

Community Action to Fight Asthma Mid-City Community Survey

Survey Report Prepared by the

National Latino Research Center (NLRC)
California State University, San Marcos

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The Mid-City Community Action to Fight Asthma (CAFA) initiative is a project of the San Diego Regional Asthma Coalition (SDRAC) and is made possible through funding from the California Endowment. The NLRC serves as the CAFA Regional Technical Assistance Center for the San Diego and Imperial Valley Region.

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The members of the SDRAC's Environmental Workgroup participated in the development of the survey including Kirk Arthur (Mid-City CAN), Jan Cortez (American Lung Association), Lorna Hardin (American Lung Association), Amelia Barile Simon, Joy Williams (Environmental Health Coalition), Sonia Taddy (National Latino Research Center), Vicki Cavataio (Southwestern College), Katherine Silver (Alliance Healthcare Foundation).



Database set-up & Data Entry: David Peterson (National Latino Research Center), Roxana Yasmin (American Lung Association) and Jon Wildey (American Lung Association).



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Data Analysis, Technical Assistance and Report Preparation:

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THE CALIFORNIA ENDOWMENT

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Community Action to Fight Asthma (CAFA) Mid-City Community Survey Report

Report Prepared by
The National Latino Research Center at Cal State San Marcos

INTRODUCTION

"Research clearly indicates that it is not enough to provide asthmatic children with just clinical management. It's just as vital that we inform educators, parents and caregivers about the environmental triggers that can cause an asthma attack."

Diana Bonta

Director, California Department of Health Services

(<http://www.healthpolicy.ucla.edu/pubs/files/asthmapressrelease.pdf>)

The Mid-City *Community Action to Fight Asthma (CAFA)* is a project of the San Diego Regional Asthma Coalition (SDRAC), a consortium of over 50 agencies and organizations throughout San Diego County. As part of a state-wide strategic initiative funded by The California Endowment, the goal of CAFA is to reduce environmental asthma triggers through public education and policies that promote "asthma friendly" environments where children live, learn, and play.

Childhood Asthma

According to the U.S. Environmental Protection Agency (EPA), asthma is the most common chronic childhood disease, affecting 4.8 million children throughout the United States. Nearly 1 in 13 school-aged children have asthma, and the percentage of children with asthma is rising more rapidly in preschool-aged children than in any other age group. Asthma accounts for one-third of all pediatric emergency room visits, is the fourth most common cause for physician office visits, and is one of the leading causes of school absenteeism, accounting for over 10 million missed school days per year (EPA 2003 <http://www.epa.gov/asthma/introduction.htm>).

California currently lacks a comprehensive asthma surveillance system (CDC 1996). However, key findings from the UCLA California Health Survey indicate that nearly 3 million Californians suffer from asthma, of which approximately 667,000 are children ages 6 to 17 (CHIS, 2001). Despite limited data on the occurrence, trends, and impacts of asthma in California, self-report surveys such as the Behavioral Risk Factor Survey (California Department of Health Services) tend to corroborate the troublesome nationwide increases in asthma among both children and adults.

High Risk Groups / Health Disparities

The burden of asthma weighs particularly heavy on low-income and non-White populations. Several studies indicate that low socio-economic status is a risk factor for asthma and is a growing problem in many inner cities (Weiss, Gergen, Crain, 1992). Furthermore, there is strong evidence to support the adverse role of environmental factors in the development and exacerbation of asthma. This is particularly evident in low-income neighborhoods with poor housing conditions and problems with over crowding, cockroaches, dust mites, old carpet, mold, and inadequate ventilation (Weiss, Gergen, Hodgson, 1992). Lack of health insurance, inadequate primary care, language barriers and inability to access services further contribute to avoidable hospitalization and asthma-related deaths in low-income communities.

Mid-City & the San Diego Regional Asthma Coalition

In response to alarming asthma trends, numerous organizations throughout San Diego County joined forces in 2001 to form the *San Diego Regional Asthma Coalition* (SDRAC). As one of 12 coalitions in California funded by The California Endowment, the SDRAC selected the Mid-City region of San Diego as its CAFA intervention site.

Mid-City was selected based on need and evidence of high childhood asthma rates. Home to a culturally diverse population, it is currently designated as a health professional shortage/medically underserved area by the California Office of Statewide Health Planning and Development (OSHPD). Like many inner cities, Mid-City bears a high burden of asthma hospitalizations, emergency room visits, and 911 emergency calls. According to OSHPD data, it has the highest hospitalization rate in San Diego (280 per 100,000), which is almost 3 times the San Diego County average of 119 per 100,000 (OSHPD, 1997-1998). Emergency room data for 1999-2000 from Children's Hospital of San Diego, reveals that the rate of asthma-related ER visits from Mid-City resident is 129 per 100,000, more than double the County average of 48 per 100,000. According to Emergency Medical Services in 1998/99, Mid-City has the second highest rate of 911 calls due to asthma (77 per 100,000) compared to the City of San Diego average (40 per 100,000).

Assessing Needs in the Mid-City Community

In an effort to design an intervention that is responsive to the community, the SDRAC partnered with Mid-City Community Advocacy Network (Mid-City CAN), a community collaborative of over 150 agencies, community residents, parents, youth, businesses, schools, and religious institutions serving Mid-City neighborhoods. As part of the planning and design of the community intervention, the SDRAC's Environmental Workgroup and National Latino Research Center (NLRC) designed a door-to-door community survey to seek input and assess the perceptions, concerns and priorities of Mid-City residents. This report summarizes the results of that survey.

DEMOGRAPHICS OF SAN DIEGO REGION

In an effort to better understand the needs and characteristics of San Diego's Mid-City area this report begins with a brief overview of demographics at the neighborhood, city and county level. It is followed by the demographics of the survey participants and a summary of survey results.

Location: San Diego County is located in the Southwest corner of the State of California and is bordered by the Pacific Ocean to the West, Imperial County to the East, the US-Mexico border to the South, and Orange and Riverside counties to the North. The City of San Diego is the largest population center in the County with 1,223,400 persons representing 43.5% of the County's population.

Mid-City is directly east of the city's central downtown business district. It is an inner-city residential area that sits atop a mesa and encompasses approximately 16 square miles. Mid-City composes several local neighborhoods including Normal Heights, Kensington-Talmadge, College Area, City Heights, El Cerritos, Darnall, Rolando, Gateway, Webster, and Oak Park. Each neighborhood is defined by major thoroughfares (e.g. El Cajon, Euclid Avenue, etc.). It is dissected by several major freeways that establish its primary borders (Interstate 8, State Highway 94, Interstate 805 and Interstate 15). Mid-City's approximate center is the intersection of University Avenue and Euclid Avenue.

Population Characteristics: Compared to the County and City of San Diego, Mid-City's demographics reveal considerable racial and ethnic diversity. Approximately 40% of Mid-City's population is White, followed by 32% Hispanic, 12% Black, 9% Asian, 4% mixed race and 1% Native American.

Mid-City's diversity is particularly evident among its estimated 47,661 children aged between 0-17 (6.6% of the region). According to the Census 2000, 52% of Mid-City's children are Hispanic, 13% White, 16% African/African-American, 13% Asian/Asian-American/Other, and 6% mixed race. The median age in Mid-City is 27.6, which is lower than the City median of 32.6, and the County median of 33.2. The Hispanic population in Mid-City has the lowest median age of 22.8 (representing 37% of the Mid-City population). The following figure illustrates the racial/ethnic make-up of San Diego County compared to the Mid-City area.

Figure No. 1: Map of City of San Diego



Figure No. 2: Race/Ethnicity for San Diego County Compared to Mid-City Region

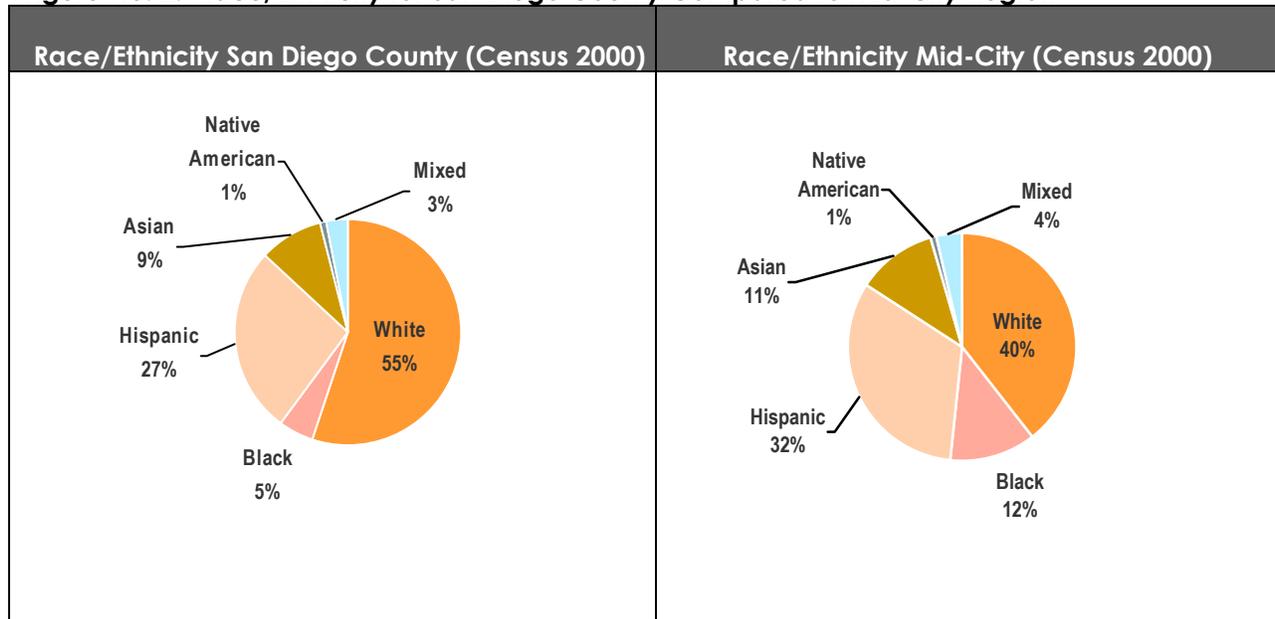
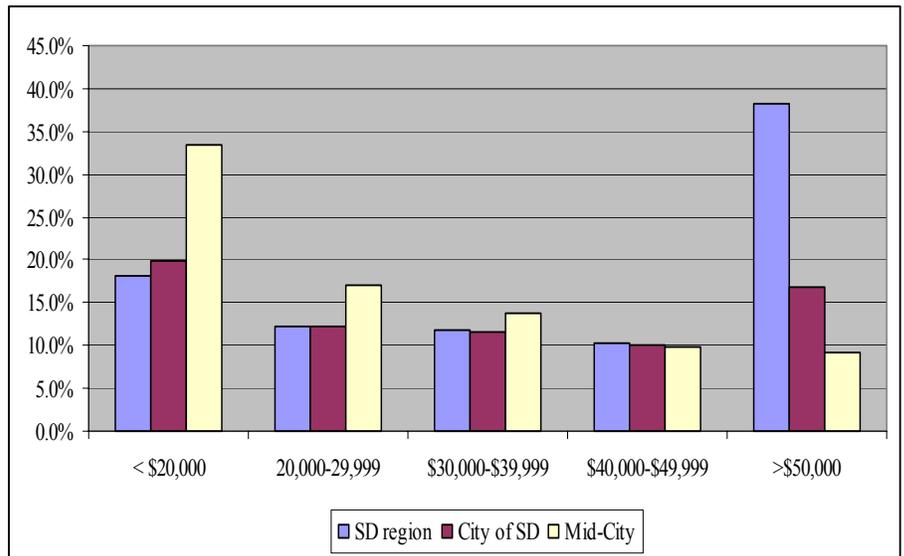


Figure No. 3: Comparison of Median Household Incomes for County, City and Mid-City Region (Census 2000)

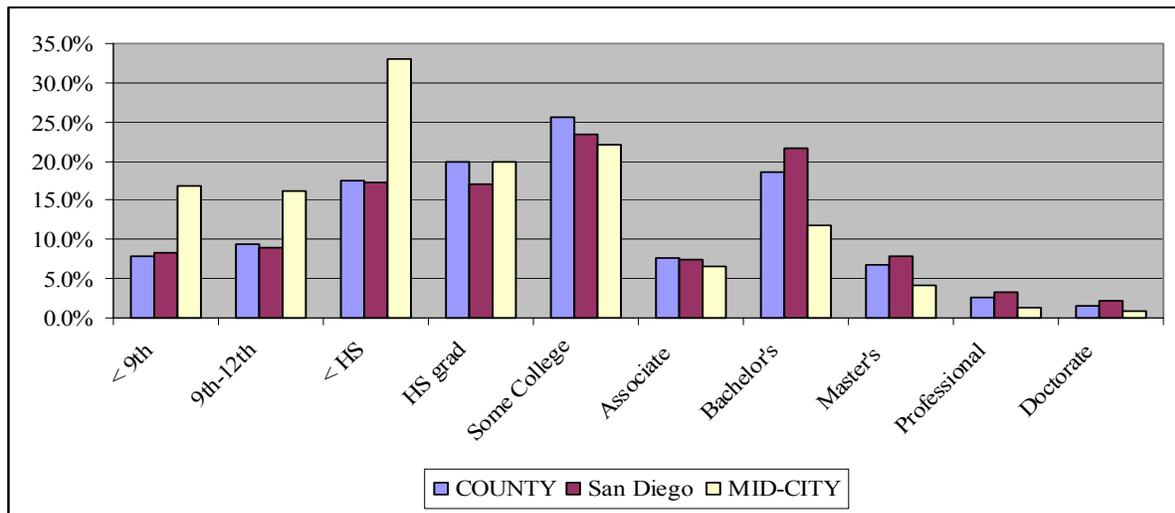
Socio-economic Indicators:

According to Census 2000, Mid-City's estimated median household income was \$29,750 compared to the City's median household income of \$45,733 and the County's median household income of \$47,067. A more detailed examination reveals that the percentage of households with income less than \$20,000 was almost twice that of the county's and significantly higher than the rest of the city of San Diego.



Education and Language: Educational attainment data for Mid-City reveals the population has significantly lower levels of education than its surrounding environment. Seventeen percent have less than a 9th grade education and 16% have some high school. This is almost twice the City and County's rate. Approximately 20% of Mid-City residents are high school graduates. The location of the San Diego State University campus within the Mid-City area likely causes some skewing of the demographic data.

Figure No. 4: Comparison of Educational Attainment for the County, City and Mid-City Region



In Mid-City, 51% of the households speak English as a primary language, followed by 32% which speak Spanish and 13% which speak an Asian or Pacific Island language. The San Diego Unified School District reports that over 35 primary languages are spoken in Mid-City, with Spanish and Vietnamese as the most common. The settlements of African refugees from Somalia, Ethiopia and Eritrea, add to the linguistic and cultural diversity of the area.

Regional Housing Indicators: As a rapidly growing metropolitan area, all regions of San Diego have felt the impact of rising rents and property values, increased density, and high rental occupancy rates. The Mid-City area of San Diego is no exception and is characterized by higher density and older housing stock compared to other parts of the region. Fifty-one percent of Mid-City's 60,000 housing structures are multi-family units, most of which were built prior to 1979.

Figure No. 5: Regional Household Characteristics at a Glance (Census 2000)		
San Diego County	City of San Diego	Mid-City Region of San Diego
Median Household Income \$47,067	Median Household Income \$45,733	Median Household Income \$29,750
Year Housing Structures Built (Total housing units 1,040,149) 26% built 1970-79 22% built 1980-89 14% built after 1990	Year Housing Structures Built (Total housing units 469,689) 24% built 1970-79 20% built 1980-89 12% built after 1990	Year Housing Structures Built (Total housing units 60,009) 19% built 1970-79 14% built 1980-89 3% built after 1990
Housing Type 60% Single Family Units 35% Multi-Family Units 5% Mobile Home/Other	Housing Type 56% Single Family Units 42% Multi-Family Units 2% Mobile Home/Other	Housing Type 48% Single Family Units 51% Multi-Family Units 1% Mobile Home/Other

MID-CITY COMMUNITY SURVEY

In December 2002 and January 2003, a community survey was conducted among 412 Mid-City residents to assess community perceptions and concerns about indoor and outdoor air quality. **This survey was specifically interested in traditionally underserved populations, with an emphasis on low income groups, new immigrants and those who may experience barriers to access due to language or lack of information.**

Figure No. 6: Mid-City Map

The survey was approximately 25 minutes in length and consisted of 38 questions (mostly discrete choice). Survey participation focused on persons over 18 years of age who had school age children living in the household. Participation was also strictly voluntary. The survey was conducted door-to-door by bilingual surveyors in English, Spanish, Vietnamese, and Somali. A small incentive (grocery store gift certificate) was offered to participants. Mid-City CAN coordinated and supervised the data collection process.

Interviews were conducted during the week and on weekends at various hours of the day. The vast majority of participants (81%) were female. It is also important to note that there was a recognized “over sampling” of specific groups as well as an over sampling in neighborhoods where these groups live. Finally, since the survey was collected

door-to-door, many of the interviews were conducted at homes along the more accessible and walk-able streets. Data was collected on residential streets where there was little traffic as well as in areas where there was more traffic and commerce. Neighborhoods around schools were also targeted for data collection.



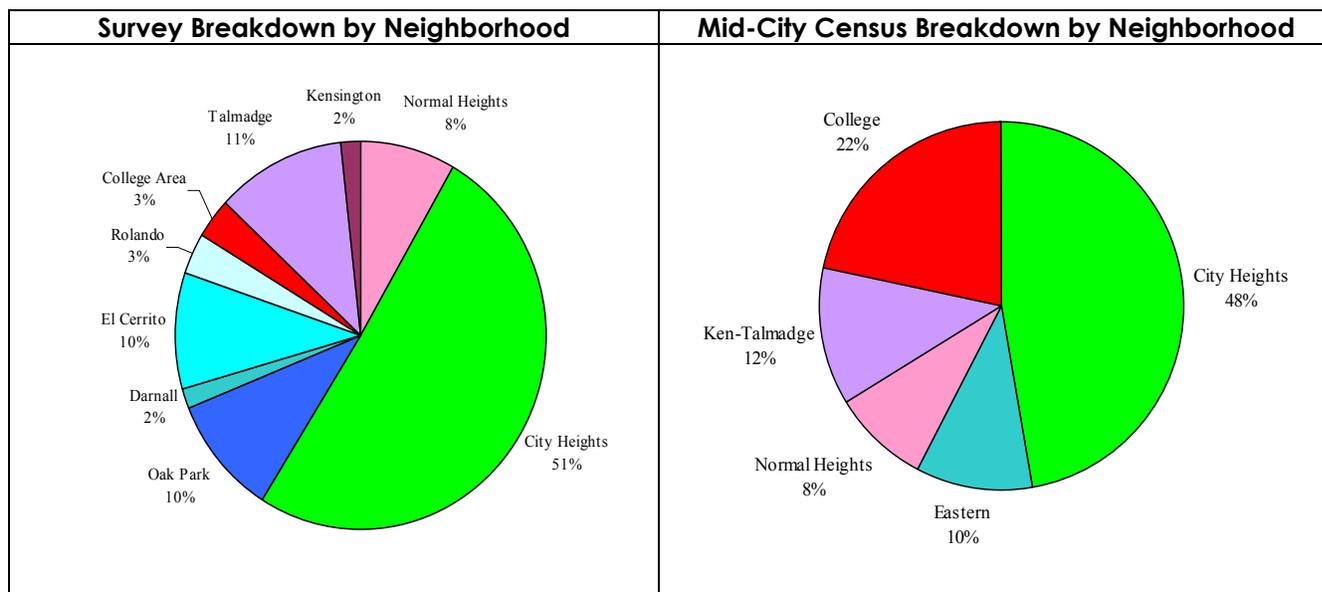
SURVEY PARTICIPANT DEMOGRAPHICS

This section of the report reviews the demographic characteristics of survey participants and includes (when available) additional Census data to assess how representative the sample population was compared to Mid-City as a whole.

Location: As previously discussed, Mid-City includes several local neighborhoods including Normal Heights, Kensington-Talmadge and College Area in the north, Eastern in the South, and City Heights in the center-West. While surveys were conducted throughout the Mid-City area, over half (61%) were in the City Heights neighborhood, with the remainder spread out in Talmadge (8%), Normal Heights (7%), Oak Park (5%), Rolando (5%), College Area (5%), El Cerrito (5%), Kensington (2%) and Darnall (2%).

Census 2000 data reveals that City Heights captures the largest population group (48%) in Mid-City while the Kensington-Talmadge and Eastern area represent about 10% of the population. The Eastern area, with one of the smallest population groups, has the largest physical area, and composes the neighborhoods of Darnall, El Cerrito, Oak Park, and Rolando. Normal Heights' 8% of the population is the smallest. Finally College Area, representing 22% of Mid-City's population, is the second largest demographic area. However, this area is home to San Diego State University, the largest campus of the California State University system, which sees a large influx of temporary student residents during the academic year. The figure below provides a comparison of Census demographic breakdown and the survey breakdown.

Figure No. 7: Population Concentration Comparison of Survey Participants and Mid-City Census Data



Ethnicity: The survey participants reflected a diverse ethnic background with approximately 54% of respondents identifying themselves as Latino/Hispanic, 18% White, 9% African or African American, and 4% Asian or Asian American. While these numbers are not entirely representative of Mid-City as a whole, they are relatively consistent with the demographics of City Heights (which constitutes 46.9% of the population of Mid-City and where the bulk of the survey was conducted). According to the Census 2000, City Heights is 52.9% Latino/Hispanic, 12.6% White, 13.4% African-American, and 16.7% Asian. The only notable under-sampling was among the Asian population.

Figure No. 8: Ethnicity of Participants

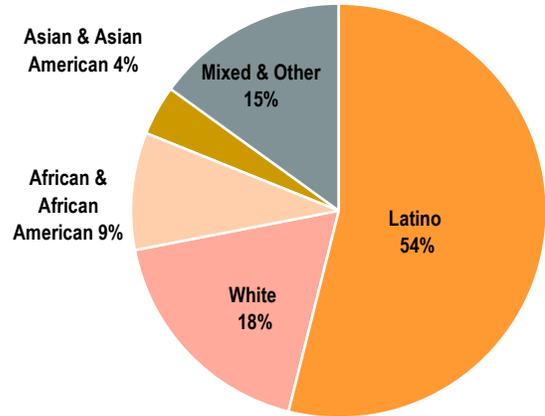
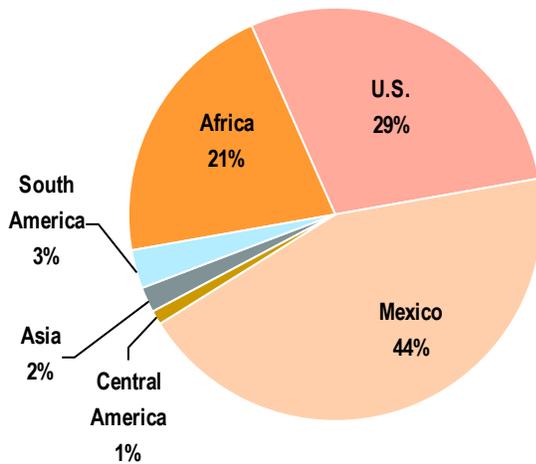


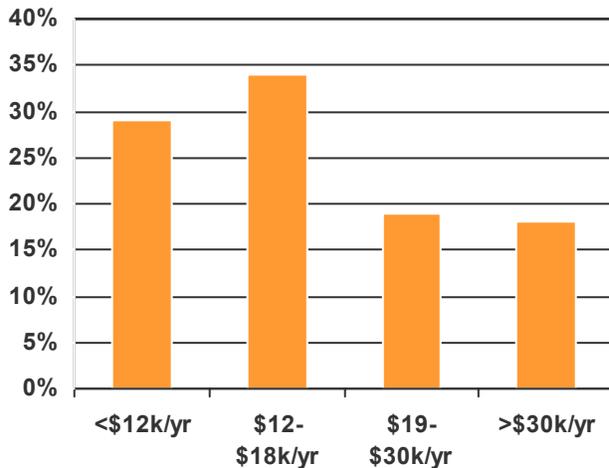
Figure No. 9: Country of Origin



Country of Origin (Birth): Only 30% of those surveyed were born in the United States. Forty-four percent reported Mexico as their country of birth. East Africans represented a significant portion with 18% of Somali origin. This very high percentage of foreign-born respondents is indicative of the data gathering effort. While the numbers of foreign born respondents seems high, they are relatively consistent with Census 2000 data for the City Heights neighborhood where 42% are foreign-born.

Family Income: The survey population reflected the low-income demographics of the Mid-City area. Nearly 30% had a family income of less than \$12,000 a year, 34% of participants reported a family income of \$12,000 to \$18,000 a year, and 19% reported family incomes in the range of \$19,000 to \$30,000 annually.

Figure No. 10: Annual Family Income (Survey Participants)

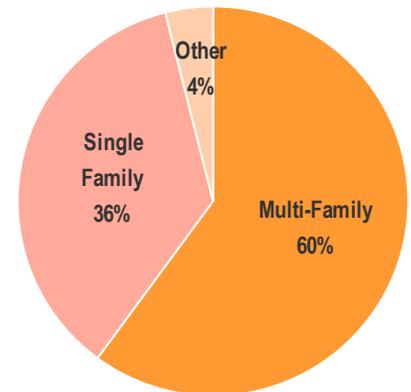


Comparisons of these data with those available from Census 2000 have some technical limitations. Specifically, the income categories used in the CAFA survey do not match those in the census. Nonetheless, if we used collapsed census categories, we can begin to provide a crude framework for comparison. The CAFA survey shows that there was a significant over-sampling of lower-income groups.

Ownership: In the Mid-City survey, renter's represented 76% of the surveyed population and 24% were home owners.

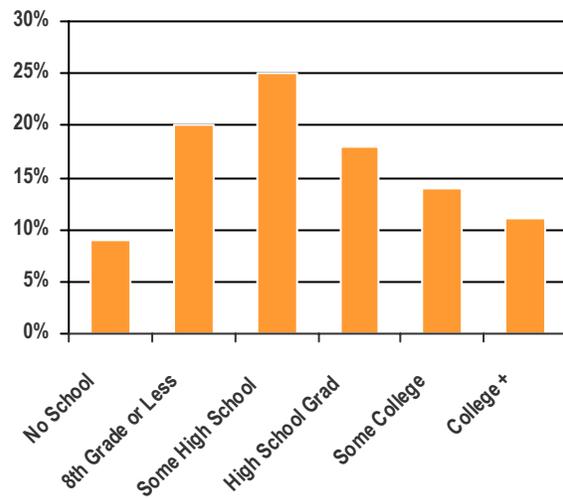
Type of Housing: Nearly 60% of survey respondents lived in multi-unit housing, 36% lived in single family homes, and 4% lived in dwellings designated as "other" (i.e., mobile homes). A comparison with Census 2000 data reveals that 48% of Mid-City's housing units were single family, 51% were multiple-family, and 1% were mobile homes. Nonetheless, a closer look at the distribution of units in the City Heights neighborhood indicates that over 60% of the units are multiple-family and in some of City Height's Census tracts, over 80% are multiple units.

Figure No. 11: Type of Housing (Survey Participants)



Education: Approximately 25% of the survey participants reported having completed some high school, with 20% reporting eighth grade or less, and 18% reporting high school graduate or GED. A comparative look at Census 2000 indicates that 52% of the Mid-City population reported a high school education or less. However, as mentioned previously the student population from San Diego State University skews the educational levels. A closer look at Census data for City Heights, reveals only 20% of City Heights residents had graduated from high school, another 23% completed some high school, while 30% had less than a 9th grade education. These data show that the surrounding population has a slightly less formal educational attainment than the surveyed group.

Figure No. 12: Educational Attainment (Survey Participants)



HOUSING ♦ INDOOR AIR QUALITY

"The prevalence of asthma continues to rise dramatically in this country and the reason why is a mystery. People spend most of their time inside, and it's vital that we understand how the indoor environment may contribute to the disease. Fortunately there are actions people can take to limit their exposure and ease symptoms."

*Richard B. Johnston Jr., Professor
Dept. of Pediatrics, University of Colorado School of Medicine
(Institute of Medicine, Clearing the Air: Asthma and Indoor Air Exposures, 2000)*

According to **Clearing the Air: Asthma and Indoor Air Exposures** (National Academy of Sciences Institute of Medicine, 2000), indoor environmental pollutants play a critical role in the development and exacerbation of asthma. Exposure to secondhand smoke, dust mites, pet dander, molds, and cockroaches can trigger asthma attacks and lead to asthma in children who are predisposed to developing the disease. For this reason, survey participants were asked several questions related to mold, mildew, ventilation, smoke and other air quality indicators in their home environment.

Mold, Mildew: According to survey participants, mold and mildew did not appear to be a major problem. Approximately 68% reported no water damage in their home and 75% reported no visible signs (or smell) of mold, mildew or must.

SURVEY RESULTS

- 83% have carpeting
- 64% do not have air conditioning
- 52% use gas heating
- 17% use electric heating
- 20% use no heating
- 72% did not have pets in the home
- 74% do not smell strong odors outside or near the home

MOLD & ASTHMA

Molds can trigger asthma in individuals with an allergic reaction to mold. When excessive moisture accumulates indoors, mold often occurs, particularly if the moisture problem remains undiscovered or un-addressed. There is no practical way to eliminate all mold and mold spores in the indoor environment. The way to control indoor mold growth is to control moisture.

www.epa.gov/iaq/asthma/triggers/molds

Tobacco Use, Smoke & Ventilation: While smoking did not appear to be a major problem, there were a large number of respondents (40%) who reported they did NOT have exhaust ventilation for their kitchen stove.

TOBACCO, SMOKE & ASTHMA

Secondhand smoke may trigger asthma episodes and make asthma symptoms more severe in children who already have asthma. Moreover, secondhand smoke is a risk factor for new cases of asthma in children who have not previously exhibited asthma symptoms.

www.epa.gov/iaq/asthma/triggers/shs/html

SURVEY RESULTS

- 76% do not have wood burning fireplace
- 83% report not smoking in home
- 35% frequently smell smoke from neighbors
- 54% reported that they have exhaust ventilation for the stove while 40% did not

PESTS & PEST MANAGEMENT

Cockroach allergens also play a significant role in triggering asthma in many inner-city areas. Mid-City residents were asked a number of questions regarding cockroaches, pests, and pest management.

The survey results indicate that there is a significant problem with cockroaches and pests in many Mid-City homes that is not adequately managed or controlled. Approximately 63% of the respondents reported seeing evidence of cockroaches, ants, rats or mice in or around their home within the previous six months.

Given the toxicity of many commonly used pesticides, survey participants were asked about the methods they or their landlords used to control pest and rodents in their home environment. The responses revealed that most residents were using aerosol pumps or sprays such as Raid. Other forms of pest control (bait traps, fumigation, boric acid and bombs) were not commonly used.

SUMMARY SURVEY RESULTS

- 47% reported using chemical aerosol sprays or pumps on a monthly to bi-annual basis
- 37% reported never using sprays
- Over 70% of the participants never used or were unsure if boric acid, bombs and other forms of fumigation were used around their homes
- Over 66% reported they never used or were unsure of the use of roach motels or bait traps

ASTHMA & CHILDREN IN MID-CITY

As noted earlier, Mid-City has the highest asthma hospitalization rate in San Diego (280 per 100,000), which is 3 times the San Diego County average (119 per 100,000). While prevalence data is not available at the zip code or neighborhood level, the California Health Interview Survey (CHIS) indicates a 9.8% asthma prevalence rate among San Diego County children (ages 0-17).

All survey participants had school-age children, with an average of 1 to 3 children per household. The majority (80%) reported that their children had NOT complained or suffered from chronic coughing, trouble breathing, or wheezing (common asthma symptoms). **However, nearly 20% (N=78) reported that they or one of their children had been diagnosed with asthma.**

Survey Results

- Most (70%) of the participants with asthmatic children did not identify any particular time of day in which attacks occurred.
- The majority (86%) reported that they had NOT worked with a school nurse to manage their child's asthma.
- Despite the outreach efforts of numerous local agencies and the availability of information in multiple languages, over 90% of the respondents were not aware of any asthma programs in their neighborhood.

Figure No. 13: Percentage of Asthmatics

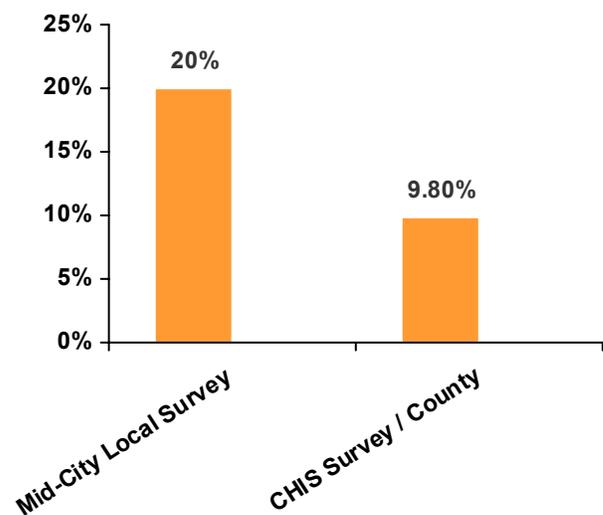
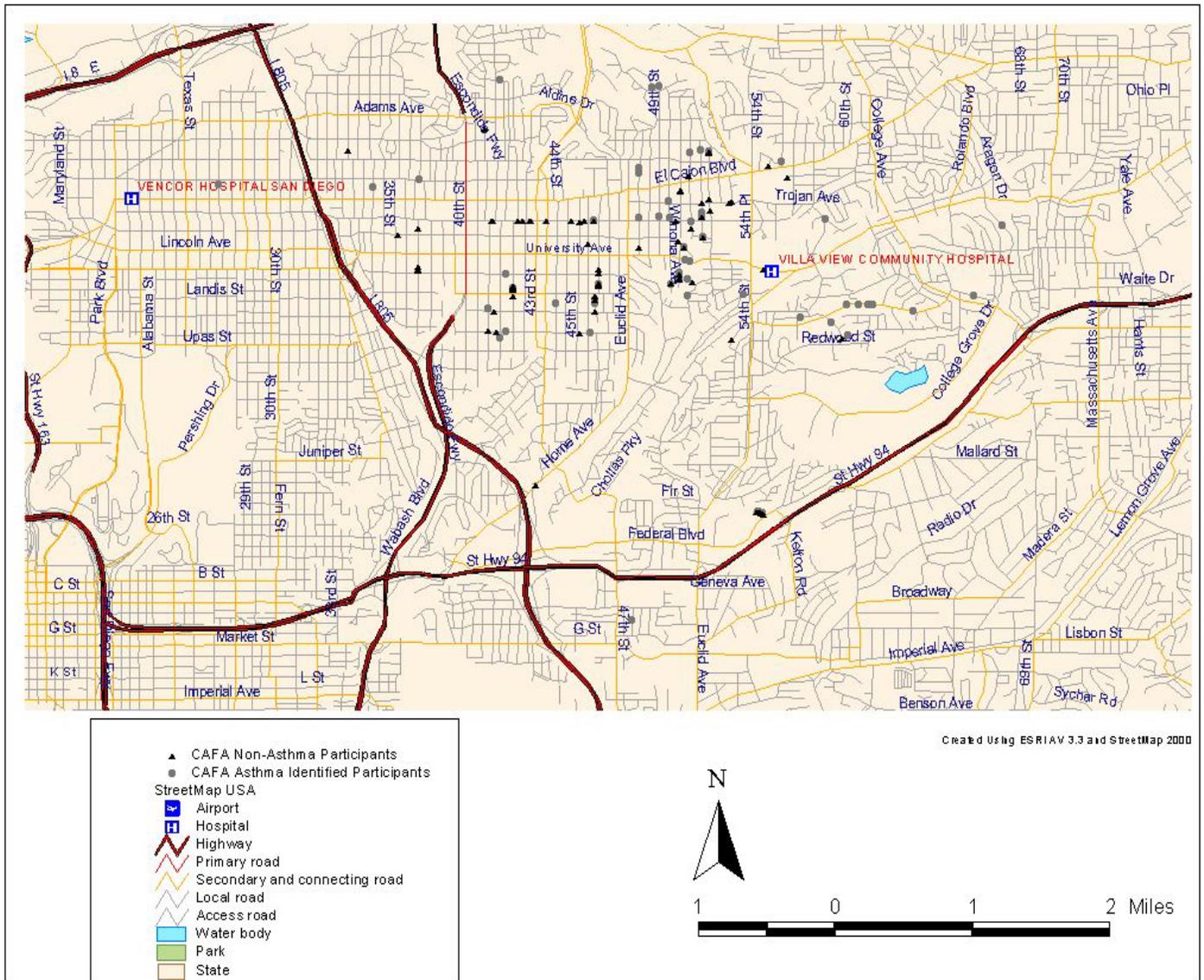


Figure No. 14: GIS Map of Asthmatic Survey Participants in Mid-City

The following figure maps survey participants who reported having a child diagnosed with asthma. Most asthma cases were clustered within a one-mile radius centered around University Avenue and Euclid Avenue. There also was a cluster in the neighborhood to the southeast of the Villa View Community Hospital.



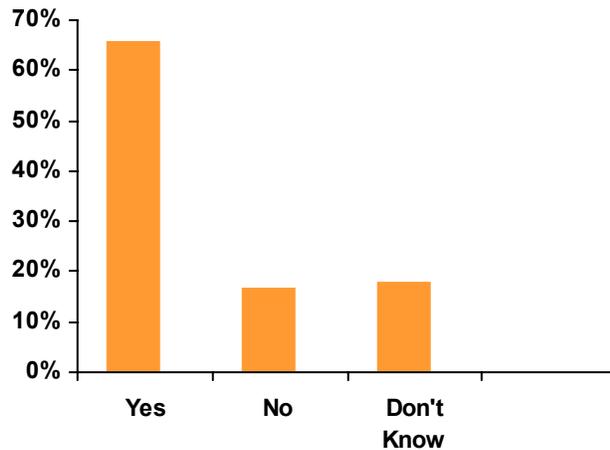
PERCEPTIONS ABOUT ASTHMA & AIR POLLUTION

When participants were asked whether they thought air pollution caused asthma, the majority (66%) believed there was a direct relationship between air pollution and asthma, while 16% replied “no”, and 18% were unsure.

Survey participants were somewhat more divided about the relationship between air pollution in their community and its affect on their health.

Approximately 47% believed that air pollution affects their health, 27% believed it did not, and 26% were unsure.

Figure No. 15: Does Air Pollution Cause Asthma?

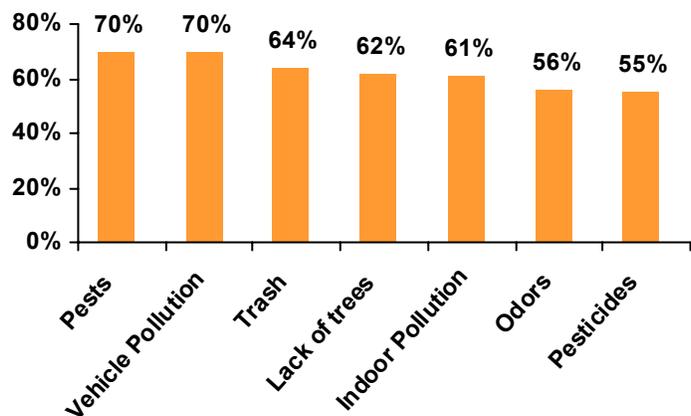


COMMUNITY ENVIRONMENTAL CONCERNS

Survey participants were given a list of common environmental concerns and were asked to indicate whether each issue concerned them “a lot”, “a little”, or “not at all”. The response options included:

- Air pollution from cars, trucks and buses
- Air pollution from businesses in the neighborhood
- Air pollution in homes such as dust or fumes from gas stoves
- Pests such as flies, cockroaches, rats or mice
- Pesticides used in or near the home (applied by landlords, neighbors, etc)
- Lack of trees / not enough parks
- Trash or litter
- Unpleasant odors
- Other (open-ended)

Figure No. 16: Issues That Concern Participants "A Lot"



The issues that were of greatest concern were pests (rats, roaches and vermin) as well as vehicle pollution with 70% of the participants expressing “a lot” of concern in each category. Trash and lack of trees followed closely behind with 64% and 62% respectively. Overall, survey participants expressed considerable concern about nearly all of the items listed.

COMMUNITY PRIORITIES

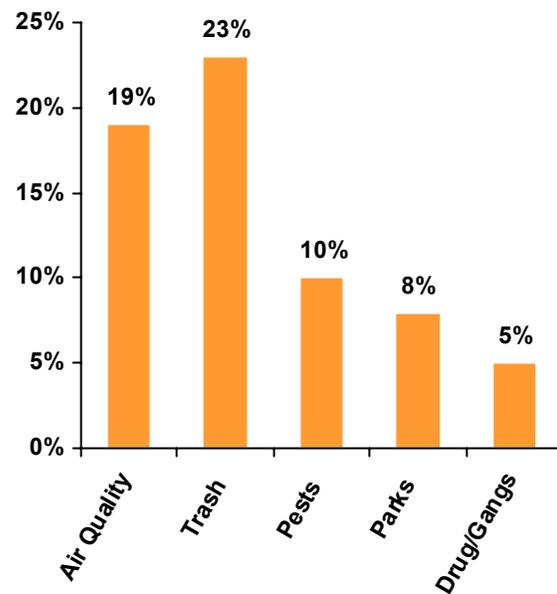
In addition to questions regarding community concerns, participants were asked which two environmental problems should be prioritized or addressed first. Twenty-three percent identified trash as their first priority, followed by air quality issues.

Following preliminary analysis of the survey, the results were presented to approximately 35 Mid-City residents at a community forum in March 2003.

In addition to receiving information about the survey results and existing local environmental data, residents were asked to rank and prioritize six potential policy areas including *trash*, *pest control*, *Chollas Lake (former Chollas Dump)*, *air quality*, *housing*, and *schools*.

Trash was identified as a first or second priority by 83% (N=24) of the forum participants. Pest control followed with 59% (N=17) identifying it as a first or second priority that required community action.

Figure No. 17: Top Environmental Priority



POLICY, ADVOCACY & COMMUNITY INVOLVEMENT

Finally, participants were asked a number of questions regarding policy, advocacy and the community's ability to make improvements in their environment. While respondents were somewhat ambivalent about the government's role in protecting the environment, most felt that community residents could collectively and individually make Mid-City a healthier and safer place to live.

- **Government & Policy:** Respondents were divided over whether the government (local, state or federal) was doing enough to protect the environment. Approximately 34% expressed that the government was not doing enough, 33% were satisfied with government efforts, and 33% did not know.
- **Community Action:** When asked whether community residents could make a difference in improving and cleaning-up their environment, the majority (71%) responded yes. Additionally, nearly 30% of the respondents expressed an interest in getting involved in the activities of the Mid-City CAFA efforts. Options for involvement included talking to friends and neighbors about air pollution, attending meetings, making phone calls, or signing petitions.

KEY FINDINGS & RECOMMENDATIONS

As previously discussed, one of the principle objectives of the Mid-City community survey was to assess community needs, perceptions, and priorities with regards to air quality and environmental health factors, particularly as they relate to asthma. In addition to gathering valuable information to develop the CAFA intervention, numerous community issues surfaced or were corroborated through the survey. In summary, these key findings include:

- **High asthma burden in Mid-City:** Despite the lack of reliable surveillance data for the region, the survey results are consistent with other sources of data (hospitalization, ER visits, and 911 calls) that indicate a high asthma burden in Mid-City neighborhoods. Of the 412 community residents surveyed, 20% reported that having at least one household member with asthma.
- **Problems with pest control, trash and illegal dumping:** Like many high-density inner-city areas, Mid-City struggles with issues related to trash, illegal dumping and subsequent problems with cockroaches, rats and mice. Many of the community members (both in the survey and community forum) expressed considerable concern about overflowing dumpsters and discarded junk filling

back alley ways and yards. In addition to being a community “eye sore”, the problems with trash can also have negative health implications. Well over half of the survey respondents had seen cockroaches, rats, mice and ants within the last six months, yet many were not taking action to control the pests and vermin population in their home environment. Given the obvious concern among community members, the Mid-City CAFA initiative identified trash and vermin management as its first intervention objective and is designing a community-driven program to address these issues. The survey results also suggest there is an opportunity to educate residents, home owners and landlords about integrated pest management strategies that are healthier for the community.

- **Lack of knowledge about local asthma programs and environmental health:** Despite the efforts of local clinics, health providers and community-based organizations, the survey suggests that many residents in the Mid-City are unaware of programs and resources available in their community. The Mid-City community may benefit from a strategic social marketing and public education campaign to increase awareness about asthma, air quality, and environmental health issues.
- **Interest in community involvement:** The survey revealed positive indications that community residents feel empowered to collectively make Mid-City a healthier and safer place to live. However, they seem unclear about the role of government and unaware of ways they can affect policy change (i.e. influence policy makers). In addition to engaging community residents in different civic activities, the Mid-City CAFA initiative also plans to raise awareness and advocate for policies that can make Mid-City a healthier place to live. Given the large number of new immigrants, these activities may also be an important contribution to the local community.

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