Sampling Design: HHS2010 used an exclusively address-based-sample (ABS) design. An ABS design allowed for geographic oversampling, included cell-phone-only and no-phone households, not covered by a traditional landline random digit dial (RDD), and accommodated various sampling techniques that were necessary to meet our goals for systematic stratification. The sample of households was divided into two strata: addresses with a listed landline telephone ("listed") number and addresses without a listed landline telephone number ("unlisted"). The sample records within each stratum were randomized and assigned to smaller random subsamples or "replicates" to be released as needed for the study. Our disproportionate design oversampled Vietnamese, Asian, and Black census block groups. Overall, this strategy insured a more representative sample of minority interviews. Additionally this design provided a good distribution of interviews below and above Federal poverty level (FPL), with 16.5% of interviews targeted to households that fall below FPL.

Stratification: HHS2010 used multiple levels of stratification: seven 1-percent PUMAs, PUMA-level strata with high densities of the designated ethnic groups (Asian, Asian/Vietnamese, Hispanic, African American and White/Other), Asian and Vietnamese surname strata, as well as separate strata for ABS with a listed phone number and ABS with no listed phone number. Sub-strata within the Super-PUMAs were developed to ensure adequate representation of low income and racial/ethnic minority households.

PUMAs: Public use microdata areas are created by the U.S. Census as a means of enhancing the accuracy of population projections from the annual American Community Surveys. The super-PUMAs contain at least 400,000 people and are drawn to accommodate aggregations of census tracts; the smaller PUMAs contain at least 100,000. There are 25 PUMAs and seven Super PUMAs in Harris County.

Data Collection: All potential households received an invitation booklet with information on various ways how to complete the survey. Households who did not respond to the invitation booklet received a reminder postcard and a reminder letter with a paper questionnaire. All materials sent to the sample were in English, Spanish and Vietnamese.

Sampling in the household: Both telephone and web interviews were targeted to a randomly selected, non-institutionalized adults, aged 18 and older, within a randomly selected household. If children lived in the household, and the selected adult served as a parent, guardian or caregiver of these children, a child was randomly selected and the adult was asked to serve as a proxy and respond to questions for that child.

Weighting: Base weights are used to adjust for differential probabilities of selection. The sample design calls for oversampling certain segments of the population and the base weights adjust for this by giving higher weight to those who were under-sampled and lower weight to those who were oversampled. Post-stratification weights correct for differences in response rate by stratum and by specific demographic groups.

Disparities Index: Indicators of social disadvantage and income inequality were selected from the literature and patterns of covariance were examined with principal components analysis to identify a reduced set of variables that best summarized the full set of indicators for our population.

Mental Health Measures: Serious Psychological Distress (SPD) is a non-specific measure of psychological distress that has been psychometrically validated and able to discriminate DSM-IV diagnostic cases from non-cases. SPD is determined using Kessler’s scale of 6 questions (K6). Each question asks about the frequency of symptoms, using one of 5 categories on a 0 to 4 scale. Responses to the six questions are then summed, resulting in scores ranging from 0-24. A K6 score of 13 or greater signifies SPD. Partially imputed values were used to calculate the K6 when a single item was missing. If more than one item was left missing by the respondent then the scale was set to missing. Unimputed values were used to estimate rates of mental health utilization and access measures.
Special thanks are due to our primary sponsor, the Houston Endowment, Inc., for their generous support. The Center for Clinical and Translational Sciences of The University of Texas Health Science Center at Houston (UTHealth) provided support for our outreach efforts. We appreciate the care, support and technical proficiency of our partners at Social Science Research Solutions, in Media, Pennsylvania, the Survey Research Laboratory at the University of Illinois, Champaign-Urbana, and the team at Norwegian Social Science Data Services, Bergen, Norway. Thanks are due to the Research into Action Project of the Institute for Health Policy and to the St. Luke’s Episcopal Health Charities for providing helpful comments on this document, and finally to the California Health Interview Survey team at the UCLA Center for Health Policy Research for their helpful advice.

We also wish to thank the following organizations for providing written suggestions on themes, topics and areas of concern. Without their input and support, this local survey focused on the health of Houston and Harris County would not have been possible.

Advocacy, Inc.
American Cancer Society
Andover/Southview/Fairlawn Civic Association, Inc.
Asian American Health Coalition
AT&T
Bee Busy Learning Academy, Inc.
Bering Omega Community Services
Blue Cross and Blue Shield of Texas
Blueridge Civic Club
Boat People S.O.S.
Breath of Life Clinic
CAN DO Houston
Care for Elders
Catholic Charities of Galveston-Houston
Center for Faith and Health Initiatives
Children’s Defense Fund Texas
CHRISTUS Health
City of Houston
City of Houston Department of Health and Human Services
City of Houston Precinct 2
City of Houston Quality Assurance and Auditing
Clark Pines Civic Association
Collaborative for Children
Community Health Choice
de Madres a Madres, Inc.
El Centro de Corazon
Epiphany Community Health Outreach Services (ECHOS)
Families Under Urban & Social Attack, Inc.
Family Services of Greater Houston
Garden City Civic Club
Gateway to Care
Good Neighbor Healthcare Center
Greater Houston Community Foundation
Harris County Breastfeeding Coalition
Harris County Healthcare Alliance
Harris County Hospital District
Harris County Protective Services for Children & Adults
Healthcare for the Homeless - Houston
Hispanic Health Coalition
HOPE Clinic
Houston Shifa Services Foundation
Houston-Galveston Area Council
Ibn Sina Foundation
Immunization Partnership
Independence Heights Redevelopment Council
LIB General Hospital
LaSalette Place Civic Club
Legacy Community Health Services
Lincoln City Civic Club
March of Dimes
The University of Texas MD Anderson Cancer Center
The University of Texas MD Anderson Center for Research on Minority Health
Mental Health America
Montgomery Terrace Civic Club
Montrose Counseling Center
MotherLand, Inc. - Independence Heights
Community Health Center
NAM Children’s Clinic/UTHealth Pediatrics
National Alliance on Mental Illness/West Houston Neighborhood Centers, Inc.
NICE
North Houston Association
One Voice
Outpost Estates Civic Club
Pasadena Health Center
Planned Parenthood
San Jose Clinic
Senior Guidance Directory, Inc.
Shalom Health Ministry
South County Community Clinic
Southwest Security Association
St. Luke’s Episcopal Health Charities
Sunset Heights Civic Club
Super Neighborhood Council #5 - Greater Inwood
Super Neighborhood Council #10 - Spring Branch West
Super Neighborhood Council #20 - Midwest
Super Neighborhood Council #25 - Allen
Super Neighborhood Council #30 - Braeburn
Super Neighborhood Council #37 - Westbury
Super Neighborhood Council #39 - Fondren Gardens
Super Neighborhood Council #42 - IAH Airport
Super Neighborhood Council #43 - Kingwood
Super Neighborhood Council #68 - Greater OST/South Union
Super Neighborhood Council #73 - Golfcrest/Bellfort/Reveille
Super Neighborhood Council #83 - McGregor
Super Neighborhood Council #84 - Spring Branch North
Super Neighborhood Council #85 - Spring Branch Central
Texas Agrilife Extension - Harris County
Texas Children’s Health Plan
Texas Children’s Pediatric Associates
Texas Department of Family and Protective Services
The Hope Foundation
The Lighthouse of Houston
Texas Youth Commission
UTHealth
VN TeamWork
Westbury Civic Club
YMCA of Greater Houston
**Key Questions**

I. **Health and Disadvantage**
   Are some groups more likely to experience fair or poor health?
   How many are experiencing economic hardship?
   Is health status related to disadvantage?
   How are health and disadvantage related?

II. **Health Insurance and Access to Care**
   Do adults in the Houston area have insurance coverage?
   Are some groups more likely to be uninsured?
   Why are Houston area residents uninsured?
   Where are residents having the most difficulty accessing the health care system?

III. **Maternal and Child Health**
   How do breastfeeding rates compare to Healthy People 2020?
   Are some groups more likely to stop breastfeeding before six months?
   How do early prenatal care rates in the Houston area compare to Texas?
   Why do some women not receive early prenatal care?

IV. **Children’s Health Insurance and Access**
   Do children in the Houston area have insurance coverage?
   Are some children more likely to be uninsured?
   Why are children in the Houston area uninsured?
   Where are children having the greatest problems accessing healthcare?
V. **Children's Diet and Activity**
   How common is obesity among Houston area teens?
   Are teens from some racial or ethnic groups more likely to be obese than others?
   How are our children doing compared to Healthy People 2020 behavior goals?
   Is the availability of fast food related to children's unhealthy weight?

VI. **Chronic Conditions and Health Screening**
   How common are chronic health conditions in the Houston area as compared to Texas?
   How are adults doing with their recommended health screenings as compared to Healthy People 2020 goals?
   Are some groups more likely to go unscreened?
   Where should screening efforts be focused?

VII. **Mental Health**
   How common are mental health needs among men and women?
   Where are the highest rates of Serious Psychological Distress?
   Are there barriers to receiving mental health services?
   Where are the highest rates of use and need for mental health services?

VIII. **Neighborhood Concerns**
   What are the most common problems in Houston area neighborhoods?
   How common is violence in Houston area households?
   How are neighborhood and environmental concerns related to financial need?
   How are neighborhood and environmental concerns related to health status?
Overview

The Health of Houston Survey (HHS) is a population survey of randomly chosen households in Houston and Harris County intended to provide communities with information about the unmet health needs of both adults and children and to offer timely data to local organizations, elected officials and health care leaders seeking to improve the public’s health. With participation from over 5,000 respondents, it is the area’s most extensive health survey to date assembling facts on health, healthcare and lifestyle, as well as on social, economic and neighborhood risk factors, and making these available free of charge to anyone interested.

The content of HHS was specifically formulated to meet the information needs of organizations working in the health sector. To discover those needs, we sought detailed input from more than 150 organizations. We also invited the area’s Super Neighborhood Councils and civic associations to participate, so that community concerns would be included as well.

To assure a representative sample of respondents, the survey team divided the county into seven areas corresponding to the U.S. Census one percent Public Use Microdata Areas (or PUMAs) and employed an address-based sampling design with special selection features to insure that minorities and lower income residents would be accurately represented. The survey was administered in three languages, English, Spanish and Vietnamese, with responses recorded either by telephone interviewers, at a secure web site, or in a mail-in questionnaire. In the map below, the seven areas are shown with different colors.

Sample of Organizations and Collaboratives Providing Input (see Acknowledgments)

- Gateway to Care
- Greater Houston Partnership
- Harris County Healthcare Alliance
- Harris County Public Health and Environmental Services
- Houston Department of Health and Human Services
- One Voice Texas
- St. Luke’s Episcopal Health Charities
- Super Neighborhood Councils and Civic Associations

Harris County and City of Houston One Percent Public Use Microdata Areas
Because of the accuracy of our sampling strategy, we are able to assign our participating households into 28 familiar, neighborhood areas using their ZIP Codes. This assignment permits us to draw valid conclusions about each area based on our sampled households and, at the same time, to protect the anonymity of our individual respondents. Each of the labeled areas in the map below represents an aggregation of five or more ZIP Codes.

The data from the survey will be available directly through our [www.hhs2010.net](http://www.hhs2010.net) web site. You will find two different programs, InstantAtlas™ and Nesstar, to assist you in accessing and viewing all of the variables in the data file. InstantAtlas™ supports visual displays that link survey items to each of our 28 areas; for example, you can locate an area on the interactive map and view how prevalent a condition or problem is in that area. Charts are also provided for summarizing these results. These displays can be saved in PDF format and printed. Nesstar (Networked Social Science Tools and Resources) works like a lending library for data. All users can review the contents and description of the data set, including questions asked and background on each variable, and can inspect counts and percentages for selected variables. Registered users can perform simple statistical analyses and create graphs and charts of their results for downloading and printing. Those completing a simple user’s agreement can check-out some or all of the data for more extensive analysis with their own software. Nesstar provides a portable file in the user’s chosen format.
I. Health and Disadvantage

Houston and Harris County are well known for their racial, ethnic and multicultural diversity. When it comes to the overall health of the population, however, there are disparities that emerge along group lines. Some groups are healthier than others, on average. In part, these differences reflect economic and social patterns of advantage and disadvantage that also distinguish some groups from others.

Are some groups more likely to experience fair or poor health?

Our findings show that 20% of Houston area residents are in fair or poor health. We can examine how close each group comes to this area average with a simple chart. Except where noted, all percentage estimates have been rounded to whole numbers. Groups with better than average rates of fair or poor health are shown with green bars. Red bars indicate groups with worse than average rates of fair or poor health. The relative lengths of the bars (indicated by the numbers within) show how much more or less likely each group is to be in fair or poor health compared to the area average. African-American and Hispanic residents are more likely than White residents (24% and 25%, respectively compared to 15% of White residents) to be in fair or poor health. Vietnamese residents are more likely to be in fair or poor health (36%) than any other group, and specifically, more than twice as likely as White residents.

Note: Vietnamese respondents are considered both separately and jointly with the “Asian” group. Following U.S. Census practice, all other group designations are mutually exclusive. Responses such as “don’t know” and “refused” are not included in the denominator.

How many are experiencing economic hardship?

Almost half of our area residents (48%) were experiencing difficulty buying food or paying their rent or mortgage at some time in the past year. Of those who experienced this kind of hardship, 70% were below 200% of the Federal Poverty Level, while 30% were from middle income households. Economic hardship is considered a more sensitive measure of financial adversity than household income because it reflects people’s experience facing food and electric bills, rent or mortgage payments and other day-to-day expenses, independently of their income level. The level of hardship experienced in Houston is not uncommon when it comes to food purchases. The recent USDA report, Household Food Security in the U.S. in 2010, reveals that almost one in five Texas households (18.8%, or 1.7 million households) were food insecure between 2008 and 2010.¹

48% experienced economic hardship.

More Black (62%) and Hispanic (57%) residents experienced hardship compared to other groups.
Is health status related to disadvantage?

Health research has established that socio-economic disadvantage is related to poor health. The presence or absence of seven different indicators of disadvantage was recorded for each respondent. This figure shows how the levels of general health status vary with the number of disadvantage indicators present. We found that as the number of disadvantage indicators went up, the level of health status went down.

How are health and disadvantage related?

The map below shows the geographical connection between fair or poor health and levels of disadvantage. Several areas with the highest levels of disadvantage (shown in red) also have the highest proportion of residents in fair or poor health (shown with hatching). The areas that are among the highest on both include Northline-Eastex, Near Northside-Fifth Ward, Downtown-East End and Gulfton-Sharpstown-Alief.

Note: Weighted percentages of respondents with one to seven indicators present for each geographic area were standardized as z-scores, and the totals were ranked in quartiles from high to low levels of disadvantage.
II. Health Insurance and Access to Care

Do adults in the Houston area have insurance coverage?

Almost a third (31%) of all adults, 18 and above, were without insurance at the time of the survey. Less than 10% of residents were on any kind of public insurance, such as Medicaid or Veterans Affairs Insurance. Men and women were not statistically different across types of insurance. Our area’s uninsured rate is higher than the U.S. Census Bureau’s Current Population Survey 2010 recent state estimate of 25% (24.6% exactly).³

Note: Harris County Hospital District’s Gold Card holders are not considered insured. TRICARE beneficiaries are included in the “Other Public Insurance” category. For those under 65 that reported more than one insurance type, priority is given to the category, “Other Public Insurance”.

Are some groups more likely to be uninsured?

More than a third (34%) of residents under 65 years of age were uninsured at the time of the survey. Hispanic and Vietnamese residents were uninsured at much higher rates than the overall average; the red bars show how much their rates exceed the average for all residents. Specifically, Hispanics are uninsured at a rate 22% higher than the average. More than half (56%) of our Hispanic residents are uninsured. White residents are substantially less likely to be uninsured and fall 20% below the average percentage of people lacking insurance.

Note: Vietnamese respondents are considered both separately and jointly with the “Asian” group. Following U.S. Census practice, all other group designations are mutually exclusive. Responses such as “don’t know” and “refused” are not included in computing the percentages.
**Why are Houston area residents uninsured?**

All adults who were uninsured at some point in the last year (35% of residents) were asked why they were without health insurance. Although the survey asked for the main reason, some respondents offered more than one. The most frequent reason for being uninsured was not being able to afford insurance (54%). Ineligibility because of working status was the next most often cited reason (20%).

**The larger the bubble, the more often it was cited.**

“Could not afford” was the main reason almost twice as often as “Working status ineligible”, and 10 times as often as “Citizenship/Immigrant status ineligible” or “Put it off”. Twelve other themes emerged from responses.

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**Where are residents having the most difficulty accessing the health care system?**

This map shows the distribution of uninsured adults across our 28 survey areas. Two other layers show the highest quartiles, where you can view the highest proportions of people experiencing access to care barriers (bordered in yellow) and the highest proportions that are in fair or poor health (hatched). The highest proportions of uninsured adults are found in Northline, Downtown-East End and Gulfton areas. Areas labeled Northline, Gulfton and Sunnyside had the highest percentages of people facing barriers and fair or poor health. Northline and Gulfton had the highest percentages of all three: 1) uninsured; 2) barriers to care; and 3) fair or poor health.

---

**Access Barriers**

- Had no personal doctor
- Emergency room was the usual place for care
- Experienced delays or were unable to do the following because of cost or lack of insurance:
  - fill a prescription
  - see a doctor
  - see a specialist
  - receive dental care

---

**Adult insurance coverage, perceived health status and barriers to care by quartiles**

- 50% of adults (18+) had no dental insurance last year. Another 8% had dental insurance for only part of last year, leaving only 42% of residents covered during all 12 months.
III. Maternal and Child Health

How do breastfeeding rates compare to Healthy People 2020?

Texas and Houston have similar rates for babies who were breastfed ever and those who were breastfed for six months. The Houston area has a slightly higher rate for babies who ever breastfed but it falls closer to the statewide rate for those breastfed for six months. Breastfeeding questions were asked to women of age 18-54 that gave birth in the last 5 years.

The Healthy People 2020 goal is for 81.9% of women to at least try breastfeeding, and the Houston numbers meet that goal. However, less than half (41.5%) were still breastfeeding at six months. Additionally, this is far below the recommended goal of 60.6%.

Are some groups more likely to stop breastfeeding before 6 months?

While efforts to increase breastfeeding rates are on-going, 58% of the women, who gave birth in the last five years, breastfed for less than the recommended six months. When compared across groups, the highest rate was among African American women, 80% of whom had stopped breastfeeding by six months. This rate exceeded the area average by 22 percentage points.

This finding is similar to other studies of breastfeeding rates. The Surgeon General’s Report in 2011 indicates that African American babies are 15% less likely to be breastfed at six months compared to white babies.
How do early prenatal care rates in the Houston area compare to Texas?

Early prenatal care rates from our survey were about 15% higher than the statewide rate (84% versus 69%), based on the most recent Texas PRAMS (Pregnancy Risk Assessment Monitoring System, 2007). This discrepancy could be explained given the different sampling methods – ours is a random sample of households and includes women respondents’ births in the last five years, as opposed to the PRAMS sample of all live births, taken every three years. In either case, disparities in age exist, with younger mothers having the lowest rates of early prenatal care.

Note: Early prenatal care is defined as having had the first prenatal care visit sometime during the first trimester.

Why do some women not receive early prenatal care?

Among women who gave birth in the last five years, 16% either received late or no prenatal care. When asked what kept them from getting care or getting it earlier, the most common reason was because of cost or lack of insurance (34% of the reasons for receiving late or no prenatal care). Some examples of responses were: “... Did not have the money ...” or “... saving money for an appointment.”

Other reasons were that they did not know they were pregnant or they did not have a Medicaid card. These findings are similar to those reported in the Texas PRAMS for 2007, where “no money” and “no Medicaid card” were the top two reasons for delayed prenatal care. 

34% of the reasons for receiving late or no prenatal care were due to cost or lack of insurance.
IV. Children’s Health Insurance and Access

Do children in the Houston area have insurance coverage?

The HHS is one of the first surveys to measure the extent of children’s health insurance coverage in the Houston area. Respondents with children in their households were asked whether one particular child aged 0-18 (see Technical Details, inside back cover) had any of several types of insurance. Eight out of every ten children were covered by either private insurance, Medicaid or CHIP. Nevertheless, 13% of children had no insurance of any kind. There were statistically significant differences between genders. Boys were more often covered by private insurance or Medicaid/CHIP, while girls were more often uninsured. The ratio of uninsured girls to boys was almost 2 to 1.

Are some children more likely to be uninsured?

Comparing the rates of uninsured children across different racial and ethnic groups, Hispanic children and those classified as belonging to Other Groups (because of small numbers of households in these groups) are the only two groups to exceed the area average of 13% uninsured and to do so by a full 6% and 7%, respectively (shown by the red bars). The proportion of uninsured Hispanic children is almost twice as high (19%) as for any other group.

Note: Uninsured Vietnamese children are not presented separately in the graph since parents or guardians were not asked about Asian ancestry.

Uninsurance among Houston area children
(ages 0-17)

<table>
<thead>
<tr>
<th>Race/Ethnicity (% of uninsured children)</th>
<th>Better than Average</th>
<th>Worse than Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (6%)</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Black/A.A. (6%)</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Hispanic (19%)</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Asian (10%)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Other Groups (20%)</td>
<td></td>
<td>7</td>
</tr>
</tbody>
</table>
**Why are children in the Houston area uninsured?**

For uninsured children, parents (or guardians) were asked why their child was uninsured in the last 12 months. Further, respondents were asked why their child was not enrolled in either Medicaid or CHIP.

Cost was the most frequent reason for a child not having insurance. Meanwhile, ineligibility was the most frequent reason for the child not having Medicaid or CHIP. Often, more than one reason was mentioned. The top reasons appear in the figure to the right.

**Where are children having the greatest problems accessing healthcare?**

This map depicts the relative concentrations of children who lack insurance coverage and, at the same time, face barriers to access. Different percentage ranges of uninsured children are summarized in four groupings (quartiles) with darker areas indicating higher proportions of uninsured children. Only the top grouping is presented for the children facing one or more barriers to access (see the full list of barriers beneath the map); these are hatched on the map. Three areas, Northline-Eastex, Acres Homes-Greater Inwood and Sunnyside-Greater Hobby have the highest levels of both of these difficulties.

**Access Barriers**

- Had no personal doctor
- Emergency room was the usual place for care
- Experienced delays or were unable to do the following because of cost or lack of insurance:
  - fill a prescription
  - see a doctor
  - see a specialist
  - receive dental care

---

**Top reasons why children did not have:**

**INSURANCE**

- Cost (Reason #1)
- Ineligible (Reason #2)

**MEDICAID/CHIP**

- Ineligible (Reason #1)
- Had not applied (Reason #2)

The larger the bubble, the more often it was cited.

**Insurance:** The #1 reason, Cost, was 40% of all reasons given. Cost was twice as frequent compared to Ineligible and four times more frequent than Ineligibility due to parent’s working status or Citizenship. Ten other themes emerged.

**Medicaid/CHIP:** The #1 reason, Ineligible, was 18% of all reasons given, compared to the other three most common reasons (15%, 13%, 13%). Twelve other types of reasons emerged.

**Percent of uninsured children and access barriers to health services by quartiles**

- Uninsured Children
  - Highest (18 - 31%)
  - 12 - 17%
  - 6 - 11%
  - Lowest (0 - 5%)
- Highest Percent with 1 or More Access Barriers
  - Upper Quartile (28 - 42%)

---
V. Children’s Diet and Activity

How common is obesity among Houston area teens?

We calculated a Body Mass Index (BMI) for all children, using the height, weight and age reported for them by their parents (or guardians). Based on the BMI, some children were assigned to an obese category, consistent with the CDC’s definition. The figure on the right compares obesity rates among children aged 14 through 17 with state and national estimates from the Youth Risk Behavior Surveillance System (YRBSS). The Houston area had lower rates than the Texas average and national average, except among males, where the Houston rate matched the Texas rate and was higher than the national one.

Note: Obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex. YRBSS values from 2009 used for Texas and national comparison.

Are teens from some racial or ethnic groups more likely to be obese than others?

Compared across racial and ethnic groups, obesity appears to be more common among African American children – 15% relative to our area average of 11%.

The statewide figures show an average of 13.6% overall, with African American teens at 16.7%, Hispanic teens at 16.5% and White teens at 10% obese. Our data for Hispanic teens shows an obesity rate that is 6.5% percentage points lower than the state’s estimate.

Note: Obesity is defined as a BMI at or above the 95th percentile for children of the same age and sex. “Other Groups” and “Asian” categories are not presented due to small numbers.
How are our children doing compared to Healthy People 2020 behavior goals?

The U.S. Department of Health and Human Services has established goals for reducing behaviors that have been found to contribute to children's obesity, such as the amount of time spent in front of television and video-game screens and physical inactivity. In the figure on the right, the national goals for children are marked by green stars. The American Academy of Pediatrics recommends that children aged two and older have no more than two hours of screen time, daily. The proportion following screen time recommendations (\(\leq 2\) hours/day) fall short of the HP2020 goals for both age groups. When we compare the proportion of local children meeting the CDC recommendation for at least 60 minutes of daily physical activity, we find that children in the Houston area slightly exceed the CDC goal of 20%.

Children's health behaviors in the Houston area compared to national recommendations (shown by green stars)

- \(\leq 2\) hours screen time (ages 14-17)
  - 22%
- \(\leq 2\) hours screen time (ages 6-14)
  - 31%
- \(\geq 60\) mins PA 7 days/week (ages 14-17)
  - 21%

Note: Screen time includes TV/Video and Computer use. PA=Physical Activity

Is the availability of fast food related to children’s unhealthy weight?

The local food environment (including the availability of fast food, fresh produce, and food markets) has been a well-documented influence on obesity and diabetes rates. To have sufficient numbers to describe children's weight status, we include children aged 12 to 17 with unhealthy weight in the map on the left. The highest concentrations of children with unhealthy weight are shown in dark blue, and the hatched areas overlaying this pattern show the highest levels of fast food availability, measured by the number of outlets per square mile. The darkest shaded areas (e.g., Downtown-East End, Near Northside-Fifth Ward, Pasadena-South Houston, Channelview-Cloverleaf) have the highest proportion of 12-17 year olds at an unhealthy weight. The hatched areas, Downtown-East End and Greater Heights-Washington, also have the greatest density of fast food establishments.

Unhealthy weight for children and number of fast food establishments by quartiles

Note: “Unhealthy weight” includes overweight and obese and is defined as a BMI at or above the 85th percentile for children of the same age and sex. Fast food outlets include three reference groups: cafeterias, limited service restaurants and snack and nonalcoholic beverage bars. Our source for fast food outlets is InfoUSA 2010 Business Dataset.
VI. Chronic Conditions and Health Screening

How common are chronic health conditions in the Houston area as compared to Texas?

Chronic diseases, such as high blood pressure, asthma and diabetes, shorten lives and increase health care costs. The display on the left shows the prevalence of some of these conditions and compares the Houston area (orange bars) relative to statewide estimates (blue bars). Obesity was the most common chronic condition at 32%, while high blood pressure was close behind at 30%. These rates were somewhat higher than the corresponding statewide rates.

Note: BRFSS 2009 used for Texas estimates. CVD - cardiovascular diseases includes heart attack, coronary heart disease and stroke.

How are adults doing with their recommended health screenings compared to Healthy People 2020 goals?

Houston area residents had lower screening participation rates than the HP 2020 goals for cancer screening. Breast cancer screening falls 17% below, followed by colon cancer and then cervical cancer screening. The breast cancer screening rate of 64% for women falls just below the statewide rate of about 70% and the national rate of 75%.

To meet federal recommendations, the Houston area needs to increase screening rates for colon and breast cancer by 12.5% and 17%, respectively.

The local HIV testing rate in the last year was 23% for ages 18-44. The HP 2020 has a recommended goal of 16.9% testing rate for ages 15-44.

Note: • Colon Cancer includes men and women, ages 50-74 years. • Cervical Cancer includes women, ages 21-65 years. • Breast Cancer includes women, ages 40-74 years.
Are some groups more likely to go unscreened?

Are some groups taking less advantage of important preventative services compared to other groups? The figure to the right shows the percentage of those who remain unscreened within each racial and ethnic category. The red bars indicate proportions of unscreened adults that exceed the overall area average; this translates into lower screening rates than expected. The green bars show the unscreened proportions that are lower than average—they are doing better than expected when it comes to meeting screening recommendations.

Close to half of Asian residents had received no screening for cervical (48%) and colon cancer (50%). Hispanic residents were more likely to remain unscreened for breast (43%) and colon cancer (53%) than any other group.

Note: Cervical cancer screening was asked of women, age 21-65. Breast cancer screening was asked of women, age 40-74 years. Colon cancer screening was asked of men and women, age 50-74 years.

Where should screening efforts be focused?

The map on the left shows areas where eligible residents have never been screened for colon cancer or have not been screened within the recommended timeframe. The darker areas show the higher percentages of unscreened people. Among the darkest shaded areas, Downtown-East End and Sunnyside-Greater Hobby show the highest proportion of residents who remain unscreened, 59% and 54%, respectively.
**VII. Mental Health**

**How common are mental health needs among men and women?**

To assess the prevalence of mental health problems across the Houston area, we rely on the presence of symptoms of Serious Psychological Distress (SPD). Screening for these symptoms is based on answers to a standardized set of questions, called the Kessler-6 (see Technical Details, inside back cover). This instrument is endorsed by the National Center for Health Statistics and is used in the U.S. National Health Interview Survey.

Seven out of every 100 residents met the criteria for SPD. These rates were almost twice as high among women as among men. Houston area rates are higher than the national estimates of 2.9% for men and 3.8% for women.

The HHS also included questions about whether adults were taking prescription medication for at least 14 days over the past year for mental or emotional problems. Ten percent of adults reported use of prescription drugs for these problems in the last year. Nationally, an estimated 10.8% of adults aged 20-59 used antidepressants in the last 30 days.

**Where are the highest rates of Serious Psychological Distress?**

The map to the right depicts how prevalent Serious Psychological Distress is in various parts of the Houston area. Areas with the highest percentages of people experiencing SPD are shown in dark blue. These are also the areas in which efforts could be concentrated to match the need with access to mental health services. The top three SPD rates are found in East Houston-Settegast, Channelview-Cloverleaf and Gulfton-Sharpstown-Alief.

1 in 10 adults took a prescription drug for at least 14 days for mental or emotional health problems sometime in the last year.
Are there barriers to receiving mental health services?

Eight percent of adults had seen a mental health professional in the last year. An additional 9% thought they needed to see someone for help, but were not able to do so. For almost 60% of adults that needed to see someone, cost was the principal barrier keeping them from seeking care.

Q. Did you see a doctor or other professional for problems with your mental health, emotions, nerves or use of alcohol or drugs?

9% of all residents did not see someone even though they needed to. Several reasons were given:

- Concerned about cost: 59%
- Felt uncomfortable: 31%
- Concerned that someone would find out: 22%
- Trouble getting an appointment: 17%

38% of residents, who did not get the help they needed for mental health problems, faced more than one barrier.

Where are the highest rates of use and need for mental health services?

The map on the left is shaded to show the percentages of people who obtained mental health services at least once in the last 12 months, with darker areas corresponding to higher percentages. We also show, with hatching, areas with the highest concentrations of people who needed mental health services. Spring Branch-Carverdale, Edgebrook-Ellington and Addicks-Bear Creek had the highest percentages of people with need for services and who obtained care.
What are the most common problems in Houston area neighborhoods?

Neighborhood conditions play an important role in community health. The most frequent neighborhood problem is the presence of stray dogs and cats. Almost 40% of the households in the Houston area are affected. Crime is a concern for 26% of the residents. Almost 1 in 5 have concerns about their drinking water, dumping and being exposed to air pollution due to traffic.

How common is violence in Houston area households?

Two-percent of residents are frightened for their safety from someone in their home. Over a quarter of those residents (0.5% of all adults), had experienced physical violence or the threat of it. An additional 1% are not in a safe place to answer questions about violence. Taken together, upwards of 3% of our area residents (about 70,000 residents) were frightened for their safety at the time of the survey. (Whenever cases of child or elder abuse were reported, we made referrals to the appropriate state authorities.)

Comparatively, in 2009 the Texas Behavioral Risk Factors Survey (BRFSS) asked about intimate partner violence and found that 2% of the adult population experienced violence or unwanted sex. Our survey expanded the BRFSS question to include all kinds of violence from either a household member or a caregiver. Given the sensitivity of this issue, it is quite likely that the 3% we found in the Houston area is an underestimate.
**How are neighborhood and environmental concerns related to financial need?**

The display on the right shows how the percentage of residents reporting some adverse neighborhood conditions varies with financial need.

As income increases from lower, federally-defined poverty levels to higher ones, we see a decrease in the proportion experiencing any of these adverse neighborhood conditions. There are more people with household incomes at 200% FPL or below (varying from 3%-8%), that think that water quality, air pollution, and stray dogs and cats are problems compared to area averages.

**Income disparities in neighborhood problem**

Note: Water pollution includes problems with water pollution-run off and drinking water. Air pollution includes pollution from traffic and industry.

**How are neighborhood and environmental concerns related to health status?**

This map depicts how areas of the city and county differ in numbers of neighborhood and environmental problems faced by residents. The areas with the highest problem tally are shown in red. Areas with the highest percentages of people in fair or poor health are indicated by hatching. There are two areas, East Houston-Settegast and Downtown-East End, where the proportion of those in fair or poor health reaches its highest level and, at the same time, residents face the largest number of neighborhood and environmental problems.

**Note:** Neighborhood and environmental concerns include stray dogs and cats, water pollution, drinking water pollution, dumping, air pollution from traffic and air pollution from industry.
Notes


10. p=0.01 for child gender and type of insurance

11. p=0.01 for child gender and uninsured status


### Health of Houston Survey

**Questionnaire Topics**

<table>
<thead>
<tr>
<th>Health Status</th>
<th>Adult</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>General health status</td>
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<tr>
<td>Functional limitations</td>
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<thead>
<tr>
<th>Health Conditions</th>
<th>Adult</th>
<th>Child</th>
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<tbody>
<tr>
<td>Asthma</td>
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<tr>
<td>Diabetes</td>
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<tr>
<td>Cardiovascular disease, hypertension</td>
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<table>
<thead>
<tr>
<th>Mental Health</th>
<th>Adult</th>
<th>Child</th>
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</thead>
<tbody>
<tr>
<td>Mental health status</td>
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<tr>
<td>Perceived need, use of mental health services</td>
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</table>

<table>
<thead>
<tr>
<th>Health Behaviors</th>
<th>Adult</th>
<th>Child</th>
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</thead>
<tbody>
<tr>
<td>Meat intake, fast food, carbonated and high sugar drinks</td>
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<td>❌</td>
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<tr>
<td>Physical activity and exercise</td>
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<tr>
<td>Sedentary behavior</td>
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<tr>
<td>Alcohol use</td>
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<tr>
<td>Tobacco use and secondhand smoke</td>
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<tr>
<td>HIV testing</td>
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<tr>
<th>Women’s Health</th>
<th>Adult</th>
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<tbody>
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<td>Pap test screening</td>
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<tr>
<td>Mammography screening</td>
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<tr>
<td>Pregnancy status</td>
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<table>
<thead>
<tr>
<th>Prenatal Care/Breastfeeding</th>
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<th>Child</th>
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<tbody>
<tr>
<td>Entry into prenatal care</td>
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<tr>
<td>Barriers to prenatal care</td>
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<tr>
<td>Breastfeeding</td>
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<table>
<thead>
<tr>
<th>Cancer History and Prevention</th>
<th>Adult</th>
<th>Child</th>
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</thead>
<tbody>
<tr>
<td>Cancer diagnosis, type and treatment</td>
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<tr>
<td>Colorectal cancer screening</td>
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</table>

<table>
<thead>
<tr>
<th>Neighborhood and Housing</th>
<th>Adult</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homeownership, length of time at current residence</td>
<td>❌</td>
<td></td>
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<tr>
<td>Transportation</td>
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<td></td>
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<tr>
<td>Safety</td>
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<td></td>
</tr>
<tr>
<td>Environmental pollution/noise pollution</td>
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<tr>
<td>Availability of fruits and vegetables</td>
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<td></td>
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<tr>
<td>Social support</td>
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</table>
## Health of Houston Survey 2010

### Questionnaire Topics (continued)

<table>
<thead>
<tr>
<th>Adult</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Care Access and Utilization</strong></td>
<td></td>
</tr>
<tr>
<td>Usual source of care, visits to medical doctor, emergency room visits</td>
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<tr>
<td>Delays in getting care (prescriptions, medical care, waiting times)</td>
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</tr>
<tr>
<td>Transportation to access medical care</td>
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</tr>
<tr>
<td><strong>Health Insurance</strong></td>
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<tr>
<td>Current insurance coverage type</td>
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<tr>
<td>Coverage over past 12 months, reasons for lack of insurance</td>
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<tr>
<td>Economic hardship due to medical expenses</td>
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<tr>
<td>Dental/Prescription coverage</td>
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<tr>
<td>Reason for Medicaid/CHIP non-participation</td>
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</tr>
<tr>
<td><strong>Public Program Eligibility</strong></td>
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</tr>
<tr>
<td>Household poverty level</td>
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</tr>
<tr>
<td>Program participation (TANF, Food Stamps, SSI, SSDI, WIC)</td>
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<tr>
<td>Assets, child support, social security, pension</td>
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<tr>
<td><strong>Income</strong></td>
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</tr>
<tr>
<td>Respondent's income</td>
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</tr>
<tr>
<td>Household income, number of persons supported by household income</td>
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</tr>
<tr>
<td>Economic hardship</td>
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</tr>
<tr>
<td><strong>Employment</strong></td>
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</tr>
<tr>
<td>Employment status</td>
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</tr>
<tr>
<td>Hours worked at main/all jobs</td>
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</tr>
<tr>
<td>Occupation</td>
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<tr>
<td><strong>Interpersonal Violence</strong></td>
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</tr>
<tr>
<td>Interpersonal violence</td>
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</tr>
<tr>
<td><strong>Respondent Characteristics</strong></td>
<td></td>
</tr>
<tr>
<td>Race/ethnicity, age, gender, height, weight</td>
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</tr>
<tr>
<td>Education</td>
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<tr>
<td>Marital status</td>
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<tr>
<td>Sexual orientation</td>
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<tr>
<td>Citizenship, immigration status, country of birth, length of time in U.S.</td>
<td></td>
</tr>
<tr>
<td>Languages spoken at home, English language proficiency</td>
<td></td>
</tr>
</tbody>
</table>
Sampling Design: HHS2010 used an exclusively address-based-sample (ABS) design. An ABS design allowed for geographic oversampling, included cell-phone-only and no-phone households, not covered by a traditional landline random digit dial (RDD), and accommodated various sampling techniques that were necessary to meet our goals for systematic stratification. The sample of households was divided into two strata: addresses with a listed landline telephone (‘listed’) number and addresses without a listed landline telephone number (‘unlisted’). The sample records within each stratum were randomized and assigned to smaller random subsamples or ‘replicates’ to be released as needed for the study. Our disproportionate design oversampled Vietnamese, Asian, and Black census block groups. Overall, this strategy insured a more representative sample of minority interviews. Additionally this design provided a good distribution of interviews below and above Federal poverty level (FPL), with 16.5% of interviews targeted to households that fall below FPL.

Stratification: HHS2010 used multiple levels of stratification: seven 1-percent PUMAs, PUMA-level strata with high densities of the designated ethnic groups (Asian, Asian/Vietnamese, Hispanic, African American and White/Other), Asian and Vietnamese surname strata, as well as separate strata for ABS with a listed phone number and ABS with no listed phone number. Sub-strata within the Super-PUMAs were developed to ensure adequate representation of low income and racial/ethnic minority households.

PUMAs: Public use microdata areas are created by the U.S. Census as a means of enhancing the accuracy of population projections from the annual American Community Surveys. The super-PUMAs contain at least 400,000 people and are drawn to accommodate aggregations of census tracts; the smaller PUMAs contain at least 100,000. There are 25 PUMAs and seven Super-PUMAs in Harris County.

Data Collection: All potential households received an invitation booklet with information on various ways how to complete the survey. Households who did not respond to the invitation booklet received a reminder postcard and a reminder letter with a paper questionnaire. All materials sent to the sample were in English, Spanish and Vietnamese.

Sampling in the household: Both telephone and web interviews were targeted to a randomly selected, non-institutionalized adults, aged 18 and older, within a randomly selected household. If children lived in the household, and the selected adult served as a parent, guardian or caregiver of these children, a child was randomly selected and the adult was asked to serve as a proxy and respond to questions for that child.

Weighting: Base weights are used to adjust for differential probabilities of selection. The sample design calls for oversampling certain segments of the population and the base weights adjust for this by giving higher weight to those who were under-sampled and lower weight to those who were oversampled. Post-stratification weights correct for differences in response rate by stratum and by specific demographic groups.

Disparities Index: Indicators of social disadvantage and income inequality were selected from the literature and patterns of covariance were examined with principal components analysis to identify a reduced set of variables that best summarized the full set of indicators for our population.

Mental Health Measures: Serious Psychological Distress (SPD) is a non-specific measure of psychological distress that has been psychometrically validated and able to discriminate DSM-IV diagnostic cases from non-cases. SPD is determined using Kessler’s scale of 6 questions (K6). Each question asks about the frequency of symptoms, using one of 5 categories on a 0 to 4 scale. Responses to the six questions are then summed, resulting in scores ranging from 0-24. A K6 score of 13 or greater signifies SPD. Partially imputed values were used to calculate the K6 when a single item was missing. If more than one item was left missing by the respondent then the scale was set to missing. Unimputed values were used to estimate rates of mental health utilization and access measures.