Ten

percent of adults infected with HBV and 90 percent of babies exposed at birth will develop chronic hepatitis B infection.[2] An effective vaccine is available, and vaccination against HBV is required for entry into school in California.[3]

Why is it important for health?

Hepatitis C: HCV is the most common blood-borne disease, a major cause of liver cancer, and the leading cause of liver transplants in the U.S.[4] Approximately 50 percent of liver cancer cases are attributable to hepatitis C infection.[5] Nationwide, an estimated 3.2 million people are infected with HCV, and in California an estimated 750,000 people are living with HCV. Unless current trends are reversed, the deaths due to HCV will double or even triple in the next 20 years. Each year since 2007, more people have died of HCV than of HIV in the U.S.[7] While there is no vaccine to prevent hepatitis C, treatment with direct-HCV acting antivirals can cure over 85 percent of cases. Successful treatment reduces liver cancer risk by 75 percent and decreases transmission of the virus to others.[6]

Hepatitis B: Nationwide, approximately 15 percent of liver cancer cases are attributable to HBV infection.[5] HBV affects approximately 240 million people worldwide, and in the U.S., an estimated 1.4 million persons have chronic HBV infection. Rates of acute hepatitis B in the U.S. have declined by approximately 82 percent since 1991, when the Centers for Disease Control and Prevention recommended routine HBV vaccination of children in the U.S.[2] Approximately two out of three people who are infected do not know it.[8]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Past or present hepatitis C infection:[1] In San Francisco, an estimated 12,000 people are living with active hepatitis C[6] and, per 100,000 residents, there are more newly reported cases of past or present HCV infection in San Francisco than in California.[9] The burden of HCV in San Francisco mirrors that of the U.S. in terms of its disproportionate impact amongst Black/African Americans and baby boomers, people born between 1945 and 1965. Black/African Americans comprise approximately 26.3 percent of HCV cases, but only 8 percent of San Francisco's population, while baby boomers comprise two-thirds of HCV cases but only one quarter of San Francisco's population. Increased liver cancer rates among Black/African Americans and Latino males and females are likely attributable to hepatitis C infection and obesity.[10]

Chronic hepatitis B infection:[2] Chronic hepatitis B virus infection disproportionately affects Asian and Pacific Islander populations in San Francisco, as well as throughout the U.S. While comprising one-third of San Francisco's population, API populations represent an estimated 88 percent of newly reported cases where race is known. The increased burden in this population is likely attributable to infection among foreign-born API people who came from areas with high (more than 8 percent) and intermediate (2 to 7 percent) prevalence levels for hepatitis B surface antigen (HBsAg).[11,12] San Francisco has the highest rate of liver cancer in the U.S.[13,14] API males have rates up to three times higher than males of other ethnicities. High rates of HBV infection among API men is a leading cause of elevated liver cancer rates in API males.[10]

What is currently being done in San Francisco to improve health?

Hepatitis C: The End Hep C SF collective impact initiative was established in 2016 with the ultimate goal of eliminating HCV in San Francisco. End Hep C SF is a collaboration between over 30 community partners, including the SFDPH, and focuses on community-based HCV testing and linkage to care, improving treatment access, and preventing new infections and reinfections. The introduction of direct-acting and highly effective antiviral HCV medications in recent years has provided an opportunity to not only improve health outcomes, but even cure people chronically infected with HCV, thus paving the way to eliminate HCV as a public health threat in San Francisco.[7]

Hepatitis B: The fact that APIs bear the largest burden of chronic HBV infection highlights the need to provide culturally and linguistically appropriate education about HBV prevention throughout the API community. Efforts to raise awareness about HBV prevention and treatment in the API and clinical communities have been undertaken by SF Hep B Free, a citywide campaign that began in 2007 to 1) increase public and healthcare provider awareness of hepatitis B; 2) promote HBV testing and vaccination of all API persons in San Francisco; and 3) ensure access to treatment for chronically infected individuals.[15]

Data Sources

SFDPH Communicable Disease Control and Prevention, San Francisco Department of Public Health (SFDPH).

Methods and Limitations

Past or present HCV infection: The 2012 CDC/CSTE laboratory criteria are applied to HCV test results to identify persons who newly meet laboratory criteria for past or present HCV infection. These persons may have acute, chronic, or resolved infection because no single lab test distinguishes acute from chronic HCV infection or chronic infection from resolved infection.

The CDC laboratory criteria used to identify past or present HCV infection are any one of the following: antibodies to hepatitis C virus (anti-HCV) screening test positive with a signal-to-cutoff ratio predictive of a true positive as determined for the particular assay as defined by CDC *or* hepatitis C virus recombinant immunoblot assay (HCV RIBA) positive *or* nucleic acid test (NAT) for HCV RNA positive (including qualitative, quantitative, or genotype testing). For the signal-to-cutoff ratios, see http://www.cdc.gov/hepatitis/HCV/LabTesting.htm.

Chronic hepatitis B: The 2012 CDC/CSTE laboratory criteria for diagnosis are applied to HBV test results to identify persons with probable and/or confirmed chronic hepatitis B. CDC defines a probable case of chronic hepatitis B as a person who has a single positive hepatitis B surface antigen (HBsAg), positive HBV DNA, or positive hepatitis Be antigen (HBeAg) lab result and who does not meet the case definition for acute hepatitis B. A confirmed case of chronic hepatitis B is a person who has a single positive HBsAg, positive HBV DNA, or positive HBeAg lab result and a negative IgM anti-HBc lab result, **OR** who tests positive for HBsAg, HBV DNA, or HBeAg two times at least six months apart.

Surveillance data do not measure prevalence: The data presented are not an estimate of the incidence or prevalence of chronic hepatitis B or of past or present HCV infection in San Francisco residents.

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IMMUNIZATIONS AND VACCINE-PREVENTABLE DISEASES

Variables

- Immunizations among children
- Immunizations among infants
- Measles and pertussis incidence
- Influenza vaccine among adults
- Hospitalization due to vaccine-preventable pneumonia and influenza

Overview

- In 2016–2017, 94.2 percent of children entering daycare and 94.2 percent of children entering kindergarten in San Francisco had all required immunizations.
- Asian, Asian Pacific Islander, and Latino children are more likely to be vaccinated with the complete series than Black/African American and White children. Foreign-born children are less likely to be completely vaccinated than those born in the U.S.
- In 2014, San Francisco again saw a high number of pertussis cases in the setting of a statewide epidemic. The city reports fewer than five cases of measles a year.
- Influenza and pneumonia disproportionately affect Black/African Americans and people living in the eastern half, and especially the southeastern quadrant, of the city.

What is it?

Routine and safe vaccines are available to protect children and adults against 15 infectious diseases—diphtheria, haemophilus influenza type B, hepatitis A, hepatitis B, influenza, measles, mumps, meningococcal disease, pertussis, pneumococcal disease, polio, rotavirus, rubella, tetanus, and varicella.[1]

In California, children under 18 are required by law to have immunizations or a valid medical exemption to attend school. To enter kindergarten, children must have four doses of the diphtheria-pertussis-tetanus vaccine (DTP or DTaP), three doses of polio vaccine, three doses of hepatitis B vaccine, two doses of measles, mumps, and rubella vaccine (MMR), and one dose of varicella vaccine or evidence of previous varicella disease.[2] The required number of doses for each vaccine for children entering childcare depends upon their age.[3] Seasonal influenza or flu vaccine is not required but recommended for everyone 6 months of age and older. Pneumonia vaccinations are usually only necessary once, although a booster vaccination may be recommended for some individuals, such as the elderly or those with a weakened immune system.

Measles is caused by an extremely contagious virus that spreads through the air when an infected person coughs or sneezes and others inhale the germs. Symptoms begin with a high fever, cough, runny nose and conjunctivitis, followed by a rash that first appears on the face or hairline and spreads downward to the neck, trunk, arms, legs, and feet. Infection may lead to encephalitis, pneumonia, or death. The Center for Disease Control (CDC) recommends that children receive the first dose of the measles, mumps, and rubella (MMR) vaccine at 12 to 15 months of age, and a second dose at 4 to 6 years.

Pertussis, also known as "whooping cough," is a respiratory disease caused by the bacterium *Bordetella pertussis*. Symptoms of pertussis include uncontrollable, violent coughing, which often makes it hard to breathe. Infants with pertussis may stop breathing, a symptom called *apnea*. Pertussis can be fatal in babies less than one year of age. The CDC recommends that children receive four doses of the diphtheria, tetanus, and pertussis (DTaP) vaccine by 18 months of age, and that pregnant women be vaccinated against pertussis during the third trimester of pregnancy to protect their babies from the infection.

Influenza is a contagious respiratory illness caused by influenza viruses that spread when an infected person coughs or sneezes, or when people touch virus-contaminated surfaces and then touch their mouth or eyes.[4] Pneumonia is an infection or inflammation of the lungs caused by bacteria, viruses, fungi, chemicals, or other agents.[5] Having influenza is itself a risk factor for pneumonia, and while many cases of flu never lead to pneumonia, those that do tend to be more severe and deadly.[6] Older people, young children, pregnant women, persons with weakened immune systems (for example, due to cancer, anti-rejection drugs, corticosteroids, or HIV/AIDS), persons with chronic diseases (for example, asthma, chronic obstructive pulmonary disease, or heart disease), and American Indians and Alaskan Natives are at higher risk for influenza and pneumonia infections and serious complications from an infection.[7] Additional risk factors for catching influenza or pneumonia include contact with others who are sick (for example, working in a healthcare setting or living in a group home setting such as a nursing home), and smoking.

For additional data on vaccine-preventable disease in San Francisco, see the Hepatitis data page.

Why is it important for health?

Vaccine-preventable diseases can be very serious—even deadly—especially for infants and young children. If vaccine coverage levels drop in the population, it is possible that eliminated or rare diseases, such as measles, could become endemic again. High levels of sustained vaccine coverage and rapid public health response are critical for eliminating and controlling vaccine-preventable disease cases and outbreaks.[1]

Influenza and pneumonia affect millions of people in the U.S. every year and together were the ninth leading cause of death in the U.S. in 2010, and the seventh among those 65-plus years of age. Each year more than 200,000 people are hospitalized as a result of flu complications.[4]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Childhood immunizations: The percentage of children entering daycare or kindergarten with all recommended vaccinations has been increasing since 2014. In 2016–2017, 94.2 percent of children entering daycare and 94.2 percent of children entering kindergarten had all required immunizations in San Francisco. The percentage of children entering childcare or kindergarten with all required immunizations was similar to children statewide (CA childcare: 94.1 percent, CA kindergarten: 95 percent).

In 2015 as in 2011, 79 percent of San Francisco 2-year-olds received the recommended four doses of DTaP, three doses of polio, and one or more doses of MMR vaccine. Data suggests that Asian, Asian Pacific Islander, and Latino children were more likely to be vaccinated than Black/African American and White children. Foreign-born children were less likely to be completely vaccinated than those born in the U.S.

California Senate Bill 277, which eliminates exemption from existing immunization requirements due to personal beliefs, was signed into law in June 2015 and took effect in July 2016.[8] Senate Bill 277 may affect immunization rates in San Francisco. The proportion of sampled school and childcare children with exemptions to vaccination due to medical contraindications or parental personal beliefs was 3.4 percent in 2015 (EKRS, 2015).

Pertussis and measles: In California, the highest rates of hospitalization due to pertussis were observed among Latino infants younger than one year of age.[9] In 2014, San Francisco again saw high numbers of pertussis cases in the setting of a statewide epidemic. However, San Francisco reported fewer infections among infants, possibly due to the recommendation for routine maternal pertussis immunization during the third trimester of pregnancy beginning in late 2012. Measles is very rare in San Francisco and is not endemic. The city reports fewer than five cases a year. Cases have been linked directly or indirectly to infections acquired in foreign countries.

Influenza vaccine: In 2016, 42.4 percent of San Franciscans reported they received the annual influenza vaccine. Vaccination rates among adults 65 years and older were higher than for younger adults; in 2014–2016, more than 70 percent of adults over 65 received a vaccine.

Pneumonia and influenza hospitalization: The pneumonia and influenza hospitalization and emergency room visit rates were unstable between 2012 and 2016 with peaks in 2013 and 2015. Influenza and pneumonia disproportionately affected Black/African Americans and people living in the eastern half, and especially the southeastern quadrant, of the city. Hospitalization rates due to influenza and vaccine-preventable pneumonia were higher among Black/African Americans, and emergency room visit rates were higher among Pacific Islanders compared to all other ethnicities. ZIP codes with the highest emergency room visit and hospitalization rates were 94102 (Tenderloin/Civic Center), 94103 (SOMA), and 94124 (Bayview Hunters Point).

Data Sources

SFDPH Communicable Disease Control & Prevention, San Francisco Department of Public Health (SFDPH).

CDPH Immunization Branch. Childcare and kindergarten immunizations, California Department of Public Health (CDPH).

EKRS Expanded Kindergarten Retrospective Survey (EKRS), Communicable Disease Control and Prevention, San Francisco Department of Public Health (SFDPH).

CHIS California Health Interview Survey (CHIS), UCLA Center for Health Policy Research.

OSHPD California Office of Statewide Health Planning and Development (OSHPD).

Methods and Limitations

Childhood immunizations (EKRS, 2015):

- Place of birth data was unknown or missing for a portion of the sampled population. It is unclear how this large amount of missing information may have affected the up-to-date comparison based on place of birth.
- Race/ethnicity was unknown or missing for a portion of the sampled population. Because there is significant variability in vaccination rates between ethnicity groups, basing conclusions on a sample not entirely representative of the ethnicity distributions of San Francisco kindergarteners and transitional kindergarteners could result in a biased estimate of vaccination coverage for the overall population.
- Exempted children are counted in the denominator when the proportion up-to-date for any vaccination or series is calculated. Consequently, an increase in the frequency of exemptions from vaccination influences the proportion up-to-date downward.

Pertussis: Care should be taken when comparing case counts and rates by year; changes in case definitions and investigation procedures may affect year-to-year comparisons.

Hospitalizations and emergency room visits:
Hospitalization and ER rates measure the number of admissions or visits, not the number of residents who are hospitalized. Admissions records may include multiple admissions by the same person.

In October 2015, the diagnosis coding standard for Hospitalizations and Emergency Room visits was changed from ICD-9 to ICD-10. Caution should be used in comparing data using the two different standards.

The following ICD-9 and ICD-10 codes were used to identify visits primarily due to vaccine-preventable pneumonia and influenza (primary diagnosis only):
ICD-9: 481, 487, 4870, 4871, 4878, 4822, 0551, 4843, 0521
ICD-10: J13, J11, J110, J1100, J1108, J111, J112, J118, J1181, J1182, J1183, J1189, J1189, J14, B052, A3701, B012

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- California Department of Finance. Demographic Research Unit. 2018. State and county population projections 2010–2060 [computer file]. Sacramento: California Department of Finance. February 2017.

Standard population for age adjustment:

- Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050. U.S. Department of Commerce, Economics and Statistics Administration, BUREAU OF THE CENSUS.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey

- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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MENTAL HEALTH

Variables

- Adults' self-reported need for help with mental health or alcohol or drug use in the past 12 months
- Prenatal depressive symptoms
- Prolonged sad or hopeless feelings among high school students
- Suicidal thoughts among middle and high school students
- Emergency room visits due to depression and self-injury
- Mortality due to suicide

Overview

- In San Francisco, 22.5 percent of adults surveyed reported needing help for mental health or substance use issues in 2016. The local prevalence is higher than the statewide prevalence of 16.4 percent.
- One quarter of pregnant women with Medi-Cal insurance in San Francisco reported prenatal depressive symptoms in 2013–2015.
- 26.1 percent of San Francisco high school students reported prolonged sad or hopeless feelings in the past year in 2017.
- Over 10 percent of high school and middle school students in San Francisco considered attempting suicide in 2017.
- In 2012–2016, the rate of emergency room (ER) visits due to major depression increased from 16.768 to 20.427 per 10,000 residents.
- The ER rate due to self-injury decreased significantly by more than 50 percent, but suicide rates increased by 87 percent to 11.8 per 100,000 population in 2013–2016.
- Mental health issues were more common among females than males, people ages 18 to 24 and 45 to 54 than other age groups, Whites, Filipinos, Latinos, and Black/African Americans than other racial/ethnic groups, people living with incomes below 200 percent of the federal poverty level than people with higher income, and people identifying as bisexual, gay, or lesbian. Rates of mental health issues were highest in the Tenderloin and South of Market neighborhoods.

What is it?

The World Health Organization defines mental health as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively, and is able to make a contribution to the community.[1] Mental illness is defined as all diagnosable mental disorders or health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired function.[2] Examples of mental disorders include mood disorders such as depression; psychotic disorders such as schizophrenia;

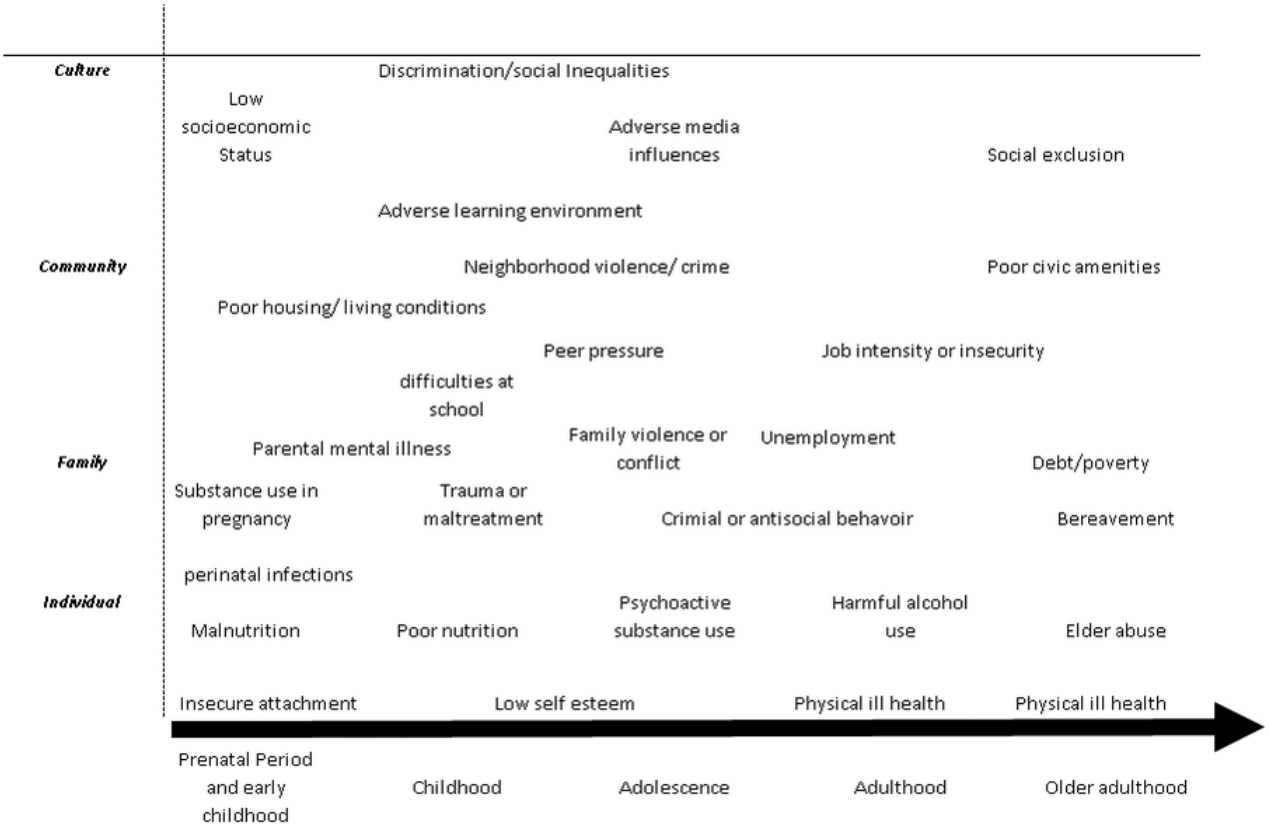
dementia due to Alzheimer's disease or other disease, event, or injury to the brain; intellectual disabilities; and developmental disorders (e.g., autism).[3] Substance dependence can also be considered a mental health disorder and is covered in more detail in the Substance Abuse section of this assessment.

Depression is the most common type of mental illness in the U.S.[4] There are several forms of depression including persistent depressive disorder (lasting for at least two years), perinatal depression (women experiencing depression following childbirth), psychotic depression (depression with psychosis), and seasonal affective disorder (depression in winter).[5] Depression often begins in adulthood but can occur in children and adolescents.

Determinants of mental health and the life course

Mental health is influenced by complex interactions between social, cultural, economic, political, and environmental factors, as well as individual attributes (e.g., psychology, personality, and biology) that occur at every stage of life.[3,6,7] Key development stages for mental health include reproductive decisions, prenatal/postnatal period, the transition to school, adolescence, transition to independence, and adult life including family, work, and retirement.[8] Figure 1 shows some of the main risk factors for poor mental health over the life course.

Figure 1. Schematic overview of risks to mental health over a lifecourse



Adapted from WHO: Risks to Mental Health: An Overiew of Vulnerabilities and Risk Factors. August 27, 2012

Preconception to childhood

Events and circumstances occurring early in life, even before birth, affect later mental health. Parents who are prepared emotionally, socially, and economically for having children are most likely to raise healthy, well-adjusted children. Risk factors for later mental health problems occurring preconception or in early childhood include pregnancy during adolescence, low birthweight, perinatal complications, maternal substance use, parental mental illness, family conflict, and child neglect or abuse.[7] Inadequate prenatal care can lead to low-birthweight babies and subsequent behavioral, emotional, and learning problems. Substance use during pregnancy increases the likelihood of premature deliveries, low birthweight, and long-term neurological, cognitive, and emotional development problems. Adolescents who become pregnant are less likely to develop employment and survival skills and more likely to experience parental stress; consequently their children are at higher risk of developmental delays and substance-related problems, and are more likely to live under deprived conditions. Prenatal depression, low self-esteem, childcare stress, and prenatal anxiety can lead to postpartum depression, which affects bonding and the quality of care given to the infant.[8]

Childhood

Childhood is a vital time for development of social, cognitive, and emotional skills important in later mental health.[7,8] Protective factors during this period include supportive parenting, feelings of security, positive learning environments, and exercise. Mental health risk factors include violence or conflict, negative life events, lack of connection to school, poor bonding with parents, having a parent with a mental illness, and trauma due to bullying, abuse, or parental loss. Socioeconomic status also impacts opportunities for learning and positive social interaction as well as exposes children to disease and injury.

Adolescence

Many mental disorders manifest their first signs and symptoms on onset during adolescence and early adulthood.[4] In addition to the risks that affect development of younger children, adolescents are vulnerable to tobacco, alcohol, and drug use. Adolescents with family unrest or behavioral problems during childhood are more likely to use drugs and alcohol. Furthermore, academic failure, peer pressure, and media influence are associated with greater substance use, which itself is linked to lower educational outcomes, increased violence, and risky sexual behavior.[7,8] Protective factors for mental health among adolescents include problem-solving skills, conflict management skills, and safe and supportive communities.

Adulthood

Being able to successfully manage the choices and challenges of adulthood is dependent on events and circumstances in childhood and adolescence. For example, adolescent pregnancy and a failure to develop skills and good work habits can leave adults inadequately prepared economically. Work-life balance, community involvement, and general health status are also key determinants of mental health in adulthood. Excessive time spent working and caring for others, as well as operating in a difficult or insecure work environment often lead to stress and anxiety.[8] Unemployment and persistent socioeconomic pressures in particular are associated with poor mental health, higher healthcare usage, and increased mortality.[6,8]

Inability to participate in the community due to lack of access, neighborhood violence or crime, or having burdensome childcare or eldercare responsibilities can lead to social exclusion and loneliness in the individual and an absence of social capital in the community.[7] Furthermore, poor physical health co-occurs with poor mental health, especially depression. Mental health is negatively affected by both the

presence of or treatment for serious medical illnesses—including diabetes, cancer, cardiovascular disease, asthma, and Parkinson's disease—and many risk behaviors for chronic disease—including low physical activity, tobacco use, alcohol consumption, and a lack of sleep.[5,9] Additional risk factors for poor mental health include personal or family history, excessive substance use, rapid social change, experiencing discrimination, and major life changes, trauma, or stress.[5,6] Protective factors include the ability to cope with stress, the ability to deal with adversity, problem-solving skills, literacy, social support from family and friends, and social and conflict management skills.

Old age

Older adults are at particularly high risk for mental health issues resulting from social isolation and chronic disease.[8] Social isolation is common as older adults withdraw from the labor market and lose partners and friends to illness and death. Social isolation and chronic disease are significant predictors of depression in older adults.

Vulnerable populations

Persons with a large number of protective factors and few risk factors over a lifetime are at increased likelihood for good mental health while those adversely affected by social determinants of health are at increased risk of poor mental health. Social determinants of health affect mental health both directly—through unmitigated (chronic) stress and epigenetic mechanisms—and indirectly—by influencing healthy behaviors and access to safe housing and healthcare.[10] People with lower education, income, and/or social status, and those who experience discrimination on the basis of race, gender, social class, or other characteristics are at a particularly high risk of mental illness.

Mental health among prisoners and inmates

More than half of all male and almost three quarters of female prisoners and inmates suffer from mental illness.[13] Inmates and prisoners with a mental illness are twice as likely to have been homeless in the year prior to incarceration or to have lived in a foster home, agency, or institution while growing up. Availability of appropriate mental healthcare can reduce the risk of incarceration among persons with mental illness.[14]

Mental health and children and adolescents in the child welfare system

Children and adolescents in the child welfare system are four times more likely to have mental disorders compared to children in the general population.[11] These children are particularly vulnerable to mental illness due to histories of child abuse and neglect, separation from their biological parents, placement instability, and inability to access appropriate and continuous mental healthcare.

Mental health among the homeless

The prevalence of mental illness among homeless persons is estimated to be between 40 and 70 percent.[12] The relationship between homelessness and deteriorating mental health is complicated with each further contributing to the other. While lack of affordable housing is the main driver for homelessness, presence of a mental disorder can make it difficult for someone to care for themselves, alienate them from their friends and family, and cause them to be unable to maintain a job and subsequently their home. Likewise, homelessness is traumatizing and can lead to depression, substance abuse, and declining mental and physical health.

Why is it important for health?

Mental illnesses are the leading causes of years lived with disability worldwide.[15] Mental health and well-being are crucial to supporting, maintaining, and optimizing quality of life.[6] The presence of mental illness can adversely impact the ability to function at work, at home, and in social settings and impacts individuals as well as their respective families and communities.[3,4] In fact, poor mental health is a predictor of unemployment and subsequent debt and impoverishment.[6,8] In the absence of support, intervention, or treatment, mental health disorders can readily worsen over time, leading to impaired quality of life, disability, hospitalization, institutionalization, incarceration, suicide and self-injury, and/or death.[3] As mental disorders progress over time, access to care and treatment influence the progression and course of the illness.[6]

Substance use is common among persons with mental illness. Approximately 30 percent of all mentally ill persons and 50 percent of persons with a severe mental disorder also abuse drugs and/or alcohol. Conversely, nearly 40 percent of persons who abuse alcohol and more than 50 percent of those who use drugs have at least one serious mental illness.[16] Drugs and alcohol, while often used to mitigate the symptoms of depression or anxiety, can both increase the underlying risk for mental disorders as well as make symptoms worse. Persons with co-occurring mental illness and substance abuse disorders have high rates of incarceration.[17]

There is high co-morbidity within and across mental illnesses, and between mental and physical health.[18] For example, better mental health correlates with physical health indicators like lower incidence of disease, more frequent treatment success, and slower progression of chronic diseases such as cancer, heart disease, diabetes, asthma, and obesity. Poor mental health status, however, is associated with greater participation in risky health behaviors (e.g., smoking, low physical activity, insufficient sleep, excessive drinking, drug use) that can in turn promote chronic disease.[4,12]

Depression is the most common mental illness. It is estimated that more than a quarter of the U.S. adult population is affected by depression and that by 2020 depression will be the second leading cause of disability in the world.[4] Depressed youth are more likely to engage in risk-taking behaviors including drug use, unsafe sex, attempting suicide, and running away from home, and are less likely to succeed in school and possibly later in life.[19]

Poor mental health and psychiatric disorders are strong and consistent risk factors for suicide and suicidal behavior.[20] In 2015, suicide was the 10th leading cause of death in the U.S. Among younger people, suicide was even more common—it was the second leading cause of death among youth and young adults ages 15 to 34 years, and it was the third leading cause of death among youth ages 10 to 14 years.[21] Major depression and other mood disorders, substance abuse disorders, schizophrenia, and personality disorders are the most common disorders among those who die by suicide.[22]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Adult self-reporting of psychological distress and seeking and receiving treatment
In 2016, a greater percentage of adults (age 18 or older) who participated in the CHIS survey reported

needing help for mental health or substance use issues in San Francisco (22.5 percent) than in California overall (16.4 percent). Asians were less likely to report needing help than other ethnicities. Caution should be exercised in interpreting estimates by ethnicity as cultural attitudes towards mental health and survey response rates may affect results. A greater percentage of adults with household incomes below 200 percent of the federal poverty level (FPL) reported needing help with mental health compared to those with household incomes above 200 percent of the FPL.

In 2014–2016, 7 percent of adults experienced serious psychological distress in San Francisco. In 2011–2016, those living below 200 percent of the FPL (15.2 percent) were more likely to experience distress than those living above 200 percent of the FPL (5.3 percent).

Prenatal depressive symptoms

In 2013–2015 citywide, 14.4 percent of pregnant women who responded to the MIHA survey reported prenatal depressive symptoms. Prenatal depression varied significantly by level of education, income, and type of insurance. Women with less than high school education were more than three times more likely to report prenatal depressive symptoms than women with a college degree (37.6 vs. 9.0 percent). Women with Medi-Cal insurance were more likely than women with private insurance to report prenatal depressive symptoms (24.1 vs. 8.9 percent). Hispanic and Black/African American women were more likely to report prenatal depressive symptoms than White or Asian women (26.7 and 21.4 percent vs. 9.5 and 11.8 percent).

Feelings of sadness and suicidal ideation among youth

Prolonged sad or hopeless feelings and suicidal ideation—consideration of suicide attempts—are predictors of suicide. In 2017, 26.1 percent of San Francisco high school students reported prolonged sad or hopeless feelings in the past year. Females (31.7 percent) as well as Black/African Americans (30.7 percent) and Filipinos (38.6 percent) reported higher rates than did males and other ethnicities. The percentage was also significantly higher among bisexual (61.9 percent) and gay or lesbian (42.5 percent) high school students.

Almost 13 percent of high school students and 19.4 percent of middle school students in San Francisco had considered attempting suicide in 2017. Similarly, female, Filipino, Latino, Black/African American, bisexual, and gay or lesbian students were more likely than other groups to have considered suicide.

Major depression and self-inflicted injury hospitalizations

In 2012–2016, the rate of hospitalization due to major depression remained fairly stable, while the rate of emergency room (ER) visits due to major depression increased from 16.768 to 20.427 per 10,000 residents. On the other hand, both corresponding rates due to self-injury decreased significantly by more than 50 percent between 2012 and 2016. Rates were the highest among Black/African Americans for all hospitalizations and emergency room visits in 2016. During the same time period, residents 45 to 54 years old and 18 to 24 years old were more likely to visit the emergency room due to depression or self-injury. Rates were also highest in the Tenderloin and South of Market neighborhoods.

In 2013–2016, suicide rates increased by 87 percent to 11.8 per 100,000 population in San Francisco. The rate was the highest among Whites and the lowest among Asians in 2013–2017. Although the data by neighborhood was not complete due to small numbers, the Castro had the highest suicide rate of 21.87 per 100,000 population, which was three times higher than the lowest suicide rate.

Data Sources

CDPH Death Statistical Master Files, California Department of Public Health (CDPH).

CHIS California Health Interview Survey (CHIS), UCLA Center for Health Policy.

MIHA Maternal Infant Health Assessment Survey, California Department of Public Health.

OSHPD California Office of Statewide Health Planning and Development (OSHPD).

YRBSS Youth Risk Behavior Surveillance System (YRBSS), Centers for Disease Control and Prevention.

Methods and Limitations

Hospitalizations and emergency room visits: Hospitalization and ER rates measure the number of admissions or visits, not the number of residents who are hospitalized. Admissions records may include multiple admissions by the same person.

- In October 2015, the diagnosis coding standard for Hospitalizations and Emergency Room visits was changed from ICD-9 to ICD-10. Caution should be used in comparing data using the two different standards.

Self-inflicted injury: Agency for Healthcare Research and Quality's Clinical Classification Software versions 2015 (ICD-9) and 2017 (ICD-10) were used to identify visits with a primary diagnosis of self-inflicted injury.

- Self-inflicted injury ED visits rates show a sudden shift, potentially indicating a change in coding. An increase in reporting may also have occurred.

Major Depression: The following ICD-9 and ICD-10 codes were used to identify visits primarily due to Major Depression:

- ICD-9: 311, 29620, 29621, 29622, 29623, 29624, 29625, 29626, 29630, 29631, 29632, 29633, 29634, 29635, 29636.
- ICD-10: F32, F33

Population estimates for rates:

- State of California, Department of Finance, *Race/Hispanics Population with Age and Gender Detail, 2000–2010.* Sacramento, California, September 2012.
- California Department of Finance. Demographic Research Unit. 2018. State and county population projections 2010–2060 [computer file]. Sacramento: California Department of Finance. February 2017.

Standard Population for age adjustment:

- Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050. U.S. Department of Commerce, Economics and Statistics Administration, BUREAU OF THE CENSUS.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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OVERWEIGHT OR OBESITY

Variables

- SFUSD students in fifth grade with a measured body composition outside the FitnessGram "Healthy Fitness Zone"
- Adults who self-report a body mass index of 25kg/M2 or greater when surveyed

Overview

- Over 30 percent of fifth-grade SFUSD students and over 40 percent of adults in San Francisco are overweight or obese.
- Overweight or obesity disproportionately affects individuals with low income and individuals of color.
- For individuals with low income, increased risk of becoming overweight or obese is associated with specific ZIP codes and community-level factors, such as type of housing, childcare center, and hospital.

What is it?

Overweight and obesity are chronic conditions that are associated with altered metabolism.[1,2,3,4] Metabolism is shifted such that the body favors burning carbohydrate, starch, or simple sugars instead of fat for energy.[1,2,3,4] When fat-burning is suppressed, individuals are less likely to burn up the fat that they consume in a given meal in the few hours after that meal, before they eat again at the next meal. The primary mechanism for developing overweight or obesity is the storage of fat left over from meals.[5] Gradually, if fat-burning is suppressed over weeks, months, or years, body fat stores increase. Men and women are considered overweight when the body fat percentage reaches 23 percent for men and 32 percent for women. Men and women are considered obese when the body fat percentage reaches 30 percent for men and 40 percent for women.[6]

Because altered metabolism and body fatness are difficult to measure directly, various indirect measures have been developed. School districts nationwide index child weight status using the FitnessGram "Healthy Fitness Zone," which combines information about the body mass index with direct skinfold measurements of body fat.[7]

The CDC classifies individuals as overweight or obese if they have a body mass index of 25 kg/m² or greater.[8] The body mass index is calculated by dividing a person's weight in kilograms by the square of height in meters. The body mass index correlates with more direct measures of body fat.[9]

The main drivers of overweight or obesity risk are political, economic, cultural, and environmental conditions in the community.[9] Factors such as the local cost of living, housing/kitchen facilities, food prices, food subsidies, food labeling policy, and types of foods and drinks available for purchase at all food outlets define the range of diet options accessible to individuals, and thus determine if people consume fat with starch or sugar. Factors such as transportation policy, price of leisure activities, neighborhood safety, and availability of parks impact an individual's opportunity to burn calories. Although an individual person's genetics, life course, education, skills, or behavior (such as conscious dieting, exercise or medication use) do contribute to their metabolism and obesity risk, community-level interventions are more powerful than individual or behavioral interventions to prevent obesity.[10,11]

Factors known to suppress fat burning include the presence of any kind of sugar in the blood, stress or the fight-or-flight response, increases in particular hormones such as insulin and cortisol, lack of oxygen, and dehydration.[3,12,13] Eating carbohydrates or any kind of starch or sugar results in the presence of simple sugar in the blood as well as increases in insulin in the blood.[3] The experience of stress triggers cortisol and is associated with shallow/rapid breathing.[12] Dehydration triggers cortisol and causes the liver to breakdown the body's protein and glycogen and transform it into the simple sugar glucose.[13] Given factors known to suppress fat burning, higher risk of overweight or obesity can be expected in communities where the majority of accessible food and beverage options contain fat with starch or sugar, where the environment is stressful, where oxygen is lacking, and/or where drinking water or bathroom facilities are not accessible. (People restrict fluid intake if bathrooms are not accessible.)

Why is it important for health?

Overweight and obesity are linked to numerous co-morbidities that include but are not limited to glucose intolerance, insulin resistance, dyslipidemia, altered immune response, and altered response to stress and sex hormones, particularly when the excess body fat is stored in the upper body or "visceral" region.[14] Body fat tissue is recognized not only as a site where excess energy derived from food is stored, but also as an endocrine organ. More body fat is associated with the production of bioactive substances known as adipocytokines or adipokines, which trigger chronic low-grade inflammation and interact with a range of processes in many different organs.[15]

Over the long-term, overweight and obesity are associated with greater risk of chronic disease, including high blood pressure, high cholesterol, heart disease, Type 2 diabetes, osteoarthritis, breast and colon cancers, sleep apnea, and gynecological problems.[16] Overweight and obesity are associated with increased risk of pain, disability, anxiety, depression, and lower quality of life.[16] Body fatness, indexed by overweight and obesity, is associated with all-cause mortality.[17,18]

Overweight and obesity are associated with increased health risk in adults as well as children. Children outside the Healthy Fitness Zone have potential for future health risk.[19]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Each year from 2013 to 2017, over 30 percent of fifth-grade SFUSD students were determined to be outside of the Healthy Fitness Zone for body composition measurements. In the 2016–2017 academic year, 35 percent of SFUSD students had a body composition outside the Healthy Fitness Zone.

Each year over the past five years, over 40 percent of adults who responded to the California Health Information Survey (CHIS) self-reported body weight and height values that met CDC criteria for overweight or obesity. The proportion self-reporting overweight or obesity did not change significantly over time.

The prevalence of overweight or obesity, although high in San Francisco, is considerably lower than in other places statewide and nationally. In 2014–2016, while almost half of San Franciscan adults (46

percent) self-reported overweight or obesity, two-thirds of Californian adults (63 percent) self-reported overweight or obesity. According to National Health and Nutrition Examination Survey data, two-thirds (69 percent) of U.S. adults were overweight or obese in 2009–2010.

Who is at highest risk of overweight or obesity?

Over the past five years, low-income children and adults have consistently had higher risk of overweight or obesity. The risk of having a body composition outside the FitnessGram Healthy Fitness Zone was about 40 percent higher each year for lower-income versus higher-income SFUSD fifth-grade students. In the 2016–2017 academic year, 42.6 percent of fifth-grade students who were economically disadvantaged had a body composition outside the Healthy Fitness Zone compared to 28.7 percent of fifth-graders who were not economically disadvantaged.

Among all San Francisco residents, adults with income below 200 percent of the federal poverty level (FPL) were more likely to self-report body measurements in the overweight or obese range than adults with income at or above 200 percent FPL.

Over the past five years, the risk of overweight or obesity consistently varied by race/ethnicity. Among SFUSD fifth-graders in 2016–2017, two-thirds of Pacific Islander and Filipino students and approximately half of Hispanic and Black or African American students had body composition measurements outside the Healthy Fitness Zone, compared to 22 percent of Asian and White students. Latino and Black/African American adults were more likely to be overweight or obese than Asian or White adults.

The risk of overweight or obesity was unevenly distributed across San Francisco ZIP codes. Obesity among adults is concentrated in parts of Bayview Hunters Point, Visitacion Valley, the Excelsior, Mission, South of Market, and Tenderloin ZIP codes.

What community-level factors are associated with higher risk of becoming overweight or obese?

For individuals with low income who qualify for subsidized services in San Francisco such as Preschool for All childcare or Medi-Cal insurance, particular community-level factors or aspects of the environment are associated with increased risk of becoming overweight or obese.

Each academic year over the past five years, the pattern of weight change experienced by children ages 3 to 4 years who attend subsidized, licensed childcare centers has varied. While in some childcare centers no (zero) normal-weight children have become overweight or obese over the course of the academic year, in other childcare centers as many as 33 percent of children who were normal weight at Fall enrollment became overweight or obese by the following Spring (approximately six months later). The relative odds of becoming overweight or obese was associated with various characteristics of the childcare center, including not serving drinking water with lunch daily, meals prepared on site or at a central kitchen as opposed to a professional food vendor, not offering structured dance, zumba, soccer, or yoga class, not having staff actively engage in physical activity with children, and not taking children to the neighborhood park.[20] These factors, in turn, were related to childcare center policy, funding, staff attitudes and expectations, and facilities/infrastructure.[20]

Between 2012 and 2016, the pattern of incident obesity was unevenly distributed among low-income pregnant women who qualified for Medi-Cal or other public insurance coverage for prenatal care. In some ZIP codes such as 94133, fewer than 10 percent of the women who were normal weight before

pregnancy became obese during pregnancy, while in other ZIP codes such as 94130, twice as many initially normal-weight women became obese during pregnancy. The incidence of obesity during pregnancy was higher for low-income women who gave an address at a single residency occupancy hotel or public housing than for low-income women with other housing. The incidence of obesity among low-income pregnant women who delivered at St. Luke's Hospital or Zuckerberg San Francisco General Hospital was double that observed at California Pacific Medical Center's other hospital campuses.

It remains to be determined what differences in nutrition and/or physical activity resources explain differences in obesity incidence by type of service or provider.

What is currently being done in San Francisco to improve health?

In the past three years, the San Francisco Health Improvement Partnership (SFHIP) and Our Children Our Families (OCOF) have been working to address childhood overweight or obesity as a key health indicator. The SFHIP Community Health Needs Assessment aimed to improve healthy eating and physical activity resources. OCOF identified SFUSD weight status as a target for citywide collective impact intervention.

The EatSF program provided vouchers to WIC program participants to increase affordability and accessibility of fruits and vegetables (foods low in fat and added sugar). The Sugary Drink Distributor Tax Advisory Committee (SDDTAC) formed to guide interventions to promote drinking water and prevent adverse health effects of sugar-sweetened beverages. Neighborhood taskforces are conducting focus groups to identify, characterize, and address ZIP-code-specific risk factors, such as food insecurity for pregnant women. Interventions in public housing and SROs are in progress by HOPE SF and the Food Security Task Force. Hospitals offer food support for patients, such as the Food Pantry at ZSFGH.

Many childcare providers in San Francisco have policies in place concerning nutrition and physical activity practices, which help children to develop healthy habits early in life. Some childcare providers offer workshops for families to educate parents about weight management for children. Children's Council of San Francisco sponsors the Healthy Apple Program, providing workshops and coaching to early care educators to aid in implementing best practices to support healthy growth.

Data Sources

CCHP San Francisco Department of Public Health: Child Care Health Program. https://www.sfdph.org/dph/comupg/oprograms/MCH/CCHP.asp

CDE The California Department of Education, FitnessGram® physical fitness test. http://dq.cde.ca.gov/dataquest/

CDPH Birth Statistical Master File. https://www.cdph.ca.gov/Programs/CHSI/Pages/PHPRB.aspx

CHIS California Health Interview Survey. http://askchis.ucla.edu

CHISNE California Health Interview Survey: Neighborhood Edition. http://askchisne.ucla.edu

Methods and Limitations

- The measures of excess body weight used in this report may misclassify individuals with respect to body fatness. Extra weight relative to height can be due to excess body fat or extra-lean mass (e.g., muscle, body fluid).
- Measures of overweight and obesity are collected using different methods, with different sources of error: self-report, recall from memory, direct measurement, and equations for age-sex standardization. The CDE FitnessGram® definition of body composition outside the Healthy Fitness Zone, or "needing improvement," is not the same as the CDC definition of childhood overweight or obesity. Weight status determined by the different methods may differ.
- The cutoffs used in this report to define overweight or obesity may be inappropriate for some groups, for example Asians, because optimal cutoffs may vary by population group.
- Estimates of weight status from the CHIS survey do not reflect the status of people who were not eligible (e.g., non-English/Spanish speakers) or who decline to participate in surveys.
- Due to the small number of people surveyed, multiple years of CHIS survey data were pooled. It was not possible to study change in weight status over the years in question.
- Estimates of incident overweight or obesity from the SFDPH Child Care Health Program and the CDPH birth records pertain to lower-income groups specifically, and not to all San Franciscans.
- The term "economically disadvantaged" in the SFUSD data refers to students who either participated in the free or reduced price meal program or whose parents' education level was coded as "not high school graduate".
- The weight status measures from CHIS and SFUSD describe the *prevalence* of overweight or obesity at a point in time, not the *incidence* during an interval of time. They only tell us how many people are overweight or obese, not how many people are gaining weight and/or losing weight.

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PRETERM BIRTH

Variables

- Live births that occurred before 37 completed weeks of gestation
- Live births that occurred before 32 completed weeks of gestation

Overview

- Annually, over 700 infants are born in San Francisco before 37 weeks of gestation.
- In 2012–2016, 414 infants were born before 32 weeks gestation.
- Preterm birth disparities persist for Black/African American women and vulnerable population groups.

What is it?

Preterm birth is the birth of an infant before 37 completed weeks of pregnancy. Births that occur before 32 weeks of pregnancy are considered very preterm and are at highest risk for morbidity and mortality.[1] The national Healthy People (HP) 2020 objectives are to reduce all preterm births to no more than 9.4 percent of live births, reduce late preterm births (at 34 to 36 weeks of gestation) to 6.8 percent, reduce births at 32 to 33 weeks of gestation to 1.1 percent, and reduce very preterm births to no more than 1.5 percent of live births.[2]

Nationally, preterm birth rates vary by race/ethnicity. Black/African American women have the highest rates of preterm birth, approximately 1.5 times the rate seen in all other women.[3,4] In 2016, California ranked 22nd among states in terms of racial/ethnic preterm birth disparities.[4]

At the neighborhood level, preterm birth is associated with poverty, low educational attainment, pollution, residential segregation, crime rates, gentrification, and housing instability.[1,5,6] At the individual level, during pregnancy, experience of racism and poverty, stress or anxiety, lack of support, substance use (tobacco, alcohol, or cocaine), and delayed or inadequate prenatal care are associated with increased risk of preterm birth.[1,7]

Why is it important for health?

Prematurity is the leading cause of infant mortality in the U.S.[1] A developing baby goes through important growth during the last weeks and months of pregnancy. Many organs, including the brain, eyes, lungs, and liver, need the final weeks of pregnancy to fully develop. Preterm infants often face a lifetime of disability, including learning disabilities and visual, hearing, and neurological problems.[8] Being born premature may also negatively affect a person's social-emotional development.[1] Furthermore, because the risk of preterm birth is determined by the accumulation of exposures over a woman's lifetime and a preterm birth can affect a person's health throughout the life course, preterm birth rates are often used as a measure of overall population health.[9]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

In 2016, 8.2 percent of live births to San Francisco residents were preterm. Less than 1 percent of births (86 births) were very preterm. The citywide preterm birth rate did not change significantly between 2012 and 2016. Over the five-year period, 6.3 percent of births occurred at 34 to 36 weeks gestation, 1.0 percent of births occurred at 32 to 33 weeks gestation, and 0.9 percent of births were born before 32 weeks gestation.

Preterm Birth Disparities: Although San Francisco has met national HP 2020 targets for risk of preterm birth, at the citywide level, elevated risk of preterm birth persists for vulnerable population groups. Consistent with national patterns, elevated risk of preterm birth is associated with neighborhood and living conditions, demographic and socioeconomic variables, smoking status, and adequacy of prenatal care.

In 2012–2016, 11.0 percent of births in the Bayview ZIP code 94124 were born preterm. Over 10 percent of live births for women with no address (homeless), an address at a single resident occupancy (SRO) hotel, or an address in public housing were preterm. Whereas 7.3 percent of White births were preterm, 13.8 percent of Black/African American births were preterm. Among women with less than a high school education**,** 9.8 percent of births were preterm. Among women with no health insurance coverage for prenatal care, 41.0 percent of births were preterm. Smoking in the three months before pregnancy doubled the risk of preterm birth from 8.4 percent to 15.4 percent. 17.6 percent of births to women with unknown prenatal care were preterm.

What is currently being done in San Francisco to improve health?

Many programs in San Francisco are working towards reducing rates of preterm birth. The Department of Public Health, Black Infant Health, Public Health Nursing, Comprehensive Perinatal Services Program (CPSP), Women Infant and Children (WIC) program, and Project 500 are providing various kinds of support for women most at risk of preterm birth. UCSF's Preterm Birth Initiative supports a wide variety of research aimed at reducing the incidence and burden of preterm birth. Some community-based organizations like Homeless Prenatal Program are working hard to address some of the social determinants of preterm birth with at-risk San Franciscans. Collaborations such as the San Francisco Collective Impact to Prevent Preterm Birth, Solid Start, and the Joint Perinatal Health Equity Project, have also set out to address some of the determinants of preterm birth by bringing together key stakeholders from a variety of organizations to coordinate their efforts and maximize their resources. Led by the community-based doula program, SisterWeb, the city will be supporting the development of a doula program geared to provide culturally relevant doula services for families at highest risk for maternal mortality and premature birth, an intervention proven to be effective in improving birth outcomes.[13]

There is limited evidence for interventions that produce population-level decreases in preterm birth rates. Preterm birth rates may be improved by interventions that can reduce stress on girls and women, especially those from the communities most impacted.[1] Programs that improve social support for the women most at risk are likely to positively impact preterm birth rates.[10] Increasing the cultural competence and racial diversity of medical providers and expanding availability of community-based health workers and doulas are key strategies to address racial disparities in birth outcomes.[10,11] Policies that decrease poverty, increase educational opportunities, improve housing quality and stability, and

increase healthcare access within Black/African American communities have potential for reducing San Francisco's preterm birth rate.[11]

Data Sources

California Department of Public Health. Birth Statistical Master File.

Methods and Limitations

Preterm birth and very preterm birth were defined in terms of the best obstetric estimates of gestational age, determined by ultrasound measurements of the embryo or fetus during the first trimester of pregnancy. This methodology is consistent with Centers for Disease Control, American Congress of Obstetricians and Gynecologists, and California Department of Public Health protocol.[12]

The validity of the preterm birth estimates depends on the quality of data collected on birth records, which is known to vary from hospital to hospital.

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QUALITY OF LIFE AND FUNCTIONING

Variables

- General health status among adults
- Disability status
- Physical or mental impairment preventing work among adults

Overview

- In 2016, 15 percent of residents reported having fair or poor health, and 10.8 percent reported having a disability in 2012–2016.
- Latino and Asian residents are more likely to report poor or fair health than Whites; Black/African American residents are more likely to have a disability.
- Those who live in households earning less than 200 percent of the federal poverty level are 3.5 times more likely to report fair or poor health and disability than those with higher household incomes.

What is it?

Quality of life is a concept that includes the subjective evaluation of positive and negative aspects of life.[1] The quality of life aspects that affect health or the determinants of health are referred to as health-related quality of life (HRQoL).[2] HRQoL focuses on the impact health status has on quality of life and is a multidimensional concept including physical, mental, emotional, and social functioning.[3] At the level of the individual, perceptions of physical and mental health and their correlated health risks and conditions, functional status, social support, and socioeconomic status affect HRQoL. At the community level, factors affecting HRQoL include community-level resources, conditions, policies, and practices that influence the population's health perceptions and functional status.[2]

Well-being is a concept related to HRQOL. It is described by the Centers for Disease Control and Prevention as the presence of positive emotions, absence of negative emotions, general fulfillment, and life satisfaction.[4] People generally achieve life satisfaction through access to basic needs (food, shelter, income), while emotional fulfillment comes from having meaningful relationships. Additional information on community participation is included in the Civic Participation section of this assessment.

Why is it important for health?

According to the World Health Organization, health is "a state of complete physical, mental, and social well-being and not merely an absence of disease and infirmity."[5] HRQoL provides a comprehensive view of health and is related to both self-reported chronic diseases and their risk factors.[2] In fact, self-assessed health status is a more powerful predictor of morbidity and mortality than many objective measures of health.[6,7]

While the traditional view of prevention emphasizes avoiding illness and risk, promoting well-being focuses on disease resistance, resilience, and self-management, thereby enhancing protective factors and conditions that promote health.[4] Higher levels of well-being are associated with decreased risk of disease, illness, and injury; better immune functioning; speedier recovery; and increased

longevity.[8,9,10,11,12] Although heritable factors play a role in well-being, environmental factors are at least as important.[13,14,15,16]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Overall, San Franciscans have health and well-being as good as or better than that of Californians overall. In 2016, 15.67 percent of residents reported having fair or poor health, and 10.8 percent reported having a disability in 2012–2016. Of adults 18 to 64 years of age, 5 percent were unable to work for at least one year due to a physical or mental impairment.

Self-rated health status varies by ethnicity. Latino and Asian residents were more likely to report poor or fair health than were Whites; Black/African American residents were more likely to have a disability.

Financial well-being is closely associated with health status and disability; those living in households earning less than 200 percent of the federal poverty level were 3.5 times more likely to report fair or poor health and disability than those with higher household incomes in 2013–2016.

Data Sources

CHIS California Health Interview Survey (CHIS), UCLA Center for Health Policy Research.

PUMS, ACS Public Use Microdata Sample (PUMS), American Community Survey (ACS), United States Census Bureau.

Methods and Limitations

Self-reported health status: CHIS asked participants to describe their health as *excellent*, *very good*, *good*, *fair*, or *poor*. The data tables available in the SFHIP Community Health Needs Assessment combine percentages from *excellent*, *very good*, and *good* and contrast them to percentages from *fair* and *poor*.

Physical and/or mental impairment preventing work: This question was only asked of respondents of presumed working age (ages 18 to 64).

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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APPENDIX J
HEALTH BEHAVIORS

BREASTFEEDING

Variables

- Intention to exclusively breastfeed
- Initiation of exclusive breastfeeding in-hospital
- Exclusive breastfeeding at 3 months

Overview

- San Francisco does not meet the national Healthy People 2020 target of 46 percent of women exclusively breastfeeding at 3 months.
- Only 36 percent of women in San Francisco are exclusively breastfeeding at 3 months.
- San Francisco has significant breastfeeding disparities. Among women who intend to exclusively breastfeed, rates of exclusive breastfeeding drop more sharply between 1 month and 3 months for lower-income and non-White women than they do for higher-income and White women.

What is it?

Breast milk is the optimal source of nutrition for most infants. The World Health Organization and American Academy of Pediatrics (AAP) recommend exclusive breastfeeding for about 6 months, with continuation of breastfeeding for 1 year or longer, as mutually beneficial for the mother and infant.[1,2] Exclusive breastfeeding is defined as the infant receiving only breast milk either at the breast or via other feeding methods, and no other liquids or solids with the exception of drops or syrups consisting of vitamins, mineral supplements, or medicines.

The federal initiative Healthy People 2020 identifies exclusive breastfeeding as a national public health priority and aims to increase breastfeeding rates such that 46.2 percent of women in the U.S. exclusively breastfeed for 3 months, and 25.5 percent of women exclusively breastfeed for 6 months by 2020.[3] Compared with other countries, the U.S. ranks poorly with respect to exclusive breastfeeding. The U.S. ranks 64th out of 84 countries.[4]

Breastfeeding is determined by various factors, including social norms in the community,[5] breastfeeding support services available at local delivery hospitals,[6,7,8] workplace policies and practices,[9] and local socioeconomic conditions[10].

Social marketing and public education about breastfeeding may increase visibility of the topic, promote positive beliefs about breastfeeding, and help mothers and families understand the risks of not breastfeeding.[11] Exposure to positive messages and images about breastfeeding can help make breastfeeding seem normal, feasible, acceptable, and expected in the community. In turn, this can make the goal of 6 months of exclusive breastfeeding seem attainable and increase pregnant women's intention to exclusively breastfeed before birth.[12,13] Women's decision-making processes are highly influenced by their social networks.[14] These networks can either be barriers or points of encouragement for breastfeeding.

The initiation of exclusive breastfeeding at delivery, in hospital, is critical to establish the breast milk supply and increase the likelihood of breastfeeding success and continuation for 6 months.[15] Hospitals that have the Baby-Friendly designation have trained staff and protocol designed to support the initiation of exclusive breastfeeding.[16] Optimally, hospitals will have enough International Board Certified Lactation Consultants (IBCLC) on staff to offer breastfeeding education, support services, and telephone follow-up to inpatients and outpatients. One full-time IBCLC is required for every 783 in-patient mother/baby couplets. One full-time IBCLC is required for every 1,292 breastfeeding couplets discharged. One full-time IBCLC is required to provide telephone follow-up for 3,915 infants discharged.[17]

Workplace lactation support, programs, and policies increase breastfeeding duration.[9,18] In the U.S., almost 55 percent of women with children under 3 years of age are employed outside the home. Re-integration into the workplace is associated with decreased duration of exclusive breastfeeding.[19]

Socioeconomic factors, including race, age, education, income, and immigration status, influence breastfeeding initiation, duration, and exclusivity.[20] Neighborhood deprivation is associated with reduced odds of breastfeeding initiation, duration, and exclusivity.[21] Health equity efforts to remove systemic barriers to breastfeeding for women across all social categories and groups are vital to improving breastfeeding rates.

Why is it important for health?

Breastfeeding is associated with health benefits for both the mother and infant. Mothers who do not breastfeed are at higher risk of breast cancer, diabetes mellitus, hyperlipidemia, hypertension, myocardial infarction, obesity, and ovarian cancer.[22] Breastfeeding reduces risk of pediatric infections such as ear infections and pneumonia, immune disorders, and death in the first year of life.[22] Breastfeeding promotes infant brain development and is associated with improved intelligence by about 2 IQ points.[23] Breastfeeding is consistently associated with a modest reduction in the risk of later overweight and obesity in childhood and adulthood.[24] Breastfeeding has dose-dependent effects such that both the duration and exclusivity of breastfeeding are associated with positive health benefits.[25] Annually in the U.S., billions of dollars could be saved by reducing hypertension and heart attacks, and more than 4,000 infant deaths could be prevented, if 90 percent of U.S. mothers were able to breastfeed for one year after every birth.[22]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

The majority of women in San Francisco do not exclusively breastfeed for longer than one month. Citywide, between 2010 and 2015, there were no significant changes in exclusive breastfeeding rates. In 2014–2015, only 69 percent of San Francisco women intended to exclusively breastfeed their infant while pregnant. At delivery in hospital, 81 percent of women initiated exclusive breastfeeding. At one month after delivery, 45 percent of women exclusively breastfed. At three months after delivery, 36 percent of women exclusively breastfed.

Breastfeeding Disparities

In San Francisco, intention to breastfeed exclusively varies by maternal age, race/ethnicity, education, income, health insurance, and parity. In 2013–2015, only 30 percent of teens planned to breastfeed exclusively before birth, whereas 72 percent of women age 35 or older planned to do so. About 60 percent of Asian/Pacific Islander, Black/African American, and Hispanic women intended to breastfeed exclusively compared to 86 percent of White women. An estimated 38 percent of women with a high school degree or GED intended to breastfeed compared to 79 percent of women with a college degree. About half of women with an income below 200 percent of the federal poverty level or public health insurance intended to breastfeed exclusively compared to three-quarters of women with a higher income or private health insurance. First-time mothers were more likely to intend to breastfeed exclusively than women with two or more children.

In San Francisco, consistent with variation in *intention* to exclusively breastfeed, rates of exclusive breastfeeding at 1 month and 3 months varied by mother's age, race/ethnicity, education, income level, and parity. While the number of teens who breastfed exclusively at 3 months was too small to estimate (fewer than five teens or large standard error), 44 percent of women age 35 or older exclusively breastfed their infants. Under 30 percent of Asian/Pacific Islander and Hispanic women exclusively breastfed at 3 months, compared to 50 percent of White women. The proportion of women with a college degree who exclusively breastfed at 3 months was about triple that of women with less than a high school degree and double that of women with some college coursework but no completed degree. Almost half of women with an income over 200 percent of the federal poverty level exclusively breastfed their infant at 3 months, compared to about 15 percent of women with lower income.

Among women who intended to exclusively breastfeed before birth, the rate of exclusive breastfeeding at 1 month did not differ markedly between groups. Rates were not significantly higher for White vs. Black women, higher income vs. lower income, or women with private vs. public health insurance. However, after 1 month, rates of exclusive breastfeeding dropped significantly faster for younger, non-White, and lower-income groups than for older, White, and higher-income groups. The proportion of women with an income below 100 percent of the federal poverty level, who intended to exclusively breastfeed before birth and did so for the first month, decreased by 67 percent between 1 and 3 months postpartum. The corresponding decrease among women with an income above 200 percent of the federal poverty level was 30 percent. The same magnitude of difference was seen by type of health insurance. The proportion of women with Medi-cal insurance, who intended to exclusively breastfeed before birth and who did so for the first month, decreased by 60 percent between 1 month and 3 months postpartum. On the other hand, the corresponding decrease among women with private health insurance was 30 percent.

Data from the Women Infants and Children (WIC) program for participants served in San Francisco over a period of 11 months, further suggest that within low-income groups, rates of exclusive breastfeeding initiation and duration vary by race/ethnicity.

Trend data from the WIC program in San Francisco over the past 5 years suggest some stabilization or improvement in exclusive breastfeeding rates between 2 and 4 months for low-income women who self-reported Asian, Black/African American, unspecified race, multiple race, or Hispanic race/ethnicity, beginning in 2015.

Local Barriers to Exclusive Breastfeeding

In 2016, initiation of exclusive breastfeeding at birth varied by hospital in San Francisco. Only one in five San Francisco hospitals was Baby-Friendly. Fear of infants becoming dehydrated or hypoglycemic, desire to provide "just one bottle" to help the mother rest, lack of clinician knowledge about breastfeeding, minimal chart documentation about breastfeeding, lack of time to educate new mothers, not placing babies skin-to-skin, extended separation of infants from mothers for routine nursing and medical tasks, use of pacifiers, and free samples of infant formula are noted barriers for local hospital staff to support exclusive breastfeeding.[5]

The hospital-specific rates of exclusive breastfeeding initiation varied by race/ethnicity, suggesting need for tailoring of services to support all population groups. The proportion of births covered by Medi-Cal or other public insurance varies by hospital. According to 2016 birth records, 17 percent, 92 percent, 51 percent, 17 percent, and 0 percent of the births at CPMC, ZSFG, St. Luke's, UCSF, and Kaiser were covered by public insurance, respectively.

Lack of hospital outpatient breastfeeding support services is a barrier for exclusive breastfeeding after the delivery, especially for families with Medi-Cal or other public health insurance or coverage. Currently at ZSFG hospital, where over 90 percent of births are covered by Medi-Cal or other public insurance, there is no dedicated outpatient IBCLC [Personal communication, Teresa Chan, Nutritionist City & County of San Francisco Department of Public Health]. The Peer Counseling Program, designed to support Medi-Cal or WIC-eligible women, only has capacity to serve 128 to 192 breastfeeding women per year. In 2016, there were 2,182 births covered by Medi-Cal or other public insurance in the city.

Lack of breastfeeding-friendly infant/childcare facilities is also a barrier to breastfeeding exclusivity and duration [Personal communication Grace Yee, WIC Breastfeeding Promotion Coordinator].

What is currently being done in San Francisco to improve health?

To promote a positive image of breastfeeding in public spaces and to celebrate World Breastfeeding Week, San Francisco Department of Public Health Lactation Collaborative organized a month-long photo exhibition at San Francisco City Hall in August 2017 and 2018. Pictures in 2017 included mothers breastfeeding their infants, from eight weeks to almost 2 years old, while sitting on park benches and in grassy areas. Pictures in 2018 included mothers breastfeeding their infants throughout urban San Francisco public spaces from local parks to bus stops. The collaborative also organized a breastfeeding photo contest for mothers that live and work in San Francisco. Submitted photos were used to create a calendar that was distributed to healthcare providers as a reminder to support breastfeeding families.

WIC and the San Francisco Public Health Lactation Support Collaborative are actively working to support all five San Francisco delivery hospitals to adopt breastfeeding-friendly policies and practices. The collaborative is also working with primary care clinics to establish outpatient clinical lactation services and support, and increase referral to WIC, Nurse Home Visiting Program, and Black Infant Health Program for prenatal and postpartum education and support for breastfeeding. Some hospitals, WIC, La Leche League, and Homeless Prenatal Program offer breastfeeding hotlines/warm lines and mother-to-mother support. WIC and Homeless Prenatal Program offer free support groups in different languages to all Medi-Cal or Medi-Cal-eligible mothers in San Francisco (www.sfhealthnetwork.org/breastfeeding-support/).

Starting January 1, 2018, San Francisco passed the Lactation in the Workplace ordinance that requires all San Francisco employers regardless of their size to have a policy regarding lactation in the workplace that specifies a process by which an employee requests lactation accommodation and defines minimum standards for lactation accommodation spaces. The policy also requires newly constructed or renovated buildings to include lactation spaces. San Francisco's Healthy Mothers Workplace Coalition (through an intensive community engagement process) has developed a workplace tool to assess policies related to parental leave, lactation accommodation, and work-family balance. The tool assesses policies using three levels: bronze (meets requirements), silver (exceeds requirements), and gold (sets a gold standard). The Coalition has given 182 Healthy Mothers Workplace Awards of Excellence to 91 unique employers over the last five years, positively impacting more than 61,000 employees. For further information, please visit: https://legalaidatwork.org/our-programs/healthy-mothers-workplace-coalition-2/

The San Francisco Department of Public Health (www.sfdph.org/breastfeedingatwork) in partnership with the Office of Labor Standard Enforcement (https://sfgov.org/olse/lactation-workplace) is developing sample policies, best practice guidelines, examples of breastfeeding rooms, and employer and employee education materials in multiple languages to especially help small businesses employing low-wage workers in the city.

Local efforts aim to reduce breastfeeding disparities by improving access to breastfeeding services, including education and support to priority groups such as Black/African American, Asian/Pacific Islander, and migrant women as well as those who are on Medi-Cal or affected by poverty, unstable housing, nutrition, and food insecurity.

For further information about efforts to promote breastfeeding in San Francisco, please visit: http://sfbreastfeeding.org/ and https://www.sfhealthnetwork.org/sfbreastfeeds/.

Data Sources

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California Department of Public Health (2018) Maternal and Infant Health Assessment (MIHA) Survey County and Regional Data Snapshots for Subgroups, 2013–2015.

San Francisco Department of Public Health, WIC Program.

Methods and Limitations

Citywide breastfeeding rates were estimated using data from the MIHA survey. The MIHA survey includes only English- or Spanish-speaking women, and may exclude vulnerable groups such as housing-insecure women who could not be reached or women who were unable to participate in the written survey. Regarding breastfeeding intention, MIHA survey participants were asked: "Before you delivered your baby, how did you plan to feed him or her when he or she was born? (I planned to breastfeed only, I planned to use formula only, I planned to breastfeed and use formula, I was not sure how I would feed my baby)." Regarding breastfeeding initiation, participants were asked: "Has your new baby ever been breastfed or fed breast milk? (Yes or No)." Regarding exclusive breastfeeding in hospital, participants were asked: "At the hospital, was your baby fed anything other than breast milk? (Yes, No, I don't

know)." Regarding exclusive breastfeeding at 1 and 3 months, participants were asked: "When your baby was 1 month old, what were you feeding him or her? and When your baby was 3 months old, what were you feeding him or her? (Check all that apply: breast milk, formula, other liquids, food)." Breastfeeding estimates were generated for each year and population sub-groups, without adjustment for differences in age or other factors.

Breastfeeding estimates for WIC program participants were determined based on the type of WIC package selected by the participant, which is not the same as self-reported breastfeeding intention or behavior. For further information about WIC packages, please visit: https://www.fns.usda.gov/wic/wic-food-packages.

Information about in-hospital breastfeeding initiation is not available by age of mother or SES variables such as income. Data quality may vary depending on the timing of the data collection relative to hospital discharge.

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NUTRITION

Variables

- Vegetable and fruit intake
- Drinking water intake
- Fast food intake
- Soda intake
- Food security
- Food access

Overview

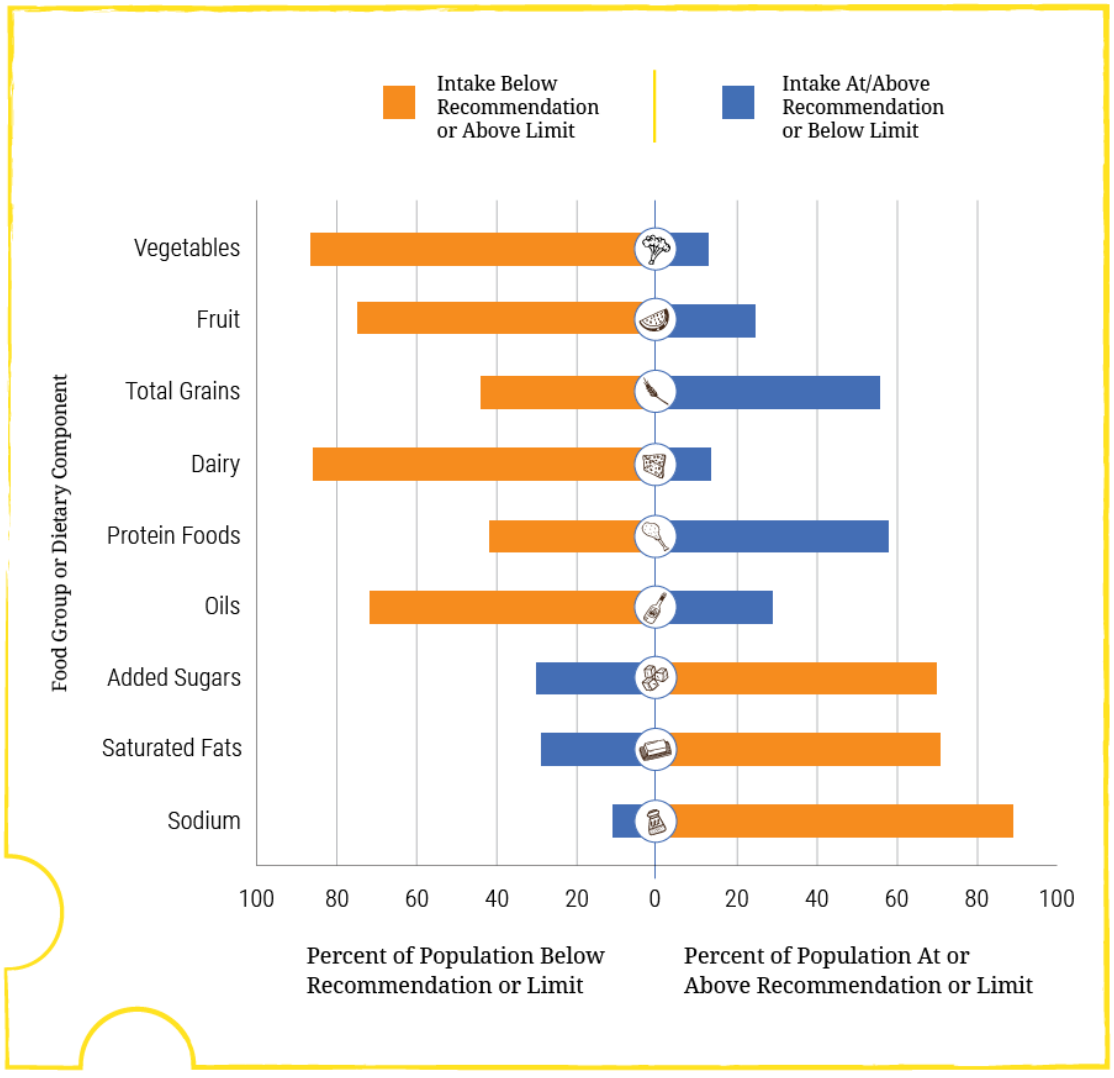
- Available data suggest that the diets of many San Franciscans do not meet minimum recommendations for vitamins and water and exceed maximum recommendations for salt, fat, and added sugar. Two-thirds of children and teens in San Francisco report less than five servings of vegetables and fruit daily.
- Not meeting dietary recommendations is associated with low income, Hispanic and Black/African American race/ethnicity, and neighborhood, southeastern San Francisco and Treasure Island, in particular.
- Food insecurity is prevalent among students in public school, low-income pregnant women, housing-insecure adults, and older adults with disabilities. Fifty-three percent of students in San Francisco Unified School District qualify for free or reduced-price meals; 72 percent of pregnant women participating in the WIC-Eat SF program report food insecurity; 84 percent of people living in single-residency-occupancy hotels (SROs) report food insecurity; an estimated 20,000 older adults with disabilities are estimated to be food insecure.
- Despite increases in the number of food outlets in San Francisco, the number of vendors that accept SNAP decreased by 7 percent, widening disparities in access to food.

What is it?

Good nutrition means getting the right amount of nutrients from healthy foods, in the right combinations, on a daily basis. The right amount of nutrients varies from person to person depending on several factors, including age, sex, temperature, physical activity, stress, and health status.[1] For each kind of nutrient, the Food and Nutrition Board of the Institute of Medicine, National Academy of Sciences identifies a minimum daily amount to consume, sufficient to meet the nutrient requirement of nearly all (97 to 98 percent) healthy people, and if appropriate, also a maximum daily amount to consume, above which excess consumption may cause adverse health effects.[1] Pregnancy can increase the minimum vitamin requirements.[2] Older age and chronic conditions such as hypertension can reduce the maximum safe limit for sodium (from 2300 mg in healthy younger adults to 1500 mg per day).[3]

According to national survey data, one-third of U.S. children and adults age 9 or older do not get enough vitamins. An estimated 31 percent do not meet minimum recommendations for vitamins A, B6, B12, C, D, E, or Folate.[4] U.S. adults do not meet recommended intakes for dietary fiber, calcium, and potassium.[5] One-third of U.S. adults are inadequately hydrated, as evidenced by their highly concentrated urine.[6,7] The low vitamin intake is attributed to low intake of vegetables and fruit. Highly concentrated urine reflects low water relative to salt.

National survey data further show that U.S. children and adults consume too much salt, solid fats, and added sugar.[8,9,10,11] Over 90 percent of the population consumes excess sodium relative to guidelines.[12] The recommended limit for added sugar intake is five teaspoons per day for women, nine teaspoons per day for men, and six teaspoons per day for children.[13,14] A typical American consumes vastly more sugar than the recommendation at almost 20 teaspoons of sugar per day.[15]



The figure shows Dietary Intakes Compared to Recommendations. Percent of the U.S. Population Ages 1 Year and Older Who Are Below, At, or Above Each Dietary Goal or Limit: https://health.gov/dietaryguidelines/2015/guidelines/chapter-2/current-eating-patterns-in-the-united-states/.

To encourage people to eat more vitamins, the USDA MyPlate promotes a diet pattern where vegetables and fruits, which are rich in vitamins and minerals, take up half of the plate at each meal.[16] Adults who engage in less than 30 minutes of moderate physical activity per day should consume 2 to 3 cups of vegetables and 1.5 to 2.0 cups of fruit each day or five or more servings of vegetables and fruit daily.[17] USDA food programs mandate that childcare centers and schools serve five servings of vegetables and fruit over the course of the day at breakfast, lunch, and snack.[18] Drinking water with and between meals is recommended as a way to meet water requirements without added sugar, fat, or calories.[19]

To support people to eat less salt and sugar, the 2015–2020 Dietary Guidelines recommend limiting consumption of foods prepared away from home, commercially processed, prepared or fast food, and sugary drinks.[20] Commercially processed or fast food is a leading source of sodium in the U.S. diet.[21] Sugary drinks are a leading source of added sugar.[22]

Good nutrition depends on food security—access, at all times, to enough nutritious food to support an active, healthy life for all people.[23] To achieve food security, a person must have the ability to secure resources to purchase nutritious food on a consistent basis, obtain foods safely and conveniently, and prepare healthy meals. They must have knowledge of basic nutrition, safety, and cooking.[23] Access to high-energy, nutrient-poor foods may lead to nutritional deficiency and overweight and obesity, and does not make someone food secure.[24] The right to food is a human right recognized by international human rights law.[25] Access to sufficient, safe, acceptable, and affordable drinking water is also recognized as a human right.[26]

In 2016, 87.7 percent (110.8 million) of U.S. households were food secure throughout 2016. Nationally, food insecurity is associated with low income and Black/African American race/ethnicity.[27] Risks of multiple vitamin deficiencies, inadequate hydration, and excess sugar and salt intake are significantly greater for lower-income groups and Black/African Americans compared to higher-income groups and non-Hispanic White Americans.[4,7]

Why is it important for health?

It is a national priority to promote health and reduce chronic disease risk through the consumption of healthful food and drink.[28] Good nutrition is critical for growth, development, physical and cognitive function, reproduction, mental health, immunity, and long-term health.[1,29-34] Hydration is associated with improved cognitive and physical performance and reduced risk of disease and death.[35,36]

Diets that are low in fruits and vegetables and drinking water and high in fat, salt, and soda are associated with weight gain, obesity, high blood pressure, heart attack, stroke, diabetes, kidney disease, and cancer.[37] An estimated 45 percent of all heart disease, stroke, and Type 2 diabetes deaths are associated with poor nutritional intake of 10 dietary factors (low intake of vegetables, fruits, seafood, whole grains, nuts/seeds, polyunsaturated fats and high intake of sodium, red meats, processed meats, sugary beverages);[38] heart disease and stroke are the first and fourth leading causes of death in the U.S. and diabetes is the seventh.[9]

Water intake below requirements results in dehydration. Dehydration significantly alters cellular metabolism and physiology. Over the short term, it impairs physical and cognitive performance.[35] Over the longer term, it increases risks of morbidity, disability, and mortality from a wide variety of

conditions.[35,36] Dehydration significantly magnifies the risk of death within one year following hospitalization for respiratory illness, gastroenteritis, other gastrointestinal conditions, urinary system infections, cancer, sepsis, cardiac diagnoses, frailty, diabetes, and other metabolic disorders.[36] As dehydration is preventable and treatable, hospitalizations due to dehydration are tracked by the California Office of Statewide Health Planning and Development as an indicator of quality of services in the community.[40]

Alleviating food insecurity and ensuring access to safe drinking water is essential to improving health outcomes and lowering health-related expenditures.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Do San Franciscans consume *too little*?

Fruits and vegetables: Local consumption of fruit and vegetables is below recommendations for the majority of children and at least one in 10 adults. In 2012–2016, the California Health Interview Survey asked children and teens in San Francisco, "Yesterday, how many servings of fruit, such as an apple or banana, did you eat?" *and* "Yesterday, how many servings of vegetables, like corn, green beans, green salad, or other vegetables did you have?" About two-thirds of San Francisco children and teens reported eating less than five servings of fruits and vegetables daily. In 2015, the BRFSS survey asked a similar question to adults in San Francisco; 14 percent of respondents reported eating vegetables less than one time per day.[41] In 2017, 70 percent of low-income pregnant women participating in the Women Infants and Children (WIC) EatSF program in San Francisco reported consuming fruit and vegetables less than five times per day [Personal communication, SFDPH Nutrition Services Director].

Water: At least one in 10 San Franciscans do not meet the recommendation to drink water with and between meals. In 2013 to 2015, an estimated 16 percent of teens and adults in San Francisco reported drinking less than three glasses of water at school/work, home, and everywhere else in the past 24 hours.[42] In 2016, 614 people were hospitalized for "potentially preventable" dehydration in San Francisco.[43]

Do San Franciscans consume *too much*?

Fast Food: Local consumption of fast food is in excess of recommendations. Over the past five years, just over 40 percent of San Franciscans reported eating fast food at least weekly. Younger adults and males were over two times more likely to report eating a fast food meal at work, school, home, a restaurant, carryout, or drive-thru in the past seven days.[41] In 2014–2016, 54 percent of adults between the ages 25 to 44 years reported eating fast food at least weekly compared to 19 percent of adults aged 65 or older. Half of the men who responded to the California Health Interview Survey reported eating fast food weekly, compared to 37 percent of the women surveyed.[41]

Soda: Citywide, in 2014 to 2015, about two-thirds of high school students and one-third of young adults reported drinking at least one can, bottle, or glass of soda (not counting diet soda) in the past seven days. Older adults were less likely to report weekly soda consumption than younger adults. In 2014–2015, soda consumption among adults age 25 to 44 years was not significantly different from soda consumption in 2011–2013 (42.0 percent).[41]

Nutrition Disparities by Income and Race/Ethnicity for Children, Teens, and Adults

Among preschoolers (age 3), fruit and vegetable intake increases significantly more during the academic year for higher-income children than lower-income children.[44] Fruit and vegetable intake is expected to increase as children grow and become familiar with a variety of fruit and vegetables. Whereas the Veggie Meter score increased by an average of 69 points between Fall and Spring health screenings in 2016 to 2017 for higher-income children age 3, the Veggie Meter score decreased by an average of six points for lower-income children of the same age. Mean changes in Veggie Meter score differed significantly by race/ethnicity, with mean change of +44 points for White children, compared to mean changes of 0, -17, and +25, for Asian, Latino and Black/African American children, respectively.[44]

Among high school students, the odds of reporting five or more servings of fruit and vegetables per day does not vary by race/ethnicity. In 2013–2017, 16 percent of Black/African American and White students and 12 percent of Chinese and Latino students reported eating five or more servings of fruit and vegetables per day.

Among adults, the odds of reporting fast food and soda and the likelihood of hospitalization for dehydration (low water intake) varies by race/ethnicity. Two times more Latino adults reported eating fast food at least weekly than White adults. Two times more Black/African American adults reported soda intake than White adults. The odds of an emergency room visit for dehydration were higher for Black/African American adults than other race/ethnic groups.

Food Insecurity

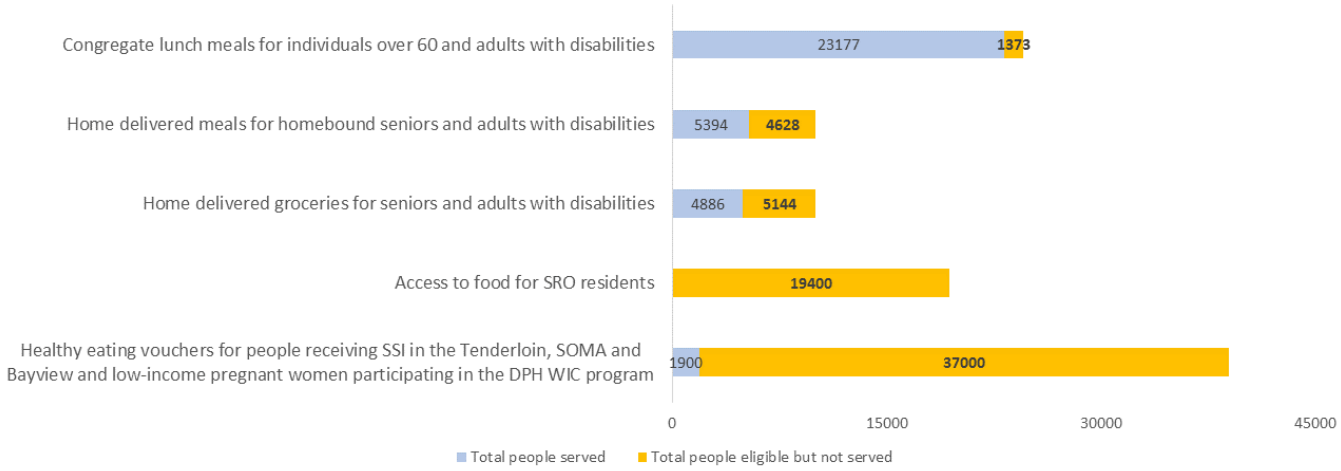
Food insecurity is prevalent among vulnerable groups in San Francisco—pregnant women, children, and older adults—and associated with socioeconomic disparity.

In 2013–2015, over one quarter of pregnant women living in San Francisco with an income below 200 percent of the federal poverty level reported food insecurity. Food insecurity was reported by 20 percent of Black/African American pregnant women and 27 percent of Hispanic pregnant women. Between 2010 and 2015, food insecurity among pregnant women in San Francisco did not decrease, with trends suggesting worsening food insecurity for women with an income between 101 and 200 percent of the federal poverty level and Hispanic women. In 2017, 72 percent of low-income pregnant women who participated in the WIC EatSF program reported food insecurity (WIC EatSF program data, Personal communication, SFDPH Nutrition Services Director).

In 2016–2017, half of the students (53 percent) in the San Francisco Unified School District qualified for free or reduced-price meals.[45] The schools served over 35,000 free or reduced-price meals daily to children.[45]

Figure 4 below describes the number of food insecure adults and seniors who were eligible to receive home-delivered meals, home-delivered groceries, or eating vouchers in San Francisco 2017–2018. Of 102,902 eligible individuals needing meals, only 34 percent received meals.[46] Food-insecure homebound seniors, adults with disabilities, low-income pregnant women, and residents of single-resident-occupancy (SRO) hotels have unmet need. According to the Food Security Task Force, 80 percent of SRO residents, approximately 19,400 people, and 30,000 SSI recipients who are not eligible for CalFresh, are food insecure and at high nutritional risk.[46]

Figure 4. Number of food insecure individuals who were eligible for meal programs or eating vouchers in San Francisco in 2017-2018 by whether or not they were served



Data source: San Francisco Food Security Task Force FY 2017-18 & FY 2019-20 Funding Request.
https://www.sfdph.org/dph/files/mtgsGrps/FoodSecTaskFrc/docs/FSTF-Budget-Request-FY-18-19.pdf
Accessed 8-24-2018.

Limited access to healthy food and drinking water

Consistent with nationwide norms to spend less time cooking and eat more meals away from home, access to ready-to-eat meals at fast food stores and full-service restaurants increased in San Francisco between 2009 and 2014. The number of fast food restaurants increased by 21 percent from 761 to 924. The number of full-service restaurants increased by 13 percent from 1,676 to 1,893. In 2014, there were 1.1 fast food restaurants and 2.2 full-service restaurants for every 1,000 people in San Francisco. Meanwhile, the number of vendors authorized to accept SNAP (food stamps) decreased by 7 percent. In 2016, 0.55 stores per 1,000 people accepted SNAP.

Available data suggest that the odds of not meeting dietary recommendations, not eating enough fruit and vegetables, drinking too little water, and drinking soda, differ by neighborhood. Furthermore, importantly, the pattern of differences across neighborhoods is similar across nutrition measures, suggesting that the neighborhoods that have low access to food are the same neighborhoods that purchase the fewest fruit and vegetables, purchase the most soda and experience the highest rates of emergency room hospitalizations for dehydration.

What is currently being done in San Francisco to improve health?

The San Francisco Food Security Task Force (FSTF) advises the San Francisco Board of Supervisors on food security in San Francisco. Established in 2005 by the Board of Supervisors, the FSTF recommends citywide strategies including legislative policies and budget proposals to address hunger and increase food security in San Francisco. The FSTF tracks vital data on hunger and food security, including demographic information to understand the scope of need in general and for specific vulnerable subpopulations; data on utilization of federal food assistance programs such as CalFresh and school

meals; and data on participation in nonprofit food and meal programs. The FSTF membership comprises representatives from 15 public and community-based entities in San Francisco.[46]

In 2013, the Board of Supervisors unanimously resolved to take steps to end hunger in San Francisco by 2020. In fiscal years 2017–2018 and 2018–2019, $10,665,000 dollars were requested for San Francisco agencies to address local food insecurity. The San Francisco Department of Aging and Adult Services, Department of Public Health and Human Services Agency offered nutrition programs, healthy eating vouchers, and developed a SRO food security initiative. Specific FSTF aims for 2017–2018 were to ensure that the waitlist for home-delivered meals did not exceed 30 days, promote standardized food security screening in all nutrition and other programs serving individuals at risk for food insecurity, increase SSI/SSP payments for elderly, blind, or disabled individuals, and estimate the cost of food insecurity to San Francisco.[46]

Data Sources

CHIS California Health Interview Survey. http://askchis.ucla.edu

San Francisco Food Security Task Force Presentations

Neilsen Percent of Food-At-Home Expenditures

OSHPD Office of Statewide Health Planning and Development

SFDPH Child Care Health Program

WIC Program Eat SF WIC participant survey, 2017.

USDA Economic Research Service

YRBS Youth Risk Behavioral Surveillance System.
http://www.cdc.gov/healthyyouth/data/yrbs/index.htm

Methods and Limitations

Detailed dietary data, such as are available from the National Health and Nutrition Examination Survey (NHANES), are not available at the county level. For this reason, information is limited about the nutritional status and quantity and quality of dietary intake of San Franciscans. Self-reported servings of vegetable, fruit and water intake, and food or beverage expenditure data are prone to measurement error and are not direct or sensitive measures of total energy intake, the various nutrients, or dietary pattern. No citywide-representative information is available about the usual daily consumption of added sugar, fat, or salt. The number of self-reported servings are considered relative to national dietary guidelines, but are not direct measures of the adequacy of each individual's diet relative to actual nutrient requirements. The meaning or adequacy of one cup of vegetables, for example, may be different for a small vs. a large person, or for a physically inactive person vs. an athlete. The available dehydration measure is based on ICD10 codes, not direct biomarker assessment. The frequency of eating fast food underestimates the consumption of all commercially prepared food. Data are not available to describe dimensions of food security, access, acceptability, and affordability across San Francisco neighborhoods over time. The available data may only be generalizable to selected populations, people willing to respond to surveys and/or participate in particular programs. The available local data are not directly comparable to the national NHANES data.

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PHYSICAL ACTIVITY

Variables

- Park score
- Public recreation facilities
- Physical activity in childcare centers
- Walking among adults
- Youth physical activity
- Youth aerobic fitness
- Students meeting state physical fitness standards

Overview

- San Francisco scores well on the Trust for Public Land's "Park Score"—however, it falls short with regards to supply of amenities, including playgrounds, recreation centers, and restrooms.
- Treasure Island, Potrero Hill, and Financial District/South Beach have the lowest access to public recreation facilities.
- There has been a steady increase in the percentage of target childcare centers with no television visible.
- Fifty percent of San Francisco adults report walking for at least 150 minutes each week for leisure or transportation.
- Female, Chinese, Latino, and bisexual students are less likely to be active for 60+ minutes each day of the week.
- Lower percentages of Black, Latino, and economically disadvantaged students meet five or more standards from the California Physical Fitness Test.

What is it?

Physical activity is defined as any bodily movement that requires energy expenditure. The Centers for Disease Control and Prevention (CDC) recommends that children and adolescents ages 5 to 17 years should do at least 60 minutes of moderate -to-vigorous physical activity daily, while adults ages 18 years and above should do at least 150 minutes of moderate-intensity physical activity, 75 minutes of vigorous-intensity physical activity, or an equivalent combination of moderate and vigorous activity throughout the week.[1] The National Association for Sport and Physical Education set physical activity guidelines for infants to children 5 years old at a minimum of 120 minutes daily in the form of 60 minutes of structured activity and 60 minutes of unstructured activity.[2]

Why is it important for health?

Regular physical activity can help people live longer, healthier lives. According to WHO, physical inactivity has been identified as the fourth leading risk factor for mortality, causing an estimated 3.2 million deaths globally.[3] The CDC states that regular physical activity helps improve overall health and fitness, including aerobic capacity, performance (measured by the ability to run a mile and climb a minimum number of stairs), strength, endurance, and flexibility. Physical activity protects against many chronic health conditions including obesity, cardiovascular disease, Type 2 diabetes, metabolic

syndrome, and cancer (breast and colon). Through the release of serotonin, exercise can help reduce stress, anxiety, and depression.[4] Increased physical activity has also been linked to improved creativity.

Beyond physical and mental health, physical activity has been found to be vital to the success of students. It supports learning by improving concentration and cognitive functioning, and has been shown to have a positive influence on students' academic performance.[5] California uses the FitnessGram® to assess physical fitness of fifth-, seventh- and ninth-graders. On average, California students who achieve more fitness standards perform better on standardized tests.[6]

Despite health advantages of physical activity, a 2009 summary by the Robert Wood Johnson Active Living Research Program revealed that less than 50 percent of children and adolescents as well as less than 10 percent of adults in the U.S. achieve public health recommended goals of 30 to 60 minutes per day of moderate to vigorous physical activity on five or more days per week.[7]

The environments in which we live can have significant impact on our level of physical activity. Institutional policies and practices, living conditions, especially physical and social environments, and individual factors interact to promote or inhibit physical activity.[8,9,10] Land use and transportation policies determine the location and design of infrastructure and activities.[11] Neighborhood features such as parks, sidewalks, bicycle trails, recreational facilities, nearby shops, and public transportation stops promote leisurely physical activity, sports, and active transportation.[8,12,13] However, existence of infrastructure alone is insufficient. Barriers to use of facilities and physical activity include costs, poor access to facilities, and perceived unsafe environments.[13,14,15] Institutional policies, including those in the workplace, school and childcare, also affect health. Policies including transportation vouchers, on-location gyms, safe routes to school, recess, physical education, and after-hours availability of the school yard for play can boost physical activity among children and adults.[16] Additionally, social support is instrumental in starting and maintaining a physically active lifestyle. Persons who receive encouragement, support, or companionship from family and friends are more likely to form positive views of physical activity and to begin and continue being physically active.[12,13,16,17] At the individual level, interest in and ability to do physical activity vary. Individuals may have physical or emotional blocks to doing physical activity. Examples include a lack of skills or confidence; a functional limitation associated with a disability, a chronic disease, or increased age; habits such as cigarette smoking or drinking alcohol; as well as a dislike for physical activity.[12,18,19] Additional personal barriers that are commonly cited are competing priorities, limited discretionary time and/or money, lacking availability to childcare, and a lack of culturally appropriate activities.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

ENVIRONMENTAL SUPPORTS FOR PHYSICAL ACTIVITY

Park score: Among the 100 largest U.S. cities, San Francisco ranks fifth on the Trust for Public Land's Park Score (https://parkscore.tpl.org). The Park Score methodology considers four components of park systems when calculating scores: 1) acreage (median park size + park acres as percentage of city acres), 2) investment (spending per resident), 3) amenities (availability of six key amenities per capita), and 4) access (percentage of the population living within a ten minute walk of a public park). San Francisco

scores best in the investment and access categories, scoring 40/40 for both. It falls short in terms of median park size and amenities (specifically playgrounds, recreation centers, restrooms, and splashpads).

Recreation facilities: Both the number of neighborhood parks near one's residence and the types of amenities at the park (such as lighting, sports fields, etc.) can influence how much physical activity the population will engage in. Recreation facilities (defined as athletic fields, meeting spaces/activity centers, performance spaces, and recreational centers/pools) run by the San Francisco Recreation and Park Department (SFRPD) are geographically distributed in such a way that 95 percent of the population is within a half-mile of one. However, Treasure Island currently has no recreation facilities, and only 32 percent of Mission Bay and 41 percent of Financial District/South Beach residents are within a half-mile of a facility. Potrero Hill and western neighborhoods (including Sunset/Parkside, Inner Sunset, and Lakeshore) also have 10 percent or more of residents living more than a half-mile away from a recreation facility.

Physical activity in childcare centers: The San Francisco Department of Public Health's Child Care Health Program works with childcare providers to support them in implementing healthy policies in their facilities. Among those policies are 1) being active 90+ minutes/day, 2) no visible television, 3) physical activity posters, 4) active staff play with children, and 5) using a physical activity curriculum. Physical activity policy and practices in childcare centers influence how much time young children spend doing physical activity. Between 2012 and 2017, there was an increase and then a decrease in the percentage of target facilities where children were active for 90 or more minutes per day. At the same time, there was a steady increase in the percentage of centers with no visible televisions. No discernible trends were present for other measures.

PHYSICAL ACTIVITY BEHAVIORS

Adult physical activity: Walking or biking for utilitarian trips is an opportunity to incorporate routine physical activity into daily living. In San Francisco, 50 percent of adults age 18 and older reported walking for transportation or leisure for at least 150 minutes in one week in 2014. That is significantly higher than the 33 percent of adults statewide who walked for at least 150 minutes.

Youth physical activity: The Youth Risk Behavior Survey is conducted by the CDC and deployed in middle and high schools. Between 2009–2011 and 2015–2017 survey periods, the percentage of middle school youth who reported meeting physical activity guidelines increased from 25 to 33 percent. No significant time trend was apparent for high school students or for the percentage of youth who played on a sports team in the past year for either age group. It is notable that the percentage of youth who report being active 60+ minutes per day each day of the week declines significantly between middle and high school (from 33 to 17 percent).

By sex, middle and high school aged females are significantly less likely to report being active on all days of the week compared to boys. There are no significant differences by sex in sports participation. The trend of middle school youth becoming more active is present in both males and females. By ethnicity, a greater percentage of White middle school youth are physically active compared to Chinese and Latino youth. A greater percentage of White middle school students also played on sports teams compared to Chinese and Latino students. Among high school students, White students were significantly more likely to be active between 2009 and 2015. White high school students were also more likely to play on a sports team compared to Chinese students in the 2009–2011 survey period. By sexual orientation, a

lower percentage of high school students who identified as bisexual were physically active than heterosexual students between 2013 and 2017.

Youth physical fitness: The California State Board of Education uses the standardized FitnessGram® to test students in grades 5, 7, and 9. The FitnessGram® defines Healthy Fitness Zones (HFZ) in six areas: aerobic capacity, flexibility, abdominal strength and endurance, upper body strength and endurance, trunk extensor strength and flexibility, and body composition. Students' scores fall either within or outside of each HFZ, and children whose scores are within five or six HFZ are considered physically fit. Over time, the overall proportion of students scoring within five or six healthy fitness zones has remained relatively stagnant, with more than one-third of both seventh- and ninth-graders not physically fit. The proportion of students meeting this standard increases with age and is higher for females than males. Children from economically disadvantaged households also perform worse than students from families who are not economically disadvantaged. Overall, San Francisco students perform worse than California students overall. While over 60 percent of Asian and White ninth-grade students score within five or six zones, less than 40 percent of Black/African American, Latino, and Pacific Islander ninth-grade students do the same.

One of the most potent measures of physical fitness from the FitnessGram® test is aerobic capacity, because of its relationship to cardiovascular and metabolic health. In San Francisco, about 70 percent of fifth- and seventh-graders meet the standard for aerobic capacity. About 60 percent of high school students meet the standard. When examined by income, the percentage of students identified as not economically disadvantaged who met the aerobic standard was more than 10 percentage points higher than those identified as economically disadvantaged. By ethnicity, around 80 percent of White and Asian students meet aerobic standards in fifth and seven grade while only 50 to 65 percent of Black/African American and Latino students do the same. In ninth grade, those rates for White and Asian students drop to around 70 percent, while for Black/African American and Latino students they drop to around 40 percent.

Data Sources

TPL Trust for Public Land. https://parkscore.tpl.org/

SFRPD San Francisco Recreation and Parks Department. https://data.sfgov.org/Culture-and-Recreation/Recreation-and-Parks-Facilities/xvq2-rjrk

SFDPH San Francisco Department of Public Health. https://www.sfdph.org/dph/comupg/oprograms/MCH/CCHP.asp

CHIS California Health Interview Survey. http://askchisne.ucla.edu

YRBS Youth Risk Behavioral Surveillance System. http://www.cdc.gov/healthyyouth/data/yrbs/index.htm

CDE The California Department of Education, FitnessGram® physical fitness test. http://dq.cde.ca.gov/dataquest/

Methods and Limitations

Recreation facilities: Recreation facilities run by the San Francisco Recreation and Park Department (SFRPD) that were included in this analysis include the following categories: performance spaces, meeting/activity centers, recreation centers/pools, and athletic fields.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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SEXUAL HEALTH

Variables

- HIV
- STDs—chlamydia, gonorrhea and early syphilis
- Condom use among high school and middle school students
- Sex under the influence of alcohol or drugs among high school and middle school students
- Forced sexual intercourse among high school students
- Dating sexual violence among high school students
- Unintended pregnancy

Overview

- The estimated rate of new HIV infection in San Francisco has decreased from 56 per 100,000 in 2012 to 40 per 100,000 in 2014.
- Between 2013 and 2016, incidence rates for chlamydia, gonorrhea, and early syphilis increased by 60 percent, 107 percent, and 13 percent, respectively.
- Incidence rates for HIV and each STD are higher among men; men contract chlamydia and gonorrhea up to nine times more often than women.
- In 2016, rates of chlamydia, gonorrhea, and early syphilis were 4.7, 7.3, and 5.2 times higher among Black/African Americans, respectively, than among Asians and Pacific Islanders, who experience the lowest rates of STDs in San Francisco.
- Among sexually active San Francisco youth, only 71 percent of middle school and 58 percent of high school students used a condom the last time they had sexual intercourse.
- From 2015 to 2017, alcohol or drug use before sex decreased among high school students but increased among middle school students.
- Gay or lesbian and bisexual high school students are more likely to experience sexual violence like being physically forced to have sexual intercourse or being forced to do sexual things by a boyfriend or girlfriend.
- Hispanic and Black/African American women are more likely to have mistimed or unwanted pregnancy, and the rates were two times higher than White women; as for those unsure of pregnancy intentions, Black/African American women have the highest percentage (33.1 percent), which was three times higher than all other races/ethnicities.

What is it?

The World Health Organization's working definition of sexual health is "a state of physical, mental, and social well-being in relation to sexuality. It requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination, and violence."[1]

Three aspects of sexual health—sexually transmitted diseases (STDs), dating violence, and unintended pregnancies—are each important indicators for the state of sexual health in San Francisco. Additionally, dating violence, among other risk factors, is associated with an increase in risk-taking sexual behaviors, an STD diagnosis, and unintended pregnancy.[2,3]

Chlamydia, gonorrhea, HIV, and syphilis are all examples of STDs. All STDs are preventable, and bacterial STDs such as chlamydia, gonorrhea, and syphilis are curable. Syphilis occurs in distinct stages, with early syphilis being subdivided into primary, secondary, and early latent syphilis. Early latent syphilis is when the STD is most contagious. Risk factors for acquiring an STD include being sexually active in communities with high rates of STDs, poverty and marginalization, limited access to healthcare, limited healthcare-seeking behavior, abuse of drugs and alcohol, stigma and secrecy around talking about sex and STDs, and early initiation of sexual intercourse.[3]

Dating violence is defined as physical, sexual, psychological, or emotional violence within a dating relationship.[4] In addition to lethal violence, abuse includes the intentional sabotaging of contraception, deliberately exposing someone to STDs, and forcing a woman into having unwanted pregnancies or abortions.[5] Risk factors for dating violence include the belief that dating violence is normal and acceptable, depression and other symptoms of trauma, aggression in other relationships, drug and alcohol abuse, engaging in early sexual activity and having multiple partners, having friends involved in dating violence, having conflicts with a partner, and experiencing violence in the home.

Unintended pregnancies are those that are mistimed, unplanned, or unwanted at the time of conception.[6] The rate of occurrence for unintended pregnancies varies according to a variety of factors, including maternal age, race/ethnicity, poverty, and education.[7] Some risk factors for unintended pregnancies are unavailability of contraception, failure to use contraception appropriately, and reproductive and sexual coercion.[8] The American Academy of Pediatrics (AAP) recommends long-acting reversible contraceptives (intrauterine devices or subdermal implants) as the first-line contraceptive choice for adolescents who do not choose abstinence.[9]

Why is it important for health?

Untreated STDs can lead to serious long-term health consequences, including reproductive health problems, fetal and perinatal health problems, cancer, and facilitated transmission of HIV. For example, chlamydia can damage a woman's reproductive system and create pregnancy complications or even infertility.

Dating violence can have a negative effect on health throughout life. Victims of dating violence are more likely to experience symptoms of depression and anxiety. They might also engage in unhealthy behaviors, such as using tobacco, drugs, and alcohol, or inconsistent use of condoms and hormonal

contraceptives. Dating violence is associated with unwanted pregnancy.[3] Teens who are victims of dating violence in high school are at higher risk for victimization later in life.[10,11]

Unintended pregnancies are associated with many negative health and economic consequences. Negative outcomes that may occur for women during the unwanted pregnancy include delays in initiating prenatal care, reduced likelihood of breastfeeding, maternal depression, and increased risk of physical violence during pregnancy. Babies born under these circumstances often suffer from birth defects and low birthweight, as well as poor mental and physical health during childhood, and tend to have lower educational attainment and more behavioral issues in their teen years. The consequences are augmented for teen parents, who are less likely to graduate from high school and will over a lifetime earn significantly less income than those who delayed childbearing.[12] Unintended pregnancies also result in significant costs to the health system.[13]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Sexually transmitted diseases/HIV: In 2013–2017, there had been steady declines in new HIV diagnoses. The annual rates of newly diagnosed HIV cases in San Francisco decreased from 46.68 per 100,000 in 2013 to 25.10 per 100,000 in 2017. HIV cases were decreasing while STDs were increasing, because biomedical HIV prevention—antiretroviral treatment for persons living with HIV and HIV pre-exposure prophylaxis for those at risk for HIV—sharply reduces transmission of HIV, but not STDs. Between 2012 and 2016, annual rates of newly reported chlamydia, gonorrhea, and early syphilis increased by 60 percent, 107 percent, and 13 percent respectively.

The rates of new HIV and each STD cases were higher among men; men contracted HIV, chlamydia, gonorrhea, and early syphilis up to 35 times more often than women. In San Francisco, Black/African Americans were disproportionately affected by STDs and HIV. In 2016, rates of chlamydia, gonorrhea, and early syphilis were 4.7, 7.3, and 5.2 times higher among Black/African Americans, respectively, than among Asians and Pacific Islanders, who experience the lowest rates of STDs and HIV in San Francisco. HIV transmission was the highest among men who have sex with men (MSM) with a rate of 131 per 100,000.

Generally, youth are more likely to contract STDs. Incidence rates decrease with age as people become less sexually active and/or have fewer sexual partners. In 2016, the peak age range for individuals to contract gonorrhea or chlamydia was 20 to 24 years old and 25 to 29 years old; middle-aged persons, between 45 and 54 years old, had the highest rates of early syphilis. An increase in early syphilis indicates that people are not identifying it in its earliest stages or are not getting treated fast enough, so the infection progresses.

Risky sexual behaviors: Condoms are effective at preventing STDs. Among sexually active San Francisco youth, only 71 percent of middle school and 58 percent of high school students used a condom in 2017. Gay or lesbian high school students were less likely to report using a condom during their most recent sexual encounter than heterosexual or bisexual students were. As this data only looks at condom usage, the older high school students could be using other forms of birth control. Surveillance has also found decreased condom use in San Francisco among gay adult men.[14]

Alcohol and drugs impair cognitive reasoning, which can lead to unwanted consequences if sexual behavior follows alcohol or drug use. From 2015 to 2017, alcohol or drug use before sex decreased among high school students but increased among middle school students. Between 2013 and 2017, White and Black/African American students were more likely to use drugs or alcohol before sex than other races. Similar to risky sexual behavior like less condom using, gay or lesbian high school students had the highest percent of using drugs or alcohol before sex.

Sexual violence: About 7.4 percent of San Francisco high school students said they had been forced to have sex, and 9.4 percent said they had been forced to do sexual things by a boyfriend or girlfriend in 2017. In 2015–2017, 26.74 percent of the gay or lesbian high school students said they had been physically forced to have sexual intercourse, which is more than 4 times higher than heterosexual students); they were also more likely to be forced to do sexual things by a boyfriend or girlfriend.

Unwanted pregnancies: In 2013–2015, 18 percent of women reported they had mistimed or unwanted pregnancies, and 11.2 percent reported they were unsure about pregnancy intention. The data suggests major disparities by race: Hispanic and Black/African American women were more likely to have mistimed or unwanted pregnancy, and the rates were two times higher than White women; as for those unsure of pregnancy intentions, Black/African American women had the highest percentage (33.1 percent), which was three times higher than all other races.

Data Sources

SFDPH HIV and STD Surveillance, San Francisco Department of Public Health (SFDPH).

YRBSS Youth Risk Behavior Surveillance System (YRBSS), Centers for Disease Control and Prevention.

MIHA Maternal and Infant Health Assessment (MIHA), California Department of Public Health(CDPH).

Methods and Limitations

HIV: The number of new HIV diagnoses per year was determined by summing persons who were diagnosed with HIV that year, persons initially diagnosed with HIV infection Stage 3 (AIDS), and persons initially diagnosed with any HIV stage below 3 who then developed Stage 3 later in the year. The numbers representing incidence and prevalence are an underestimate of true HIV status in San Francisco because the values do not account for people tested anonymously, unless they also tested confidentially or entered care in San Francisco.

Chlamydia, gonorrhea, and syphilis: The data includes San Francisco residents who contract chlamydia or gonorrhea, are tested, and have positive STD test results reported to the health department.

Rates: Incidence, prevalence, and case diagnosis rates were calculated using population estimates and projections from California Department of Finance. Annual rates are calculated as the number of cases diagnosed for a particular group during each year divided by the population for that group, multiplied by 100,000.

Condom and alcohol or drug usage: The denominator in rate calculations is based on youth ever reporting having sex. Due to the low number of responses collected from the YRBS survey, statistics may

have decreased accuracy or large confidence ranges. Responses from separate years had to be pooled together to generate stable numbers.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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SUBSTANCE ABUSE

Variables

- Binge drinking among adults
- Binge drinking among middle and high school students
- ER visits and hospitalizations due to alcohol abuse
- Density of off-sale alcohol outlets
- Use of marijuana, unauthorized pain medications, and other drugs among middle and high school students
- Mortality due to drug use disorders
- ER visits and hospitalizations due to drug use
- Opioid prescriptions

Overview

- In 2015, 36 percent of adults in San Francisco self-reported binge drinking on at least one occasion. In 2017, 5.7 percent of high school students reported binge drinking and 0.97 percent of middle school students reported binge drinking.
- Hospital admission rates due to alcohol abuse among adults citywide decreased in 2014–2016 from 10.53 to 1.12 per 10,000, but Latinos and Black/African Americans still had the highest rates.
- The density of off-sale alcohol permits is highest in the Tenderloin, where there are 104.4 licenses per square mile compared to 16.26 licenses per square mile for the city as a whole.
- In 2017, 25.65 percent, 10.98 percent, and 10.15 percent of high school students in San Francisco reported they had used marijuana, unauthorized pain medications, and other drugs (including inhalants, ecstasy, methamphetamines, and cocaine).
- More than 40 percent of White, Black/African American, and Latino high school students as well as more than 10 percent of Black/African American and Latino middle school students reported having used marijuana.
- The age-adjusted rate of mortality due to drug use disorders decreased from 18.97 per 100,000 in 2015 to 10.58 per 100,000 in 2017. The rate among Black/African Americans over that period was over five times as high as that among other races/ethnicities.
- Neighborhoods like the Tenderloin and South of Market with large Black/African American populations also have much higher mortality rates due to drug use disorder.

What is it?

The World Health Organization (WHO) defines substance abuse as harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. Psychoactive substance use can lead to Substance Use Disorder—a cluster of behavioral, cognitive, and physiological phenomena that develop after repeated substance use, which typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.[1]

Many factors determine whether someone will start to use or become dependent on drugs or alcohol. Risk factors can increase a person's chances for abuse, while protective factors can reduce the risk. Risk factors for use among children and adolescents include unstable family relationships; exposure to physical, mental, and sexual abuse; mental illness, early aggressive behavior; poor social skills; poor academic performance; substance use among peers and family members; drug and alcohol availability; involvement with the juvenile justice system; drug experimentation; and poverty.[2,3] Protective factors include parental monitoring; positive social relationships; academic competence; and anti-drug policies.

The negative effects of alcohol correlate with increased consumption. Moderate consumption is defined as having up to one drink per day for adult women and up to two drinks per day for adult men. Excessive alcohol consumption can refer to binge drinking, heavy drinking, drinking by persons under 21 years of age, and any alcohol use by pregnant women. Binge drinking is defined as any consumption leading to a blood alcohol concentration of 0.08 percent or more or about four drinks on a single occasion for adult women, or five drinks for adult men. Heavy drinking is defined as consumption of eight or more drinks per week for women or 15 or more drinks per week for men.[4]

Why is it important for health?

The effects of drug and alcohol use are cumulative and significantly contribute to costly social, physical, mental, and public health problems. These problems include poor academic performance, cognitive functioning deficits, unintended pregnancy, HIV and other sexually transmitted diseases, motor vehicle crashes, violence, child abuse, crime, homicide, chronic diseases including liver disease and certain cancers (e.g., colorectal, liver, breast, prostate), and mental and behavioral disorders (unipolar depressive disorders, epilepsy, suicide).[5] Unintentional poisoning is now the leading cause of injury death among American adults, surpassing motor vehicle accidents. In 2016, more than 64,000 deaths occurred due to drug overdoses, primarily from heroin and other natural and synthetic opioids.[6] Approximately 88,000 deaths result from alcohol use annually in the U.S., and in 2012 more than 10,000 persons died in alcohol-related motor vehicle accidents alone.[7,8]

Drug and alcohol use are both causes and effects of violence. More than half of all persons arrested for major crimes including homicide and assault were under the influence of drugs at the time of their arrest, and over 42 percent of violent crimes reported to the police involved alcohol.[9,10] More than half of all substantiated cases of child abuse and neglect involve substance abuse.[11] Those who experience violence are also more likely to abuse drugs and alcohol. Women who have experienced childhood abuse or neglect are more likely to have problems with alcohol, and over two-thirds of patients in drug abuse treatment centers report having been physically or sexually abused as children.[9,12]

Research suggests that geographic density of alcohol outlets is closely related to crime and violence.[13] One study in New Jersey, controlled for age and poverty, found that neighborhoods with higher densities of alcohol outlets had more violent crimes, including homicide, rape, assault, and robbery.[14] In Los Angeles, a higher density of alcohol outlets was associated with more violence, after controlling for unemployment, age, ethnic and racial characteristics, and other community characteristics.[15] In a six-year study of alcohol outlets in 551 urban and rural ZIP code areas in California, an increase in the number of bars and off-premise establishments (e.g., liquor, convenience, and grocery stores) was correlated to an increase in the rate of violence.[16] These effects were largest in poor, minority areas of the state, already saturated with the greatest numbers of outlets.

Drug and alcohol have lasting impacts on children exposed intrauterine. Drug use during pregnancy can lead to premature birth, low birthweight, cognitive problems, and substance dependence in the baby.[17] Alcohol use during pregnancy causes fetal alcohol syndrome, which includes mental retardation, malformation of the skeleton, heart and brain, and other developmental complications.[18] Children with prenatal exposure to drugs and alcohol are more likely to need special education services in school.

The earlier a person begins to use drugs and alcohol, the more likely he or she is to develop serious problems. The adolescent brain is negatively affected by alcohol and other drugs (e.g., cannabis) through altered function of neurotransmitters, altered perception, and habits and choices associated with drug and alcohol use becoming ingrained.[19] Adolescents exposed to drugs and alcohol before age 15 are more likely to be dependent as adults, to contract a herpes infection, to become pregnant as an adolescent, and to be involved in crime.[20]

Drug and alcohol abuse put the user at increased risk for communicable and chronic diseases. In 2000, one-third of AIDS cases in the U.S. resulted from injection drug use; about half of pediatric AIDS cases resulted from injection drug use or sex with an injection drug user by the mother.[21] Nearly all hepatitis C cases are attributable to injection drug use.[22] Alcohol consumption can also lead to high blood pressure, various cancers, heart disease, stroke, and liver disease.[23] Alcohol use has been estimated to cause 3.5 percent of cancer deaths in the U.S., with each death associated with 17 to 19 years of life lost.[24]

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Alcohol abuse: In 2015, 36 percent of adults in San Francisco self-reported binge drinking on at least one occasion, compared to 35 percent in California overall. Men were twice as likely to binge drink as women, and young adults were more likely to binge drink than older adults.

Alcohol abuse can start in middle school. In 2017, 5.7 percent of high school students in San Francisco reported binge drinking. The percentage among White high school students was 25 percent, which was between two and twelve times as high as other races/ethnicities in 2013–2017. Limiting youth access to alcohol has reduced underage alcohol use and alcohol-related problems.[8]

Hospital admission and emergency room rates due to alcohol abuse in San Francisco decreased from 2012 to 2016. It is possible these decreases are a result of less residents seeking care. Latinos, Black/African Americans, and Pacific Islanders had the highest such rates between 2014 and 2016.

Although self-reported binge drinking was highest among young adults, emergency room visits and hospitalization rates were highest among adults age 45 to 64 years, presumably as a result of health issues arising from heavy drinking. City areas with the highest density of off-sale alcohol outlets coincide with areas with high alcohol-related hospitalization rates.

Off-sale alcohol outlets: Drinking and underage drinking are known to vary directly with proximity to liquor stores and pricing. *Off-sale alcohol outlets* are those authorized by the State of California to sell all types of alcoholic beverages for consumption off premises in original, sealed containers—such as grocery stores, liquor stores, mini-marts, and package stores. This excludes restaurants, bars, and other facilities where alcohol is consumed onsite. Off-sale alcohol permits are either general (for the sale of beer, wine, and distilled spirits) or beer-and-wine-only. Per Section 23817.5 of the California ABC Act, the number of licenses for each permit type is limited to one for every 2,500 inhabitants of a county, or one for every 1,250 inhabitants for both types combined.[13]

A number of neighborhoods, however, have license densities that are far higher, including the Financial District, North Beach, Japantown, Castro/Upper Market, Chinatown, South of Market, and the Tenderloin, which have between two and four licenses per 1,250 residents. The density of permits is by far the highest in the Tenderloin, where there are 104.4 licenses per square mile compared to 16.26 per square mile for the city as a whole. Note that the per capita densities of licenses is only slightly higher in communities of concern like Chinatown or the Tenderloin, due to their high population density.

Drug abuse: In 2017, 25.65 percent, 10.98 percent, and 10.15 percent of high school students in San Francisco reported they had used marijuana, unauthorized pain medications, and other drugs (including methamphetamines, inhalants, ecstasy and cocaine), respectively; the percentages for middle school students were 3.88 percent, 3.37 percent, 4.16 percent, respectively. Ethnic identity correlates drug use among students. More than 40 percent of White, Black/African American, and Latino high school students as well as more than 10 percent of Black/African American and Latino middle school students had used marijuana in 2013 to 2017.

In 2017, the age-adjusted mortality rate due to drug use disorder was 10.58 per 100,000, which decreased from 18.97 per 100,000 in 2015. The rates among Black/African Americans was five times as high as that of all ethnicities with 74.22 per 100,000. Neighborhoods with large Black/African American populations, like the Tenderloin and South of Market, also have much higher mortality rates due to drug use disorder in 2012–2016.

While hospitalization rates due to drug use were stable in 2012–2016, corresponding emergency room visit rates for all drugs increased by 200 percent and for opioids increased 100 percent. Black/African American residents of the Tenderloin and South of Market were more likely to be admitted to hospital or visit the emergency room due to drug use. Pacific Islanders also had higher emergency room visit rates in 2014–2016.

In 2017, the opioid prescription rate in San Francisco has decreased to 311.1 per 1,000 residents, much lower than the statewide rate 507.6 per 1,000 residents. That same year, ZIP code 94104 had the highest opioid prescription rate in the city at 1,291 per 1,000 residents. Between 2010 and 2012, there were 331 deaths in San Francisco due to accidental overdose of opioids, most commonly involving methadone, morphine, and/or oxycodone. Most of these deaths also involved other substances (cocaine, benzodiazepines, anti-depressants, alcohol).[25] While prescription opioids are becoming a significant concern, one report cautions that reducing access to prescribed opioids may increase the

number of young heroin users as well as the number of relapsing former users.[11] In 2013, several lesser-known drugs were detected in San Francisco. Cannabimimetics, such as XLR-11, have been found in several driving-under-the-influence and criminal justice cases.[11] Additionally, the San Francisco Police Department reported finding desomorphine and 4-methyl-5-thiazole ethanol--a viscous, oily liquid used as a sedative and hypnotic.

Data Sources

CHIS The California Health Interview Survey (CHIS), UCLA Center for Health Policy Research.

OSHPD Office of State Health Planning and Development (OSHPD).

YRBSS Youth Risk Behavioral Surveillance System (YRBSS), Centers for Disease Control and Prevention.

COOSD California Opioid Overdose Surveillance Dashboard (COOSD).

SFHIP San Francisco Health Indicator Project (SFHIP)**.**

Methods and Limitations

Density of off-sale alcohol outlets: Not all off-sale alcohol outlets are the same type of business. The stores vary in hours open, types of other products or types of alcohol for sale, languages spoken, pricing, and clientele. The presence of a full-service grocery store that also sells alcohol likely has a very different impact on a neighborhood's access to healthy food resources than the presence of a package or liquor store.

Although there is officially a moratorium on new alcohol outlet licenses in San Francisco, the trading of licenses between businesses does occur and may impact the distribution of alcohol outlets. More information on the methodology used to compute the density of off-site alcohol outlets is available at the San Francisco indicator project, www.sfindicatorproject.org.

Hospitalizations and emergency room visits:

- Hospitalization and ER rates measure the number of admissions or visits, but not the number of unique residents hospitalized. Admissions records may include multiple admissions by the same person.
- In October 2015, the diagnosis coding standard for Hospitalizations and Emergency Room visits was changed from ICD-9 to ICD-10. Caution should be used in comparing data using the two different standards.
- ICD-9/10 codes for alcohol and drug use were obtained from the CDPH Safe and Active Communities Branch.[26]
- Rate estimates for alcohol or drug use as the primary cause were computed by searching the primary diagnosis field only. Rate estimates for alcohol or drug use as the primary, co-morbid, or coexisting cause were computed by searching all available diagnosis fields.

Population estimates for rates:

- State of California, Department of Finance, *Race/Hispanics Population with Age and Gender Detail, 2000–2010.* Sacramento, California, September 2012.
- California Department of Finance. Demographic Research Unit. 2018. State and county population projections 2010–2060 [computer file]. Sacramento: California Department of Finance. February 2017.

Standard Population for age adjustment:

- Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1995 to 2050. U.S. Department of Commerce, Economics and Statistics Administration, BUREAU OF THE CENSUS.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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TOBACCO USE AND EXPOSURE

Variables

- Current cigarette smokers among adults
- Smoking among high school and middle school students
- Smoking among pregnant women
- Tobacco permits and sales

Overview

- In 2015–2016, 10.85 percent of adults in San Francisco reported they were current cigarette smokers, which slightly increased from 8.76 percent in 2013–2014; but the percentage was lower than California (12.40 percent).
- Men are almost three times more likely to smoke cigarette than women, and the percentage among residents who lived below 200 percent of federal poverty level is two times higher than residents who lived above 200 percent of federal poverty level.
- Similar to adults, male student are more likely to smoke cigarettes than female students. The percentage was higher among White and Black/African American students, and it also increases along with age.
- In 2016, 0.98 percent of new mothers in San Francisco reported smoking before or during pregnancy. The percentage has been dropping in the last 10 years from 2.71 percent in 2007. However, it was still six to 15 times higher among Black/African American women (6.83 percent) than all other races and ethnicities.
- Districts in San Francisco with higher concentrations of smokers, ethnic minorities, and youths are associated with a higher density of tobacco retailers, despite the fact that all the districts have approximately the same number of residents.

What is it?

Tobacco products are made entirely or partly of leaf tobacco as raw material and are intended to be smoked, inhaled, chewed, or sniffed. All of these products contain nicotine, a highly addictive psychoactive ingredient.

Electronic cigarettes (e-cigs or e-cigarettes) are electronic nicotine delivery devices that simulate tobacco smoking. These personal use products produce an aerosol containing a mixture of chemicals that may include nicotine. They usually contain any of over 7,000 flavors to modify the use experience.

Menthol cigarettes, flavored little cigars, cigarillos, or blunt wraps are combustible tobacco products that feature prominent flavors as additives to the leaf tobacco.

Why is it important for health?

Tobacco, the number one preventable cause of death, claims nearly half a million lives a year in the U.S. and estimates have shown that 18 percent of all U.S. deaths could have been avoided if not for tobacco products.[1,2] Tobacco products are cancer-causing and contribute to nearly every type of cancer. Cigarette smoking increases the risk of heart disease, chronic obstructive pulmonary disease, acute respiratory illness, stroke, and cancers of the lung, larynx, oral cavity, pharynx, pancreas, breast, and cervix.[1,3,4]

There is growing concern that flavored tobacco products, particularly menthol cigarettes, serve as easier starter products, may prove more addictive than non-flavored products, and have been shown to be harder to quit.[1,3,5] Flavored products stand in the way of tobacco control efforts and may encourage youth use as well as co-use of cannabis.[6]

Numerous factors affect the decision to start smoking or use other tobacco products, including some individual characteristics such as stress and low self-esteem, but also social characteristics such as having friends and family who smoke. Tobacco industry targeting commences early, as tobacco addiction starts early in the developmental period, with over 90 percent of adult tobacco users having started smoking prior to age 18.[7] Adolescents who lack college plans or whose parents are not college-educated are also more likely to smoke. Tobacco advertising can also foster smoking initiation.[8] Nicotine products are highly addictive, and smokers find that quitting after a period of regular use is difficult despite known health benefits to quitting.

Tobacco products have been heavily marketed and targeted to some of the most vulnerable communities in San Francisco. This includes Black/African American, LGBTQ, lower-income, and homeless populations. The sale and use of these products has been normalized for generations, leading to mass addiction. Despite being the only known product that if used as directed on the label is known to cause disease and death, tobacco is still sold in many locations and continues to contribute to considerable death and disability. Tobacco product marketing and the resulting use is a major source of health inequity in the country and in San Francisco. Use of tobacco products among Californians is associated with uninsurance and underinsurance, lower educational attainment, poverty, and among men from communities of color.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Smoking prevalence: In 2015–2016, 10.85 percent of adults in San Francisco reported they were current cigarette smokers, which slightly increased from 8.76 percent in 2013–2014; but the percentage was lower than California (12.40 percent). Men were almost three times more likely to smoke cigarette than women, and the percentage among residents who lived below 200 percent of federal poverty level was two times higher than residents who lived above 200 percent of federal poverty level.

Smoking prevalence among high school students decreased between 2013 and 2017; 4.74 percent of high school students said they smoked cigarettes in the past 30 days in 2017. Similar to adults, male students were more likely to smoke cigarettes than female students. The percentage was higher among White and Black/African American students (15 percent and 9.4 percent), and it also increased along with age.

In 2016, 0.98 percent of new mothers in San Francisco reported smoking before or during pregnancy. The percentage has been dropping in the last five years from 1.51 percent in 2012. However, it was still six to 15 times higher among Black/African American women (6.83 percent) than all other races and ethnicities.

Tobacco permits and sales: Districts in San Francisco with higher concentrations of smokers, ethnic minorities, and youths are associated with a higher density of tobacco retailers, despite the fact that all the districts have approximately the same number of residents. These districts include historically ethnic neighborhoods such as the Mission, Tenderloin, Western Addition, Bayview Hunters Point, Excelsior, and Chinatown (District 3). District 6 (Tenderloin) had more than 140 tobacco retailers in 2017, while District 4 (Sunset) had only 47 tobacco retailers.

Research has shown that areas with a higher density of tobacco retailers are associated with an increased prevalence of smoking.[10] It should be noted that the districts with higher numbers of tobacco retailers are also districts with lower socioeconomic status. An ordinance adopted in 2015 set a future cap on retail permits. The ordinance has already been shown to slow the growth of tobacco retail sales in these oversaturated communities that are historically targeted because of the number of lower income, racial minority, and youth residents.

Secondhand smoke is a problem in densely populated San Francisco. Nearly 40 percent of San Francisco residents surveyed in 2014 experienced at least some degree of drifting smoke, despite the fact that only 7 percent of adults reported they smoke indoors.[11,12] The frequency of experiencing drifting smoke was higher in lower-income districts such as Districts 3 and 6.

The U.S. Food and Drug Administration does not regulate e-cigarettes, and no restrictions on the sale of e-cigarettes to minors exist in most states.[2] In San Francisco, e-cigarette usage is only allowed where traditional cigarettes are allowed. Retailers must have a tobacco permit to sell e-cigarettes and follow all state and local laws such as a prohibition on the sale of e-cigarettes to minors. A survey conducted by the San Francisco Unified School District found that 10 percent of middle school and 17 percent of high school students have tried e-cigarettes, while only 7.5 percent of high school students have used cigarettes in the last 30 days.[13] San Francisco spends nearly $400 million a year on tobacco-related costs, including medical expenses, loss of productivity, and secondhand smoke exposure.[14]

What is currently being done in San Francisco to improve health?

Reducing tobacco retailer density and overall tobacco sales
Districts in San Francisco that are home to more people of color, low-income people, and young people are also associated with a higher density of tobacco retailers and higher smoking rates [i.e., Mission, Tenderloin, Western Addition, Bayview Hunters Point, Excelsior, and Chinatown].

- In 2014, the San Francisco Board of Supervisors unanimously adopted the Tobacco Permit Density Reduction Ordinance, which limits new tobacco retailer permits near schools or other tobacco retailers.

Addressing e-cigarette use

"Vaping" is on the rise, especially among young people. In 2018, the number of twelfth-graders who reported e-cigarette use increased 78 percent from the prior year, causing the U.S. Surgeon General to call for aggressive steps to curb the epidemic of teen nicotine use.[23]

San Francisco is leading the way with policies that directly address e-cigarettes' health effects and popularity among minors.

- In 2014, San Francisco passed a law prohibiting use of electronic cigarettes wherever smoking of tobacco products is prohibited. [SF Health Code Article 19N]
- In 2016, San Francisco raised the minimum age to purchase tobacco products from 18 to 21. [San Francisco Health Code Article 19H]
- In 2018, San Francisco passed a comprehensive ban on flavored tobacco product sales, which includes flavored electronic tobacco pods. Proposition E, banned the sale of all flavored tobacco products, including e-liquids, menthol cigarettes, and flavored cigars. Tobacco companies designed the taste and packaging of flavored products to appeal to youth and have historically marketed menthol products specifically to the Black/African American community. [San Francisco Health Code Article 19Q]

Data Sources

CDPH Birth Statistical Master File, California Department of Public Health (CDPH).

CHIS California Health Interview Survey (CHIS), UCLA Center for Health Policy Research.

SFDPH Environmental Health Protection, Equity, and Sustainability Branch, San Francisco Department of Public Health (SFDPH).

YRBS Youth Risk Behavior Surveillance System (YRBSS), Centers for Disease Control and Prevention.

Methods and Limitations

Survey sample sizes are not sufficiently large to create statically stable estimates for all age, gender, race and ethnicity, or poverty level stratifications.

Statistical instability: Statistically unstable estimates are not shown in this document. Statistical instability may arise from:

- Few respondents to a survey
- Small population sizes
- Small numbers of affected individuals

Statistical instability indicates a lack of confidence in an estimate's ability to accurately and reliably represent the population. Due to statistical instability, estimates are not available for all age, gender, ethnicity, or other groups.

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[10] Y. Chuang et al, "Effects of neighborhood socioeconomic status and convenience store concentration on individual-level smoking," *Journal of Epidemiology and Community Health*, 59 (2009): 568–73.

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[12] California Health Interview Survey (2011–12).

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APPENDIX K
DEATH

MORTALITY

Variables

- Number of deaths
- Mortality rates
- Years of life lost
- Life expectancy

Overview

- The leading causes of death are predominately chronic diseases including heart diseases, cancers, Alzheimer's, chronic obstructive pulmonary disease, and diabetes.
- Mortality rates of both Alzheimer's disease and diabetes are increasing in San Francisco.
- Substance use and suicide are also leading causes of death in San Francisco. Drug and alcohol use are especially important among adults 18 to 64, while suicide is one of the leading five causes of death for residents aged 13 to 34.
- Additional important causes of premature death in San Francisco include assault, traffic accidents, injuries, and HIV. While each of these kill relatively few residents, those afflicted are typically younger.
- Overall life expectancy is high in San Francisco, with the typical resident living to 83 years. Similar to trends seen nationwide, life expectancy in San Francisco has decreased since 2014.
- Life expectancy varies by race/ethnicity and gender. Black/African Americans and Pacific Islanders have the lowest life expectancy.

Leading Causes of Death in San Francisco

1. Cardiovascular diseases
2. Cancer
3. Alzheimer’s disease
4. Substance use
5. Chronic obstructive pulmonary disease
6. Diabetes Mellitus
7. Influenza and pneumonia
8. Suicide

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

The leading causes of death in San Francisco are predominantly chronic diseases but notably include substance abuse—drug use and alcohol dependence, suicide, and influenza and pneumonia.

In 2015–2017, four of the 20 the leading causes were cardiovascular diseases—ischemic heart disease, inflammatory heart disease, hypertensive disease, cerebrovascular disease. These four diseases alone accounted for almost 25 percent of all deaths in San Francisco.

Six of the leading 20 causes were cancers—lung/tracheal/bronchial, colon, pancreatic, liver, breast, lymphoma, and prostate. These cancers account for almost 15 percent of all deaths in San Francisco.

Mental and behavioral health causes—alcohol use, drug use, and suicide—account for 6 percent of all deaths.

Deaths due to ischemic heart disease decreased dramatically since 2005. A smaller decrease was seen for hypertensive disease starting in 2009. Rates for cerebrovascular and inflammatory heart diseases remained flat.

Since 2005, rates of lung, tracheal/bronchial, colon, and breast cancer and lymphoma decreased in San Francisco, while death rates due to pancreatic, liver, and prostate cancer remained stable.

In 2007 and 2013, mortality rates due to drug use and alcohol dependence were at their lowest points over the past 13 years. For more information on drug use and alcohol dependence in San Francisco, see the Substance Abuse data page of this report.

Since 2005, the death rate due to Alzheimer's disease increased, and Alzheimer's is now the third leading cause of death.

There have been modest decreases in the death rate due to chronic obstructive pulmonary disease since 2005.

Starting around 2010, diabetes appears to be increasing in importance as a cause of death in San Francisco. Diabetes is now the eighth leading cause of death in San Francisco.

Despite steady decreases in the death rate since 2005, influenza and pneumonia, the only communicable diseases in the top 20 causes of death, remain important causes of death in San Francisco.

Leading causes of death by age

The leading causes of death in San Francisco largely reflect the leading causes of death among persons over 65 years of age who, as expected, are more likely to die. However, different patterns emerge when we look at age-specific leading causes of death.

The leading causes of death among adults 65 and older are the same as the leading causes citywide. The top five causes for this age group are ischemic heart disease, Alzheimer's disease, cerebrovascular disease, lung/tracheal/bronchial cancer, and hypertensive disease.

Chronic diseases play a lesser role, and drug and alcohol use play a larger role in death among middle-aged adults. Among adults 45 to 64 years of age, the leading five causes of death are ischemic heart disease, drug use, alcohol use, hypertensive disease, and lung/tracheal/bronchial cancer.

Drug and alcohol use are also the first and third leading causes of death among adults 25 to 34 years of age. Violence—suicide and assault—are the second and fourth leading causes, while HIV is the fifth leading cause of death.

Among young adults (18 to 34 years), including transitionally aged youth (18 to 24 years), drug use is the leading cause of death. Like adults 35 to 45 years of age, violence—suicide and assault—significantly impact younger adults and are the second and third leading causes of death, respectively. The fourth and fifth leading causes of death for this age group are traffic accidents and non-traffic-related injuries.

Between 2015 and 2017, 39 children (1 to 17 years) died. With only 39 deaths, there are few common causes. The leading causes are intentional self-harm, injuries, and traffic injuries.

Rate of death among infants (under 1 year) are significantly higher than for children aged 1 to 17 years. Between 2015 and 2017, 70 infants died. The five leading causes, accounting for 46 percent of all deaths, are low birthweight, maternal factors and pregnancy complications, sudden infant death syndrome, birth asphyxia and trauma, and hemorrhagic and hematological disorders.

Premature death

While the leading causes of death are determined solely on the number of persons who die, years of life lost (YLL) is a statistic that measures both the number of deaths and the age at death. YLL increases if the number of people dying increases or if the ages of the people dying decrease. Due primarily to the high number of deaths, ischemic heart disease is both the leading cause of death and the leading cause of premature death in San Francisco. In fact, seventeen of the leading causes of death are also leading causes of premature death as measured by YLLs. However, despite contributing relatively few deaths, the low age of death among the deceased for HIV, accidents (drowning, fire and smoke inhalation, non-drug related poisonings, and firearms), and assault make them each leading causes of premature death in San Francisco.

Life Expectancy

- A typical San Franciscan can expect to live a long life; according to 2015 data, life expectancy is just over 83 years.
- Women consistently live longer than men; in 2015, the female life expectancy was 86 years compared to 80 years for males.
- Mirroring national estimates, life expectancy dipped slightly between 2014 and 2015; the significance of this dip, if any, is yet to be determined.

Health Disparities and Inequities Manifested at Death

Life expectancy varies by race/ethnicity. On average, Asians in San Francisco can expect to live the longest—87 years. Black/African Americans and Pacific Islanders live 11 to 15 years less however, with a life expectancy of only 72 to 76 years. Despite having the lowest life expectancy of all San Franciscans, Black/African Americans have seen the largest gains in life expectancy since 2005–2007.

Women have a longer life expectancy than men across all races/ethnicities; the race/ethnicity with the greatest gender gap are Black/African Americans (8.2 years) and Asians (5.7 years).

The survival curve for Black/African Americans and Pacific Islanders in San Francisco decreases earlier than for other ethnicities, indicating Black/African Americans are more likely to die younger than persons of other races/ethnicities. Of the groups studied, the curve for Black/African American males decreases the fastest, and Black/African American men have the lowest life expectancy.

The leading 20 causes of death vary slightly by race/ethnicity. However, Black/African Americans in San Francisco are disproportionately affected by nearly all of the top causes of death. This can be seen in the metrics for both mortality rates and for years of life lost.

Unlike mortality rates that take into account only the number of deaths, years of life lost accounts for both the number of deaths and the age of death. Examination of YLLs further makes apparent the importance of assault (among men), breast cancer (among women), and drug use as causes of death that affect younger residents. (Many of the other leading causes as assessed by YLL are chronic diseases that affect all residents.)

Mortality by Place

Life expectancy and what people die of varies by place of residence. People living in eastern neighborhoods or supervisor districts are more likely to die younger and have higher mortality rates for most causes.

Data Sources

CDPH VRBIS. State of California, California Department of Public Health, VRBIS Death Statistical Master File Plus 2006-2017, created on January 31, 2018.

Methods and Limitations

This analysis uses specific cause-of-death categories based on the World Health Organization Global Burden of Disease and Injury (WHO GBD) and the National Center for Health Statistics 113 Selected and 50 Rankable Causes of Disease.[1,2] Race/ethnicity was categorized according to San Francisco ethnicity data guidelines.[3] All mortality analyses are based on the primary cause of death and do not take into account co-morbidities.

Mortality measures used include:

- Average age of death: A measure to show the degree to which specific groups are dying prematurely, without regard to numbers of people involved. Expressed in years, for any size population.
- Average age-adjusted YLL: The age-adjusted YLL estimate divided by the number of deaths. Estimates the number of years of life lost per person.
- Deaths (numbers of deaths): Numbers of individuals dying, expressed as numbers of deaths and percentage of all deaths.
- Death rates: Overall measure of "force of mortality" in a population. Calculation of age-adjusted rates allows comparisons across time or location by applying each population's age-specific rates of death to the age distribution of a standard population. Death rates are expressed as number of deaths per size of population (usually 100,000).
- Life expectancy (LE): Most direct summary measure of current mortality. Expressed as expected years of life for someone born today who experiences current age-specific mortality rates. While life expectancy has been increasing steadily overtime, these calculations assume mortality is constant. Therefore the life expectancies reported here may underestimate the true life expectancy of children born today.
- Morality rate ratios: Age-specific death rates are a measure of force of mortality in a given age group. Age-specific death rates for each non-White race/ethnicity were divided by the rate for Whites. Ratios higher than 1 show increased death rates for other ethnic groups as compared to Whites, while ratios lower than 1 show decreased death rates for other ethnic groups as compared to Whites.
- Years of life lost (YLL): Measure of burden of premature mortality. YLL weights each death by the years of remaining life expectancy at the time of death, based on a standard population. Expressed as total number of expected years of life lost.
- YLL rate: Generated by applying to YLLs the same age-adjustment that is used for age-adjusted death rates. YLL rate is a metric that allows a comparison of burden of YLLs across populations with different age structures. YLL rate is expressed as YLLs per number (usually 100,000) of population.

All rates were calculated with population data from the State of California, Department of Finance. The 2000 U.S. standard population was used to age-standardize mortality rates and YLLs.

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MATERNAL AND INFANT MORTALITY

Variables

- Number of maternal deaths
- Number of infant deaths
- Infant death rate
- Pregnancy-related mortality ratio
- Leading causes of maternal death
- Leading causes of infant death

Overview

- San Francisco does not meet the national Healthy People objective for maternal mortality of no more than 3.3 deaths per 100,000 live births. The estimated local rate is 11.2 deaths per 100,000 live births.
- Each year in San Francisco, about one woman dies from complications of pregnancy or childbirth. The top three local causes of maternal death are embolism, infection, and chronic disease.
- In the past five years, 122 infants died within 12 months of birth. The top three local causes of infant death are low birthweight related to preterm birth, sudden unexpected infant death (SUID), and birth asphyxia or trauma.
- Over the past 10 years, Black/African American mothers had about 4 out of 100 births, but experienced 5 out of 10 maternal deaths, and 15 out of 100 infant deaths. Significant maternal and infant death disparities persist.

What is it?

Maternal death is defined as the death of a woman during pregnancy or within one year of the end of pregnancy from a pregnancy complication. Pregnancy complications may include any chain of events initiated by pregnancy or the aggravation of an unrelated condition by the physiologic effects of pregnancy.[1,2] The pregnancy-related mortality ratio is the number of pregnancy-related deaths for every 100,000 live births.[2]

Infant death is the death of an infant before his or her first birthday.[3] The infant death rate is the number of infant deaths for every 1,000 live births.[3]

Maternal and sudden unexpected infant deaths are considered sentinel events.[4] The U.S. government's Healthy People targets aim for no more than 3.3 maternal deaths per 100,000 live births[5] and no more than 6.0 infant deaths per 1,000 live births.[6]

Why is it important for health?

The pregnancy-related mortality ratio and infant death rate are often used as indicators of the nation's health.[2,3] Factors that affect the health of the entire population can affect mortality among pregnant and postpartum women and infants.

What is the status in San Francisco?

See the Community Health Data Pages accompanying the original SFHIP Community Health Needs Assessment at www.sfhip.org for additional graphs, charts, and maps containing more detailed data.

Over the 10-year period 2007–2017, there were 10 maternal deaths due to pregnancy or childbirth. Relative to the 89,594 live births during the decade, the estimated pregnancy-related mortality ratio was 11.2 maternal deaths per 100,000 births. The top three causes of maternal death were embolism, infection, and chronic disease, including cancers and hypertension.

Trends in infant death in San Francisco: Over the past decade, local infant death rates have consistently been lower than statewide and national rates, and below the Healthy People 2020 target of 6.0 infant deaths per 1,000 live births.[6] For infants born between 2012 and 2016, there were about 24 infant deaths per year. The five-year infant death rate was 2.7 infant deaths per 1,000 births. The top three causes of infant death were low birthweight, SUID, and birth trauma. The majority of infant deaths occurred within seven days of birth.

Maternal and infant death disparities: Black/African American women and children have disproportionately experienced maternal death and infant death. Between 2007 and 2016, Black/African American mothers had about 4 out of 100 births, but experienced 5 out of 10 maternal deaths, and 15 out of 100 infant deaths.

In 2012–2016, 5.6 per 1,000 Black/African American infants died within 12 months of birth compared to 1.7 per 1,000 White infants. The leading causes of Black/African American infant death were preterm birth (7 out of 11 deaths) and SUID (4 out of 11 deaths). SUID is sudden and unexpected death of a baby less than 1 year old in which the cause is not obvious before investigation. SUID often happens during sleep or in the baby's sleep area.[7]

Independent of race/ethnicity, infant deaths in San Francisco are associated with indices of lower socioeconomic status and limited access to services. Among Black/African American and White infants, higher death rates were associated with *unknown* level of maternal education, *unknown* participation in WIC, *no* first trimester prenatal care, and *unknown or inadequate* quality of prenatal care (based on the expected number of prenatal care visits). In San Francisco, a greater proportion of Black/African American women do not have a college degree and have limited access to services than White women.

Consistent with uneven distribution of socioeconomic status and services across San Francisco, infant deaths are unevenly distributed across San Francisco ZIP codes. Whereas there were zero infant deaths in 10 years in the high-income ZIP code 94129, there were more than 20 infant deaths in the lower-income ZIP code 94124.

What is currently being done in San Francisco to improve health?

Citywide partnerships, strategic plans, and projects, such as the San Francisco Health Improvement Partnership, Our Children Our Families Five-year Plan, and the UCSF Preterm Birth Initiative, aim to reduce maternal and infant health disparities.

The San Francisco Fetal Infant Mortality Review (SF FIMR) program reviews the support services provided to local families who experience a fetal or infant death. SF FIMR reports need for services that reduce stress related to poverty and housing insecurity for pregnant and parenting women, and link women to family planning, preconception, interconception and mental healthcare, and community resources, such as the Black Infant Health and public health nurse home visiting programs. SF FIMR supports American Academy of Pediatrics (AAP) recommendations to reduce the risk of all sleep-related infant deaths by promoting the Safe to Sleep® campaign, formerly known as the Back to Sleep campaign. Caregivers can visit How to Keep Your Sleeping Baby Safe: AAP Policy Explained for further information.

Data Sources

State of California, California Department of Public Health (CDPH), VRBIS Death Statistical Master File Plus 2005–017, created on January 30, 2018.

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Methods and Limitations

This report focused on the primary cause of death only. Deaths were classified into mutually exclusive categories based on ICD-10 coded primary cause of death. Categories were developed to be consistent with the WHO's Global Burden of Disease.[8]

The **maternal death analysis** reported here used data obtained from CDPH that were not prepared by the CDC Pregnancy mortality surveillance system. For this reason, the results may underestimate pregnancy-related deaths in San Francisco and/or may not be directly comparable with data from the national CDC Pregnancy mortality surveillance system. The CDC monitors deaths within one year of the end of a pregnancy, regardless of the outcome, duration or site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management. For the national CDC Pregnancy mortality surveillance system, medically trained epidemiologists determine the cause and time of death related to the pregnancy, using a cause-of-death coding system established in 1986 by the American College of Obstetricians and Gynecologists and the Centers for Disease Control and Prevention Maternal Mortality Study Group.

The **infant death rates** were determined by linking birth records with death records for the same year and following year, to allow for deaths within 12 months of birth. Birth records for 2016 were linked, for example, with death records for 2016 and 2017. Infant deaths are described in terms of the year that the infant was born. Infant death rates and 95 percent confidence limits were not calculated for groups with fewer than 10 deaths. Confidence limits were calculated using factors recommended by the National Center for Health Statistics.

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APPENDIX L
DATA NOTES

Notes on Race & Ethnicity

Collecting and using data by race and ethnicity is important for monitoring and addressing health inequities and differences.[1] Racial and ethnic data categories are social-political constructs that should not be interpreted as being genetic, biological, or anthropological in nature but which instead serve to identify underlying conditions which produce disparities.[2]

The races/ethnicities represented in this report include those listed in Table 1. Estimates are shown for all race and ethnic groups where data collection methods provide sufficient data.

Table 1: Definitions for racial and ethnic categories

Race/ Ethnicity	Description of race/ethnicity
Asian	A person having origins in any of the original peoples of the Far East, Southeast Asia (including Philippines), or the Indian subcontinent. Where data are available for Asian subpopulations, such as Chinese or Filipino, estimates for the subpopulations are presented.
Asian and Pacific Islander (API)	Includes persons identifying as Asian and or Pacific Islander. Where possible, data for Asians are shown separately from those for pacific islanders.
Black/African American (B/AA)	A person having origins of any of the black ethnic groups of Africa.
Latino(a)	A person having origins in Mexico, Central America, South America, Puerto Rico, or Cuba. Latino includes persons self-identifying as Latino, Hispanic, or Chicano, regard-less of race.
Multi-Ethnic	A person having origins in more than one of the races listed. Excludes persons with a Latino ethnicity.
Native American	A person having origins in any of the original peoples of North American, Central America, or South America.
Other	Tables and figures may use "other" where data from multiple race/ethnicities are grouped together due to low numbers of responses.
Pacific Islander	A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Island.
Unknown	Tables and Figures may include statistics for persons who decline to respond or enter an invalid race/ethnicity responds.
White	A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Notes on Sex and Gender

According to the World Health Organization, “sex” refers to the biological and physiological characteristics that define men and women. “Gender” refers to the socially constructed roles, behaviors, activities, and attributes that a given society considers appropriate for men and women.[3] Gender identities include male, female, trans-male, and trans-female.[4]

While biological, social, and personal history aspects of sex and gender identity may matter for understanding health differences, the data sources used in this report typically do not capture gender accurately or do not have sufficient data to produce stable estimates for each of the possible gender identities. Most currently available data sources only produce estimates by male and female. In the

future, primary data collection by the San Francisco Department of Public Health will include capture of gender identity more accurately, and, where possible, analyses will utilize and show this data.

Notes on Geographies

The City and County of San Francisco includes 41 neighborhoods and 26 ZIP codes. Different data sources vary in terms of geographic level of detail available. Some data sources are available at the census tract level, which can be aggregated up to the neighborhood level, and others only at the ZIP code level. Neighborhoods may include parts of one or several ZIP codes and similarly, ZIP codes may represent parts of one or more neighborhoods. Tables 2 and 3 provide crosswalks between the various neighborhoods and ZIP codes. Detailed maps showing the overlap of San Francisco geographies are available at http://bit.ly/sfgeobound.

Table 2: San Francisco neighborhoods and corresponding zip codes, 2014

Neighborhood	Zip Codes	Neighborhood	Zip Codes	Neighborhood	Zip Codes
Bayview Hunters Point	94124	Lincoln Park	94121	Potrero Hill	94107, *94110, 94158*
Bernal Heights	94110	Lone Mountain/USF	94118, 94117, *94115*	Presidio	94129
Castro/Upper Market	94114, *94117*	Marina	94123	Presidio Heights	94118, *94115*
Chinatown	94108, 94133, *94111*	McLaren Park	94134	Russian Hill	94109, 94133
Excelsior	94112, *94134*	Mission	94110, 94103	Seacliff	94121
Financial District/South Beach	94111, 94104, 94105, 94108, *94103, 94102, 94107*	Mission Bay	94158, 94107, *94103*	South of Market	94103, 94107
Glen Park	94131	Nob Hill	94109, 94108, 94133, *94102*	Sunset/Parkside	94132, 94116, 94122, 94132
Golden Gate Park	94122, *94117*	Noe Valley	94131, 94114, *94110*	Tenderloin	94102, 94109
Haight Ashbury	94117	North Beach	94133	Treasure Island	94130
Hayes Valley	94102, 94117	Oceanview /Merced/Ingleside	94112, 94132	Twin Peaks	94131, 94114
Inner Richmond	94118	Outer Mission	94112	Visitacion Valley	94134
Inner Sunset	94122, 94131, *94116, 94117*	Outer Richmond	94121, *94118*	West of Twin Peaks	94127, 94116, 94112, *94131, 19132*
Japantown	94115, 94109	Pacific Heights	94115, 94109, *94123*	Western Addition	94115, 94109, *94102*
Lakeshore	94132	Portola	94134		

Many San Francisco neighborhoods overlap with parts of multiple zip codes. Zip codes which are italicized have minor overlap with the indicated neighborhood.

Table 3: San Francisco zip codes and corresponding neighborhoods, 2014

Zip Code	Neighborhoods	Zip Code	Neighborhoods
94102	**Hayes Valley, Tenderloin,** *Western Addition, Financial District/South Beach, Nob Hill*	94118	**Inner Richmond, Lone Mountain/USF, Presidio Heights,** *Outer Richmond*
94103	**South of Market, Mission,** *Mission Bay, Financial District/South Beach*	94121	**Lincoln Park, Outer Richmond, Seacliff**
94104	**Financial District/South Beach**	94122	**Golden Gate Park, Inner Sunset, Sunset/Parkside**
94105	**Financial District/South Beach**	94123	**Marina,** *Pacific Heights*
94107	**Mission Bay, Potrero Hill, South of Market,** *Financial District/South Beach*	94124	**Bayview Hunters Point**
94108	**Chinatown, Financial District/South Beach, Nob Hill**	94127	**West of Twin Peaks**
94109	**Russian Hill, Nob Hill, Pacific Heights, Tenderloin, Western Addition,** *Japantown*	94129	**Presidio**
94110	**Mission, Bernal Heights,** *Potrero Hill, Noe valley*	94130	**Treasure Island**
94111	**Financial District/South Beach, Chinatown**	94131	**Glen Park, Inner Sunset, Noe Valley, Sunset/Parkside, Twin Peaks,** *West of Twin Peaks*
94112	**Excelsior, Outer Mission, Oceanview/Merced/Ingleside, West of Twin Peaks**	94132	**Lakeshore, Sunset/Parkside, Oceanview/Merced/Ingleside, West of Twin Peaks**
94114	**Castro/Upper Market, Noe Valley, Twin Peaks**	94133	**North Beach, Russian Hill, Chinatown, Nob Hill**
94115	**Pacific Heights, Western Addition, Japantown,** *Lone Mountain/USF, Presidio Heights*	94134	**Portola, Visitacion Valley, McLaren Park,** *Excelsior*
94116	**Sunset/Parkside, West of Twin Peaks,** *Inner Sunset*	94158	**Mission Bay, Potrero Hill**
94117	**Haight Ashbury, Lone Mountain/USF, Hayes Valley,** *Castro/Upper Market, Inner Sunset, Golden Gate Park*		

Many San Francisco zip codes overlap with parts of multiple neighborhoods. Neighborhoods which are italicized have minor overlap with the indicated zip code.

References

[1] San Francisco Department of Public Health. Principles for collecting, coding, and reporting social identity data – ethnicity guidelines. https://www.sfdph.org/dph/files/PoliciesProcedures/COM3_EthnicityGuidelines.pdf, 2011.

[2] Office of Management and Executive Office of the President Budget. Provisional guidance on the implementation of the 1997 standards of federal data on race and ethnicity. http://www.ucsf.edu/fhop/_docs/pdf/prods/raceEth2003.pdf., December 2000.

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[4] San Francisco Department of Public Health. Sex and gender guidelines: Principals for collecting, coding, and reporting identity data. https://www.sfdph.org/dph/files/PoliciesProcedures/COM5_SexGenderGuidelines.pdf, 2014.