



IMPACT OF HEALTH INEQUITIES IN HOUSTON

Leon Jerrels, MBA, MHA, RN, CPHQ

Director, Quality Improvement

Kelsey-Seybold Clinic



Kelsey-Seybold Clinic (KSC) was founded in 1949 by Dr. Mavis Kelsey in Houston's renowned Texas Medical Center.

More than 500 physicians and allied health professionals practice at 26 locations in the Greater Houston area.

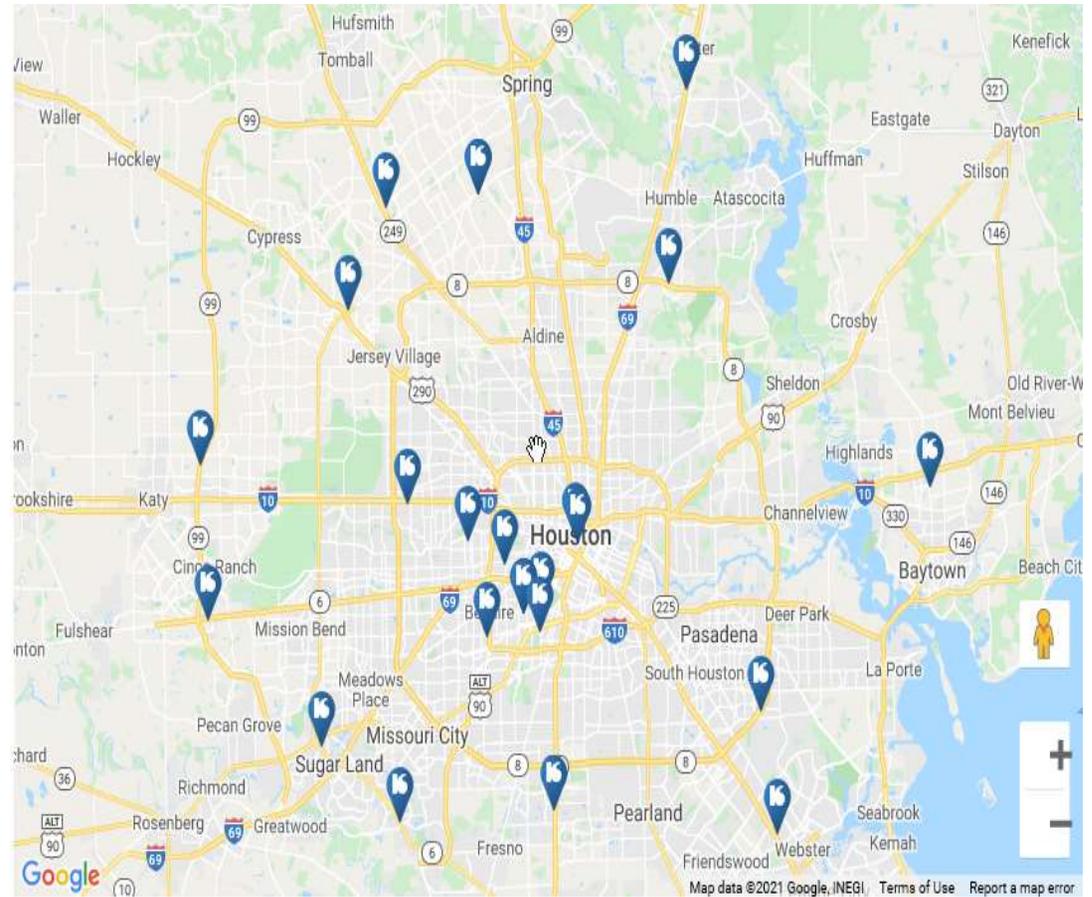
KSC offers quality medical care in 55 medical specialties.

Operates the largest freestanding Ambulatory Surgery Center in the state of Texas .

Offers state-of-the-art Varian TrueBeam and Varian Edge radiation therapy technology at a nationally accredited Cancer Center.

KelseyCare Advantage (KCA), a Medicare Advantage plan offered to Houston-area beneficiaries and affiliated with KSC, has achieved the coveted 5-out-of-5-star rating from CMS for five consecutive years.

WHERE WE ARE



HOUSTON – METROPOLITAN

INDUSTRY SHARE OF METRO HOUSTON EMPLOYMENT

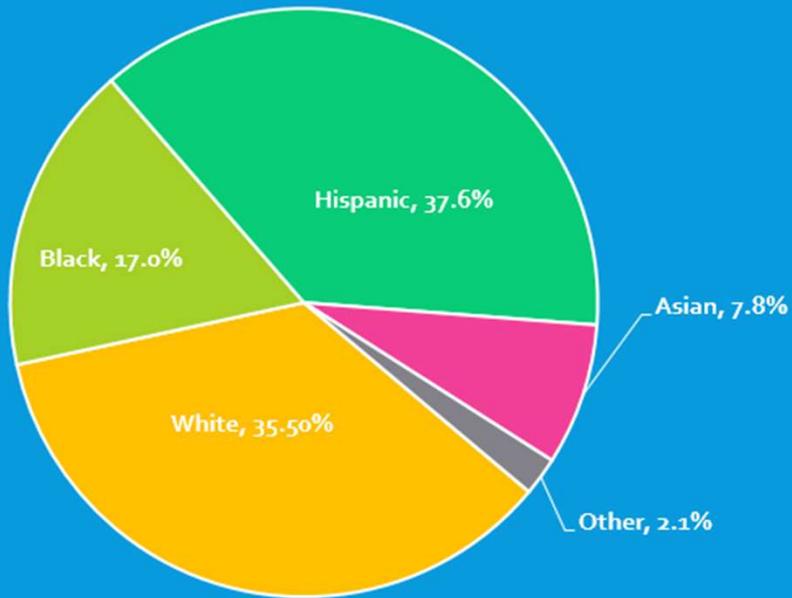
- Trade, Transportation, and Utilities- 19.8%
- Professional and Business Services- 16.5%
- Government- 13.1%
- Education and Health services- 12.7%
- Leisure and Hospitality- 10.4%
- Manufacturing- 7.5%
- Construction- 7.2%
- Financial Activities- 5.3%
- Other Services- 3.8%
- Mining and Logging- 2.7%
- Information- 0.9%

- Metro Houston
 - 7,066,141 residents
 - Fifth most populous metro
- Populations Rankings
 - 4th largest Hispanic
 - 7th largest Black
 - 7th largest Asian
 - 12 largest Anglo

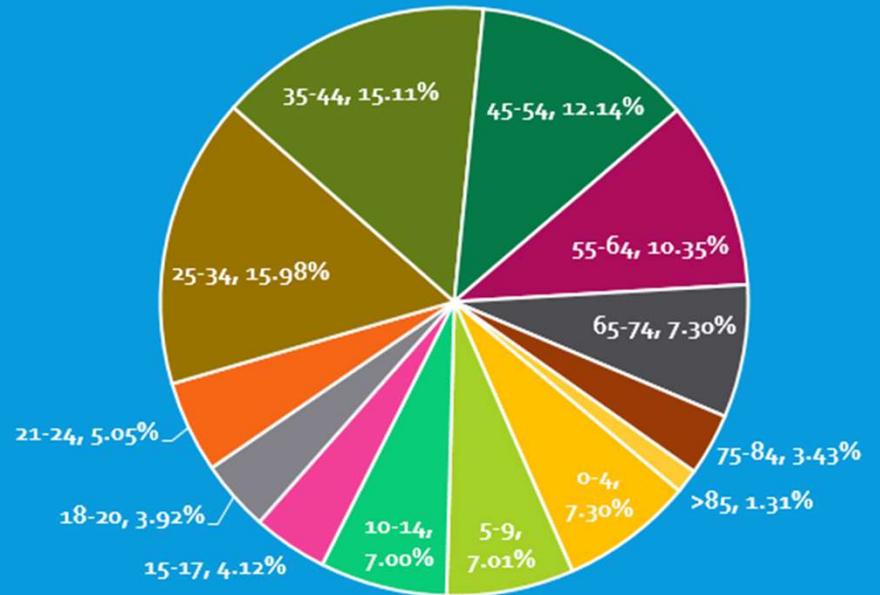


DEMOGRAPHICS

Houston By Race

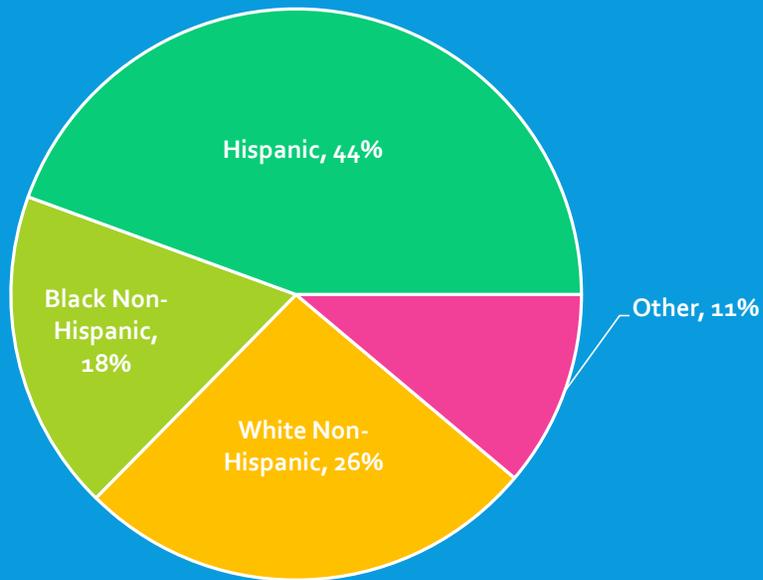


Houston By Age

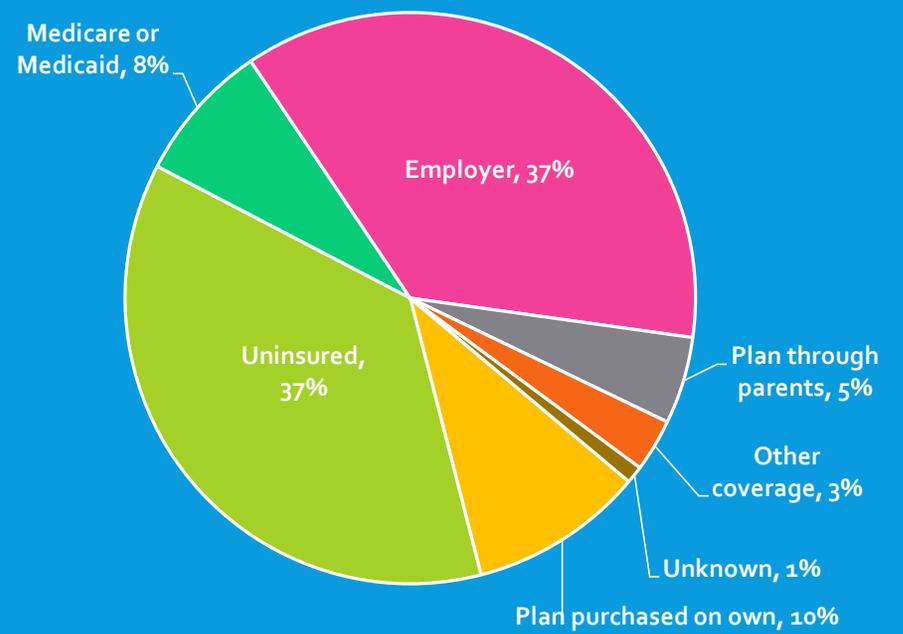


CLOSER LOOK

Essential Workers



Insured Under Age 65



HEALTH DISPARITIES

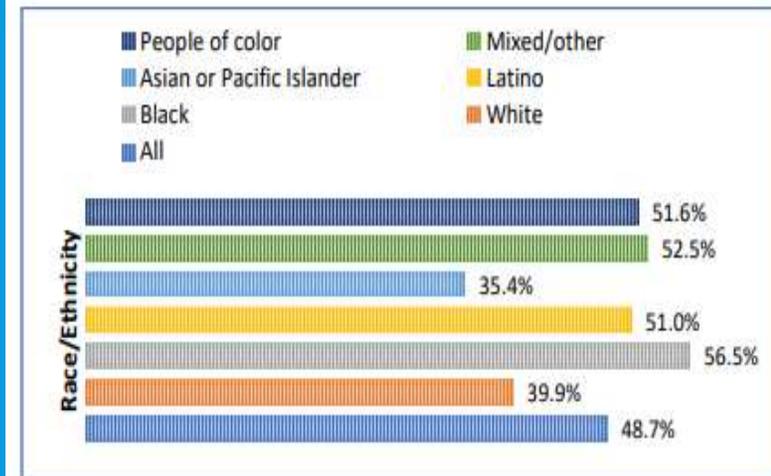
Metro Houston

WHAT IS A HEALTH DISPARITY?

- The U.S. government defines health disparity as “a particular type of health difference that is closely linked with social or economic disadvantage.”
- These disparities negatively impact whole groups of people that already face significantly more obstacles to maintaining good health, often because of specific social or economic factors, such as:
 - Socioeconomic status or income
 - Race or ethnicity
 - Age
 - Sex or gender
 - Geography, eg. rural vs. urban
 - Disability
 - Sexual orientation
 - Immigrant status
 - Religion
 - Mental health status

DISPARITIES IN HOUSTON (UPSTREAM)

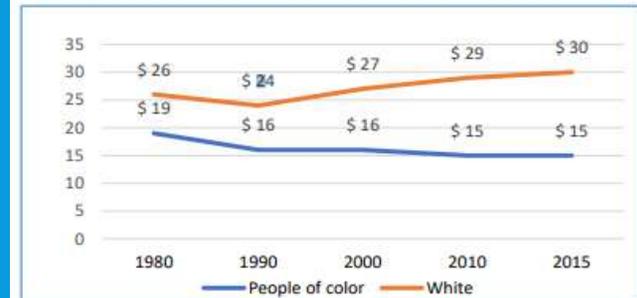
- Demographics
 - The Houston/Harris County population is now a “majority minority” urban area, where no one racial/ethnic group is in the majority.
- Living Conditions
 - People of color face housing challenges, compared to the white population, including: lower rates of home ownership, less access to transportation, and greater exposure to environmental pollution/toxins in and near their residences.
 - The percentage of extremely low-income households increased by 25% from 2000 to 2014, but the number of housing units they could afford remained almost unchanged, pushing families to spend increasing amounts of their incomes on housing.
- Transportation
 - In Houston, 17% of black households do not have access to a vehicle, compared to 5% of whites and 8% of Hispanics.



DISPARITIES IN HOUSTON (UPSTREAM)

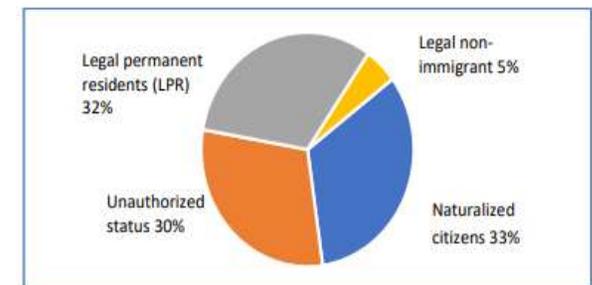
- Environmental Pollution
 - Lead-based paint in older homes is another risk to health, is more common in poorer areas of Houston/Harris County, and has been determined by CDC to be especially dangerous to children.
- Employment and Wages
 - Wage discrepancies are commonly seen by race/ethnicity and gender in Houston/Harris County.
 - The gap in earnings is increasing. In 1980, whites in Houston earned \$7 more per hour than people of color; by 2015, that gap had more than doubled, to \$15 per hour.
- Income Equality
 - Over the past three decades, gains in income and wages have gone largely to the very top earners, while wages and incomes of working class and middle class workers have declined or stagnated.
- Immigration
 - The greater Houston metropolitan area has been rapidly growing, from 6 million in 2010 to 7 million in 2017; immigrants now account for 1.7 million of the total population. The largest group of immigrants, by far, came from Mexico.

Trends in Median Hourly Wage by Race/Ethnicity, Houston TX 1980-2015



Note: Wages are adjusted for inflation

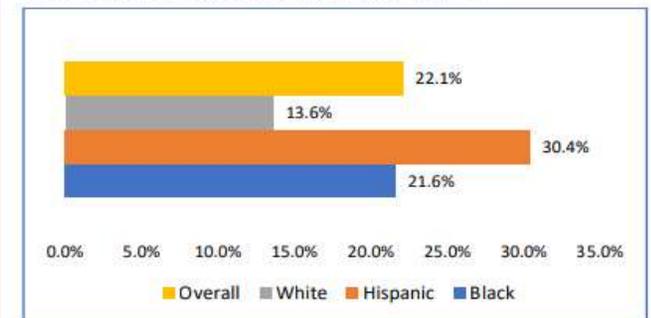
Legal Status of the Foreign-Born Population in the Houston TX Metro Area, 2012-2016



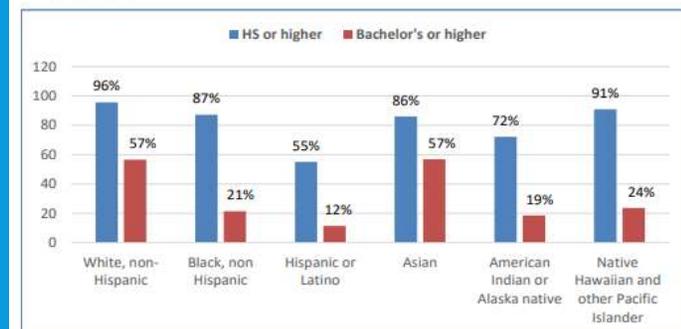
DISPARITIES IN HOUSTON (UPSTREAM)

- Residential Segregation
 - Houston area is the most diverse large metropolitan area in the US and is also one of the most segregated. Residential segregation may be by race/ethnicity or by income, and it is related to income inequality.
- Health Care Access
 - 89% of whites reported they had health insurance, compared to 59% of Hispanics; 30% of Hispanics said they could not see a doctor due to cost in the last year.
- Education
 - In Houston, far more whites (57%) and Asians (57%) have a bachelor's degree, compared to blacks (21%) and Hispanics (12%).

Percentage of Adults Who Reported They Cannot See a Doctor Due to Cost by Race/Ethnicity, Harris County TX 2017



Percentage of Educational Attainment by Race/Ethnicity, Houston TX 2012-2016



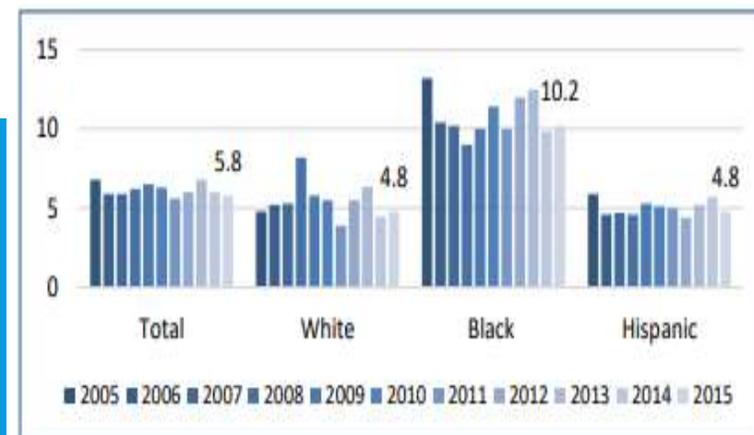
HEALTH BEHAVIORS (DOWNSTREAM)

- Smoking
 - Smoking is most prevalent among those with lower incomes and less education.
- Physical Activity
 - In Harris County, college graduates (87%) and those with higher incomes (92%) were more likely to report leisure time physical activity compared to high school graduates (65%) and those with incomes below \$25,000 (58%). This may be due, in part, to those with more education and higher incomes having better access to recreational facilities and safe places for walking and other outdoor activities
- Violence
 - Deaths from firearms in Harris County have remained between 11.5 and 14.7 per 100,000 during the past 20 years.
 - Firearm deaths were highest among blacks (24.5 per 100,000) in 2017 compared to whites (13.6), Hispanics (8.3) and Asians (6.4).
- Illicit Drugs
 - In Harris County, the rate of accidental drug overdoses has increased 69% since 2008 from a rate of 6.2 per 100,000 in 2008 to 10.5 per 100,000 in 2017.
 - Drug induced deaths in Harris County are highest among the white and black populations, more than double the rate for Hispanics in 2017
- Use of Preventative Services
 - Social/Economic, insurance coverage and education are key driver to the use of some important preventative services : immunizations, mammograms, colorectal cancer screenings and prenatal care

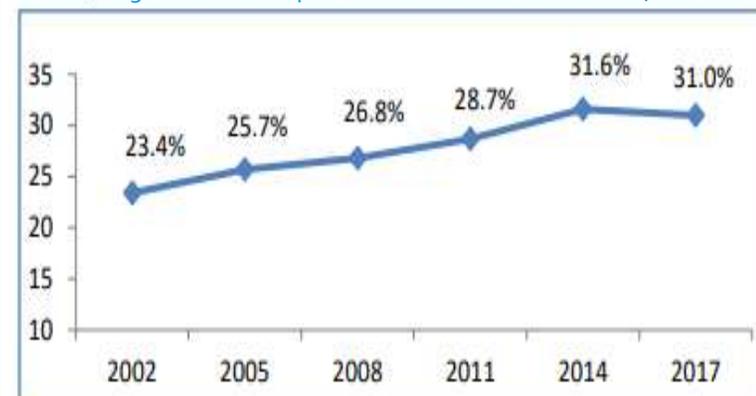
HEALTH OUTCOMES (DOWNSTREAM)

- Infant Mortality
 - Infant mortality is over twice as high among the black population compared to the white and Hispanic populations, for unknown reasons.
- Obesity
 - Obesity increases the risk of many diseases, including heart disease, type 2 diabetes, cancer, hypertension, stroke, liver and gallbladder disease, respiratory problems, and osteoarthritis.
- Disability
 - Disabilities are most common among those who are over 65 years of age, and those with chronic diseases such as obesity, heart disease, or those who have a history of smoking.
 - Disability is highest in Harris County among blacks (12.6%), followed by whites (8.5%), Asians (7.2%) and Hispanics (6.0%).
- Life Expectancy
 - Life expectancy in Houston varies by up to 18 years, depending on the neighborhood one lives in. Residents in wealthy areas live longer.

Infant Mortality Rate by Race/Ethnicity, Harris County, TX 2005- 2015, Deaths per 1,000 Live Births



Percentage of Obese Adults, Houston-The Woodlands-
Sugar Land Metropolitan Statistical Area 2002-2017



MORBIDITY (DOWNSTREAM)

- Communicable Disease
 - Small percentage of Deaths
 - Rates of all the STDs that are reported to the health department have been rising during the past 10 years.
 - Houston/Harris County rates are higher among men (43.7 per 100,000) compared to women (11.5) and among the black population (66.9 per 100,000) compared to whites (12.0) and Hispanics (24.1).
 - Syphilis is higher among males (88.6 per 100,000) compared to females (19.2); and among blacks (129.1 per 100,000) compared to the white (28.2) and Hispanic (44.5) populations.
- Chronic Disease - (Texas BRFSS Survey): Top 5
 - Hypertension-38%
 - Hypertension, or high blood pressure, contributes to stroke, heart attacks, heart failure, kidney failure, and atherosclerosis.
 - Black (38.0%) compared to white (32.5%) and Hispanic (18.9%)
 - Those earning less than \$50,000 per year (30.2%-32.5%) compared to those earning more than \$50,000 (23.5%)
 - Obesity - 32%
 - Obesity among adults in the greater Houston area has risen from 23.4% in 2002 to 31.0% in 2017. Obesity is higher among black adults (47.3%) compared to whites (25.9%) and Hispanics (35.0%) and is higher among those with lower incomes and less education.
 - Arthritis - 17%
 - Depressive Disorders - 12%
 - Diabetes - 10%

-Houston Health 2019

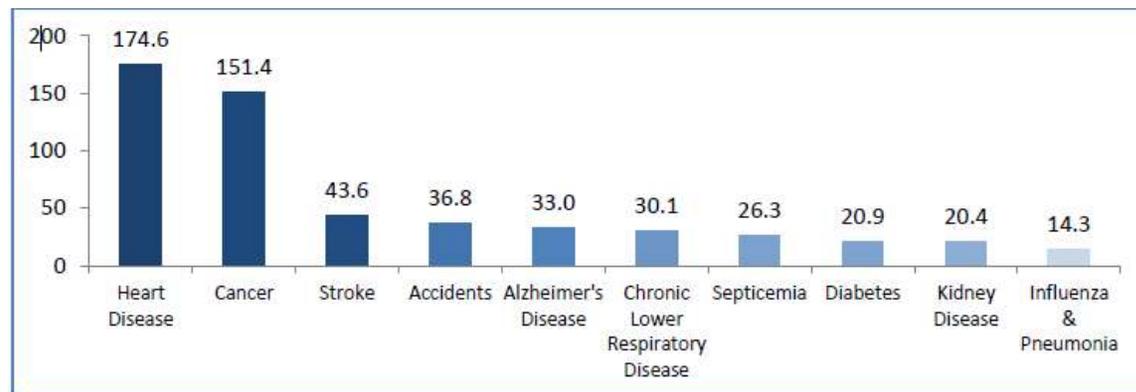
MORTALITY (DOWNSTREAM)

Top 10 Causes of Death

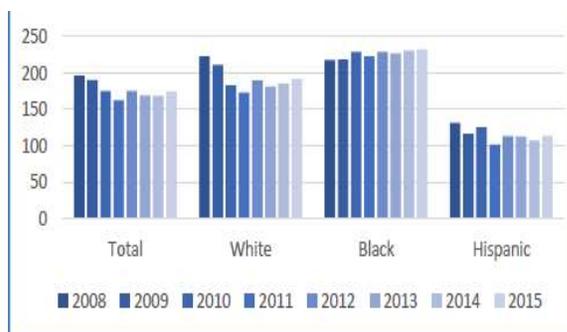
- Heart Disease
- Cancer
- CVD/Stroke
- Accidents
- Alzheimer's Disease
- COPD
- Septicemia
- Diabetes
- Kidney Disease
- Influenza & Pneumonia

-Houston Health 2019

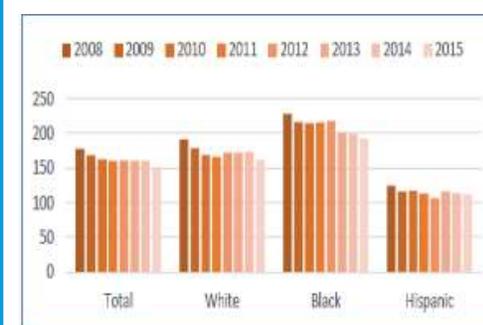
Top 10 Causes of Death



Heart Disease



Cancer



COVID-19 AND HOUSTON

COVID-19 AND HOUSTON

- Texas open-March 2, 2021
 - Level 1 Threat Level
- Covid-19 Stats (Harris County/City of Houston)- 5/9/21
 - Confirmed Cases 395,188
 - Active Cases 8,334
 - Recovered 382,504
 - Deaths 4,331
 - Positivity Rate 9.5%
 - New Case Trend -20.59

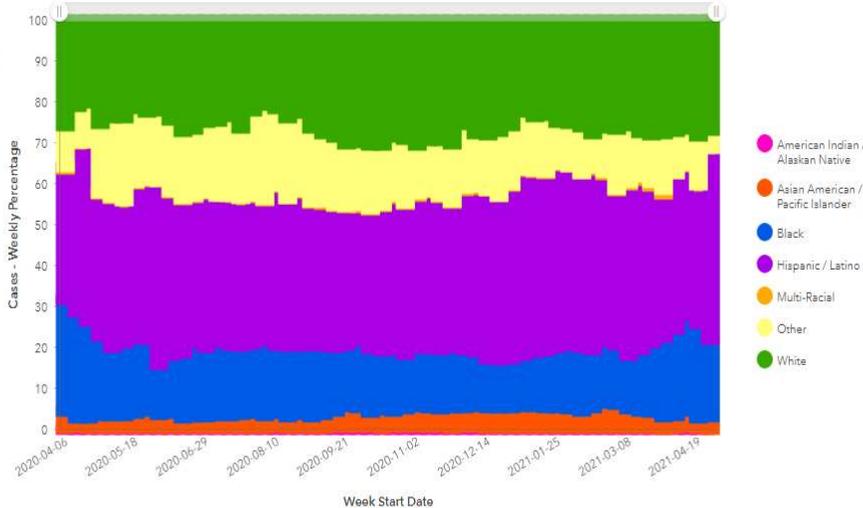
COVID-19 HOUSTON AND PEOPLE OF COLOR

- More than 40% of Houston-area households have lost income as a result of the COVID-19 crisis. And the pandemic appears to be taking a greater economic toll on African American and Hispanic households than white and Asian American households- Rice University's COVID-19 Registry.
- While COVID-19 has affected everyone, people of color, particularly Hispanics, have had the most cases, hospitalizations, and deaths. In Houston and Texas, Hispanics lead in COVID-19-related deaths- Texas Medical Center and Texas Department of State Health Services.
- Researchers found that disparities resulted in 30% of total deaths at the end of September 2020. The report by the Episcopal Health Foundation looked at the effect of health inequities between Hispanic and Black Texans, compared to white Texans, which also accounted for 24,000 hospitalizations for severe COVID-19 cases.
- The rollout of vaccinations has not reflected what we know. Vaccination sites are glaringly sparse in neighborhoods where the pandemic has been most severely felt, and instead are overwhelmingly located in the same westside neighborhoods, as is the rest of Houston's resources.

COVID-19 HOUSTON AND PEOPLE OF COLOR

CASE BREAKDOWN

Percent of Weekly Total COVID-19 Cases by Race/Ethnicity

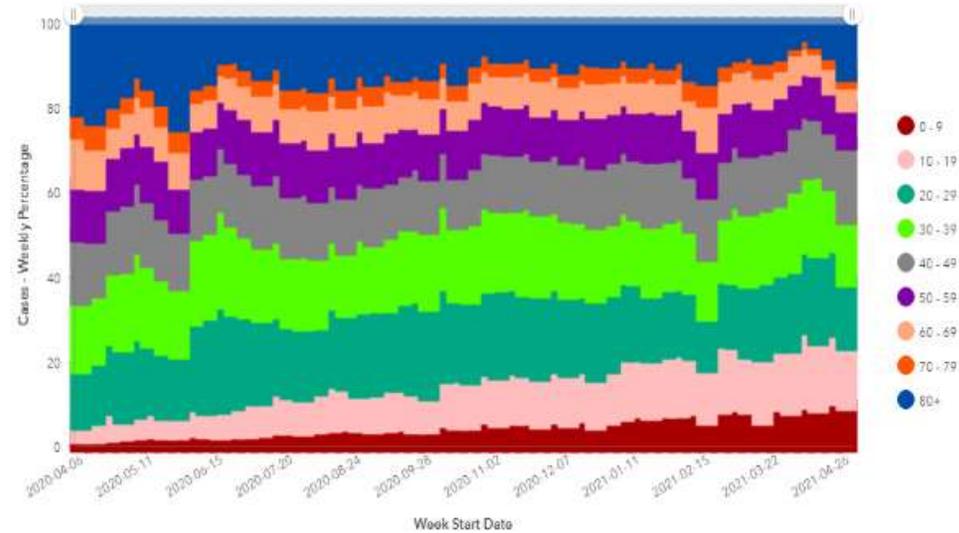


This graph shows the percentage that each race/ethnicity makes up of the weekly total COVID-19 cases reported in Harris County. Data includes reported cases for the entire week starting on the date indicated.

Date Updated: 2021-05-04

Data Source: Harris County Public Health (HCPH), Houston Health Department (HHD)

Percent of Weekly Total COVID-19 Cases by Age



This graph shows the percentage that each age group makes up of the weekly total COVID-19 cases reported in Harris County. Data includes reported cases for the entire week starting on the date indicated.

Date Updated: 2021-05-04

COVID-19 VACCINATION RATES- 12/14/2020 TO DATE

Houston Metro

Race/Ethnicity	Received At Least 1 Vaccine Dose	Fully Vaccinated
Asian	48.8%	36.5%
Black	24.7%	17.1%
Hispanic	29.1%	18.4%
White	38.0%	28.7%
Total Metro* Population: 6,506,668		

* Brazoria, Fort Bend, Harris, and Montgomery Counties

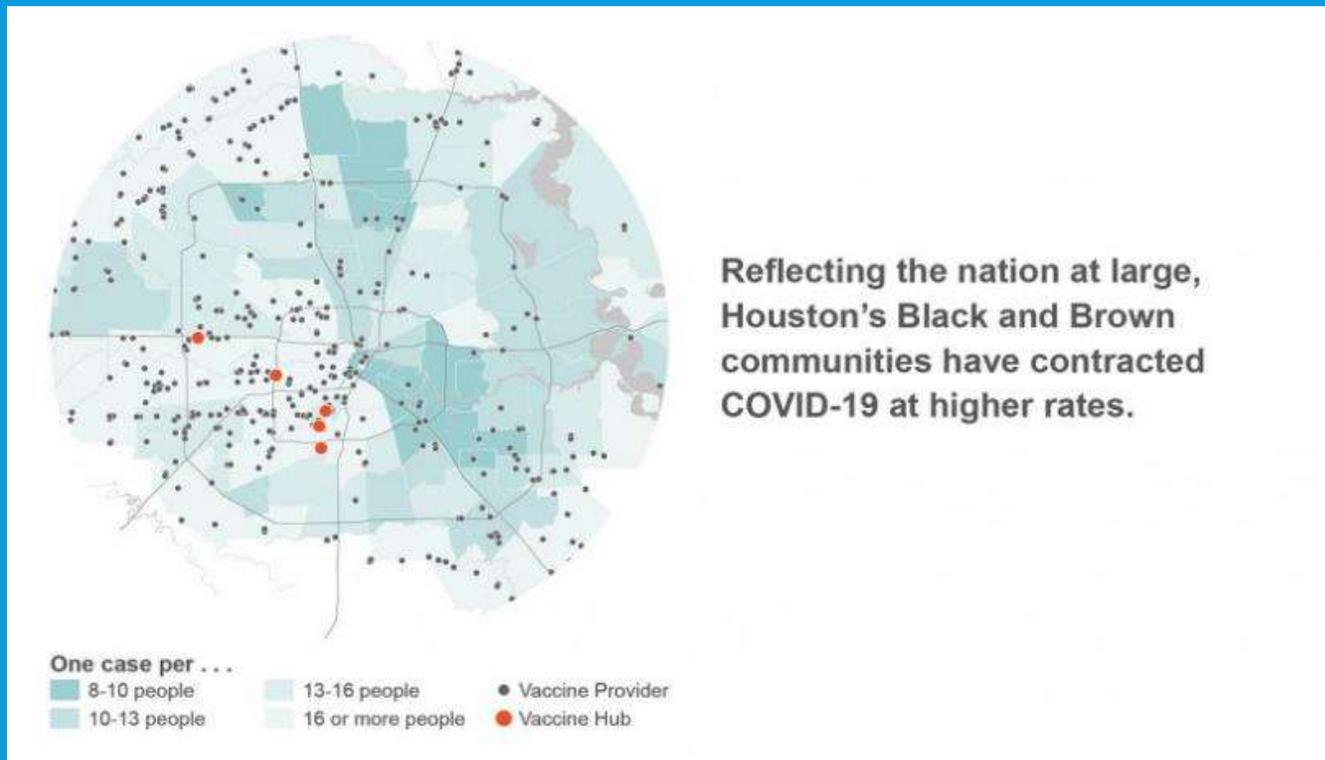
Source: Texas Department of Health and Human Services.
Data up-to-date as of Wednesday, May 5th, 2021.

USA

Race/Ethnicity	Received At Least 1 Vaccine Dose	Fully Vaccinated
Asian	28.4%	20.3%
Black	19.9%	15.5%
Hispanic	21.1%	14.3%
White	28.8%	24.3%
Total US Population: 332,217,183		

Source: Centers for Disease Control.
Data up-to-date as of Monday, May 10th, 2021.

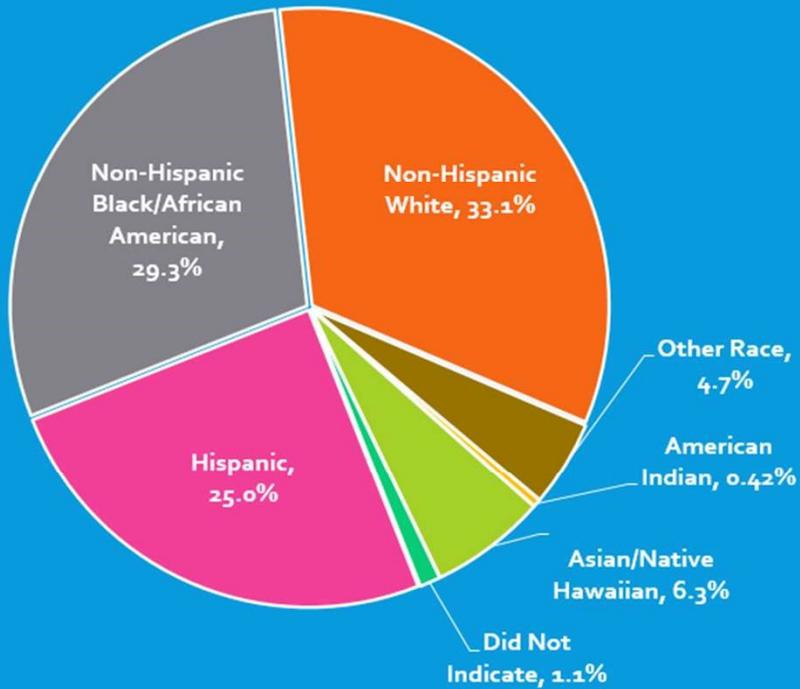
COVID-19 VACCINE LOCATIONS



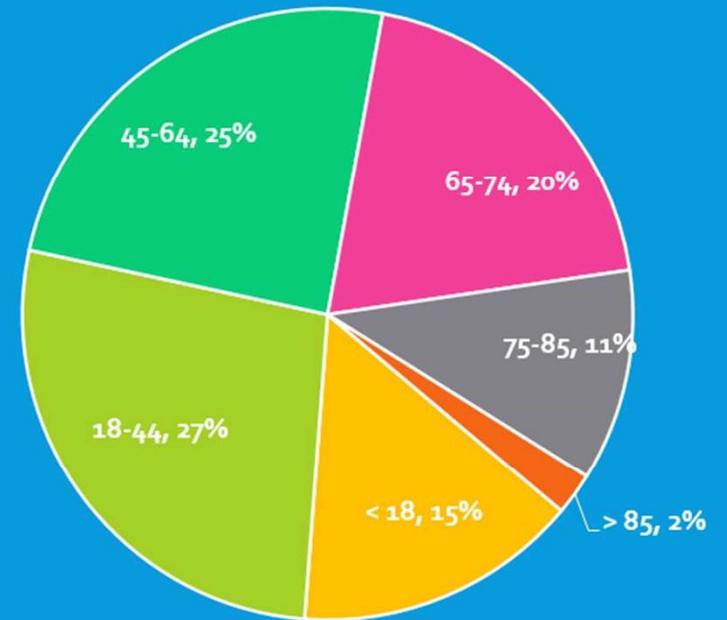
COVID 19 - KELSEY-SEYBOLD

OUR POPULATION

Race/Ethnicity



Age

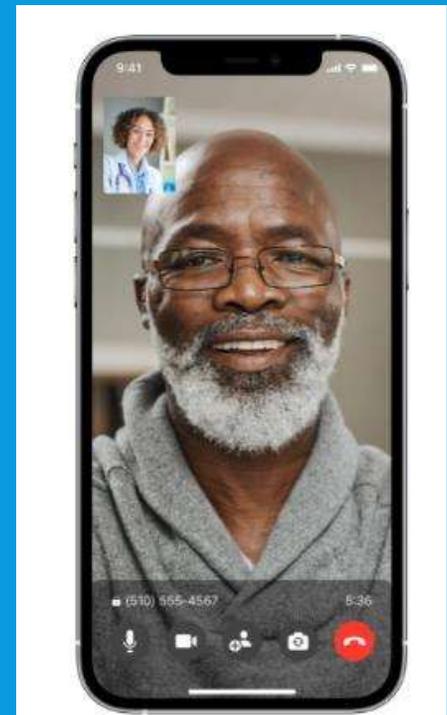


COVID-19 TESTING AND POSITIVE RATE

Race/Ethnicity	Tested Rate	Positive Rate
American Indian	23%	2.67%
Asian/Native Hawaiian	18%	1.97%
Did Not Indicate	8%	2.38%
Hispanic	27%	5.60%
Non-Hispanic Black/African American	23%	3.39%
Non-Hispanic White	28%	3.43%
Other Race	20%	2.66%
Grand Total	25%	3.82%

ADAPTING TO COVID-19

- March 9, 2020
 - Switch to 90% Virtual Visits
 - 15% previously
 - Goal to maintain a 20% level at our normal
- Halted patient outreach for preventative care
- Struggled to find PPE and thermometers
- Restricted in-person visits
 - All upper respiratory virtual
- Opened Care
 - Open COVID-19 assessment to all patients regardless of history
- Virtual Health Issues
 - Market outreach to patients explaining and providing tip sheets
 - Re-purposed staff to man the help line
 - Pre-Calls to patients
 - Acquired third-party vendor to complex issues - Doximity
- COVID-19 Needs Assessment
- Struggle to get vaccine initially



WHAT WE ASSUME

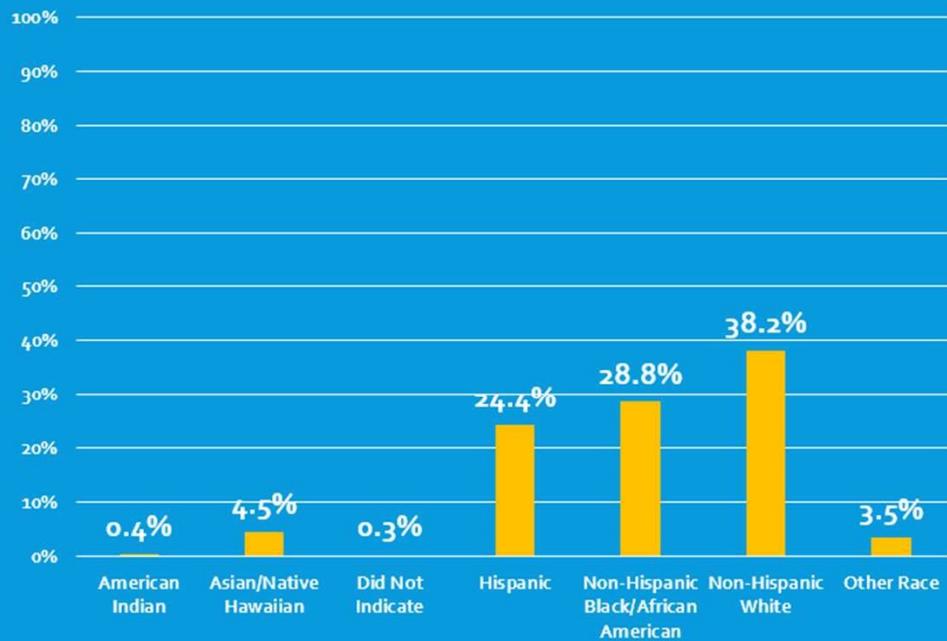
- Everyone has internet-
 - 80% households have internet- Census
 - “This pandemic has highlighted the importance of quality internet service particularly for those vulnerable populations who must stay at home to stay safe,” said Mayor Sylvester Turner.
 - **December 3, 2020** -- City Council recently approved a \$624,960 program to provide internet vouchers to low-income Houstonians.
- Everyone has a smartphones
 - Mobile Market reports in
 - 1 in 3 Houstonians have a smartphone
 - 64% have a household income of \$75,000 or more
 - 15% 55+
 - \$550.00 Average price of a Smartphone.

WE CONTINUE TO ASSUME

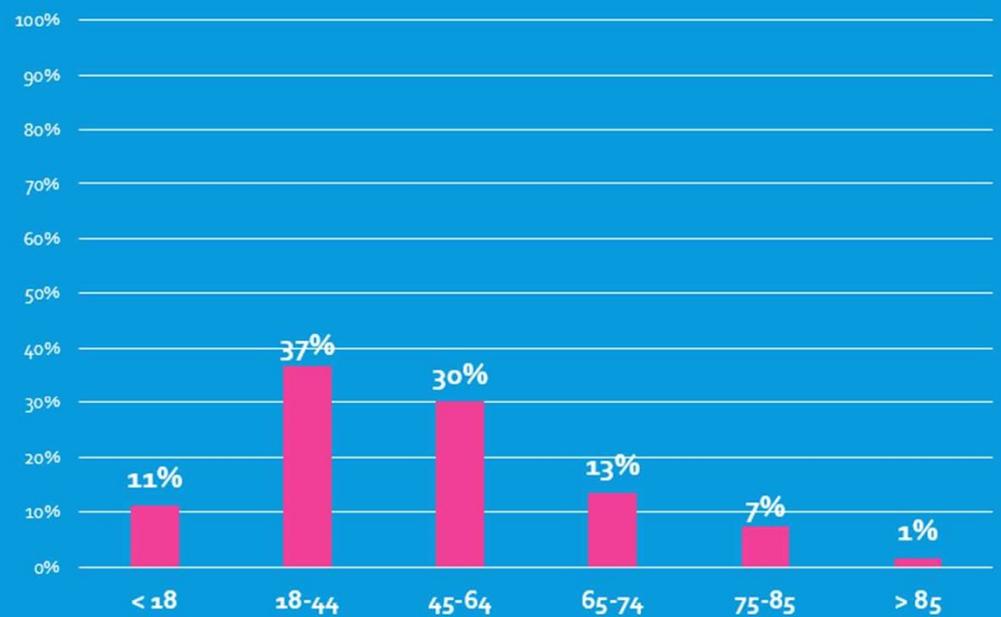
- Everyone wants to do virtual visits-
 - Recent research and anecdotal evidence point to significantly lower levels of telemedicine usage among Black and Hispanic patients, particularly those over age 65, as compared with white patients, since the pandemic's onset. -Journalist Resources
 - Access to technology
 - Variations in health and digital literacy
 - Mistrust of the health care system
 - Skepticism about health technology
 - The study found that older age, non-English as the patient's language preference, Asian race, and Medicaid were associated with fewer telemedicine visits.
 - Additionally, older age, female sex, Black race, Latinx ethnicity, and lower household income were linked with lower use of video for telemedicine visits. -Mhealthintelligence

VIRTUAL VISITS

Race - 2020

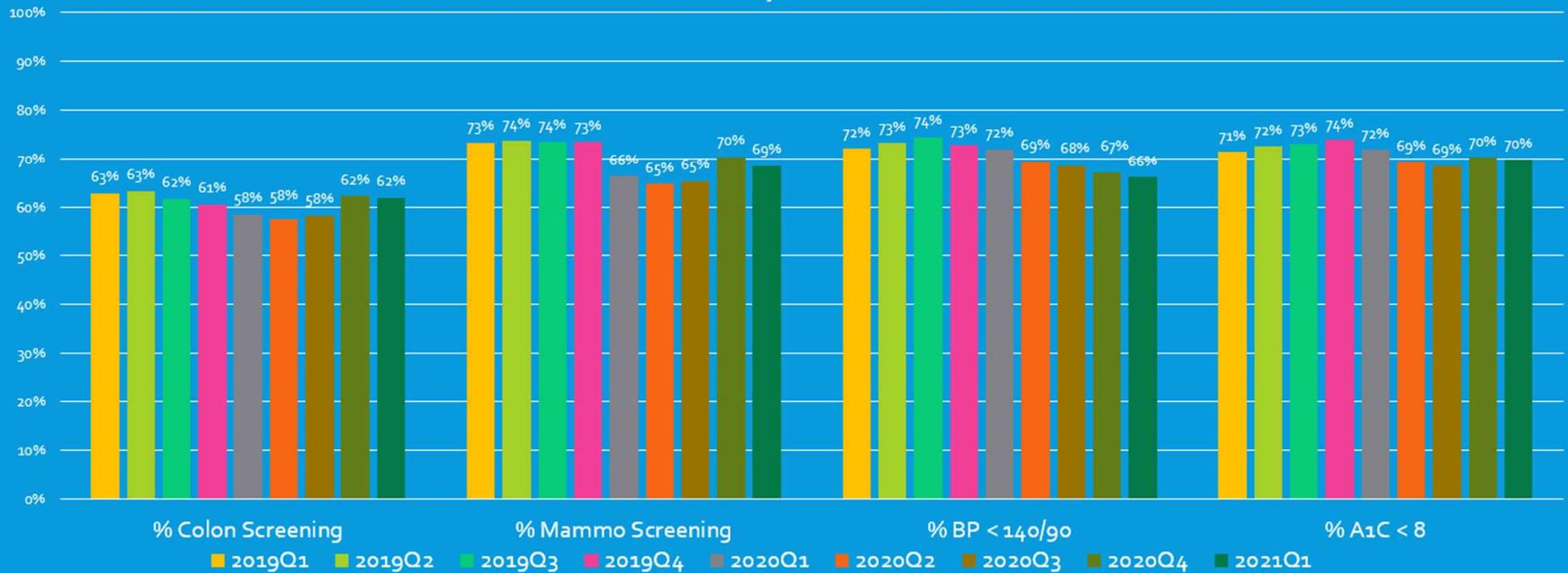


Age - 2020



CHRONIC CARE METRICS

Quality Metric Rates



CHRONIC CARE BREAKDOWN

Race/Ethnicity	Colon Screening %	Mammo Screening %	BP<140/90 %	A1C<8 %
Non-Hispanic White	67%	71%	69%	74%
Non-Hispanic Black	67%	76%	65%	71%
Hispanic/LatinX	60%	72%	67%	64%
Asian/Native HI	65%	76%	71%	77%
American Indian	58%	68%	71%	77%
Other	55%	69%	67%	70%

OPERATIONAL CHANGES

- Population Health
 - Traditional Case Management Population
 - High minority population
 - Multidisciplinary Team
 - Physician
 - Nursing- NP, RN & LVN
 - Social Work
 - Pharmacy
 - Mobile extension of the Clinic
 - Increased and maintain constant communication with patients
 - Grand Pad
 - Courier Delivery for those without reliable internet or technology



OPERATIONAL (CONTINUED)

- Virtual Programs
 - Hypertension Clinic
 - Pharmacist Driven
 - Expanded to all African Americans
 - Strong focus on Self- Monitored BP
 - Prediabetes-
 - 4 Part Zoom Programs
 - Increased focus outreach to African American and Hispanic populations
- Colorectal Cancer Screening
 - FIT Kit mail out

LOCAL GOVERNMENT COLLABORATION

- We joined the City of Houston to develop an informational campaign to reach communities of color across the City of Houston who have been hit disproportionately hard by COVID-19, particularly in the African American and Hispanic communities.
- As the availability of an approved vaccine for COVID-19 approached, it was essential to address the concerns many people of color have about the vaccine due to various historic and cultural factors.



COMMUNITY PUBLICATIONS



DN Health

A DEFENDER AND KELSEY SEYBOLD CLINIC ALLIANCE

COVID-19 vaccine is safe, effective

BY VICTOR SIMMS, M.D., M.P.H., F.A.C.P., AND FELICIA JORDAN, M.D., F.A.C.P.

The world has been waiting for a COVID-19 vaccine in the hope that it would bring an end to the pandemic. Now that the FDA has approved emergency-use authorization for a limited number of vaccines in the U.S.A., misconceptions, distrust, and skepticism are making the rounds. We

hope to put these to rest by presenting factual information for you to consider when deciding whether to get the vaccine when you have the chance to.

THE VACCINE IS SAFE

The COVID-19 vaccine has passed human trials and is safe. While it's understandable that the speed at which the vaccine was developed and tested might be concerning, the risks of not getting vaccinated are greater

than the risks of getting vaccinated. African Americans have some of the highest death rates from COVID-19. This means deciding not to take a vaccine that could protect you and others has major consequences.

It's important to note that COVID-19 is a member of the coronavirus family, which contains numerous strains of the virus that have been studied. The scientists who developed the COVID-19 vaccine didn't start from scratch. They used research and data going back years as a foundation. Billions of dollars were poured into the development of the COVID vaccine, making it possible to significantly speed up the process.

SIDE EFFECTS ARE MILD TO MODERATE

Side effects are possible with any vaccine, but severe allergic reactions to the COVID-19 vaccine

most of which occur after the second injection. Anyone with a history of anaphylactic reaction should consult with their doctor about whether to receive the COVID-19 vaccine.

YOUR DNA ISN'T ALTERED

There's also a misconception the COVID-19 vaccine will alter DNA. The fact is messenger RNA isn't able to alter a person's genetic makeup because it does not enter the nucleus of the cell where DNA is kept.

THE VACCINE WON'T GIVE YOU THE VIRUS

Neither the Pfizer nor the Moderna vaccines, or others currently in development, contain the live virus that causes COVID-19, which means getting the vaccine won't give you the virus.

THE VACCINE IS EFFECTIVE

Based on clinical trials, the



FROM THE DOC



FROM THE DOC

DN Health

A DEFENDER AND KELSEY SEYBOLD CLINIC ALLIANCE

Stay on top of your health

BY JASMINE PETTIFORD, M.D.

Maintaining appointments and seeking care for non-COVID-19 healthcare is especially important for anyone with ongoing medical issues that demand regular monitoring, such as diabetes, heart failure, or high blood pressure. These kinds of medical problems put you at a higher risk for complications if you get COVID-19.

In March, medical practices like Kelsey-Seybold and hospitals stopped on-site non-urgent and elective medical procedures and preventive visits as directed by state and local officials. Kelsey-Seybold continued to



FROM THE DOC

PATIENTS LIKE VIDEO VISITS

For patients who prefer Video Visits, they offer the convenience of staying on top of your health from your home or workplace. Just as with an on-site appointment, you schedule your Video Visit ahead of time – through mykelseyonline.com or the MyKelseyOnline app or by calling 713-424-0000. When it's time for your visit, log on through the MyKelseyOnline app on your phone or digital tablet to begin your visit.

symptoms you're experiencing and hold the camera up to show your provider:

- A rash
- A cut
- Breasting
- Swelling, or
- Other medical concerns

Your provider may:

- Guide you on how to check your blood pressure and sugar or take your own pulse
- Prescribe medications
- Order tests

DN Health

A DEFENDER AND KELSEY SEYBOLD CLINIC ALLIANCE

Flu vaccination: more important than ever

BY SHELDON GAINES, M.D.

With the COVID-19 pandemic still in full force, getting your annual flu vaccination may not be top of mind, but it should be this year to help prevent a "tridentemic" that could overwhelm our hospitals and communities.

Without a vaccine for COVID-19, there is a real possibility the U.S. could be overtaken by both the pandemic and a severe flu season, something that could be detrimental to both our healthcare system and our economy.

THE FLU SHOT & COVID-19

With emergency rooms, hospitals,



FROM THE DOC

"We offer the flu vaccine at 24 clinic locations. Schedule your visit today."

testing because flu and COVID-19 share symptoms, including fever, cough, headaches, and muscle aches.

According to the CDC, influenza cases reached over 40 million last year, with 780,000 hospitalizations and upward of 60,000 deaths. More people receiving the flu vaccine – a safe and proven vaccine – could significantly reduce influenza-related illness and the medical care needed in response to it.

While the flu shot will not prevent COVID-19, coming down with both viruses at the same time could be devastating to you.

the flu vaccine would "at least blunt the effect of one of [these] two potential respiratory infections."

In the event that you still contract the flu, having had the vaccine may help reduce its severity if you are co-infected with another virus. Additionally, getting the flu shot does not increase your risk of getting COVID-19.

THE BOTTOM LINE

This season, it's more important than ever to protect yourself and your loved ones by getting the flu vaccine. There are three options for receiving the vaccine:

- The traditional flu shot for those age

COMMUNITY RADIO

Informational

Kelsey-Seybold Clinic
Changing the way health cares: **Univision Radio 0:60**

["TESTIMONIAL"
RADIO 104.9-PM
START: **APRIL 04 2021**

Script: Renzo Heredia | Juanito Perry

INTRO (Estándar)
RENZO Heredia: Este *Minuto Medico* traído a ustedes por la Clínica de KELSEY-SEYBOLD.

RENZO:

Hey - RENZO HEREDIA, here!
For the past ten years, you've heard me talk with the doctors I know and trust - the doctors at Kelsey-Seybold Clinic - so, I assure you that Kelsey-Seybold is leading the way in healthcare and embracing our Hispanic community with many bilingual doctors that know our language - and understand our culture.

Until you get your vaccine, Kelsey-Seybold reminds you to continue wearing your face-mask - practice social distancing and stay away from crowds - and if you're feeling sick, call Kelsey-Seybold's contact Center at 713-442-8482 and schedule an in-person appointment or Video Visit. [break] That's **713-442-8-4-8-2**.

TAG - **Updated TAG:**
"Due to limited supply, eligible patients can ONLY schedule a COVID-19 vaccination at Kelsey-Seybold after first receiving a phone - text - or email notification to do so. We greatly appreciate your understanding. Visit **Kelsey dash**



Testimonials

Kelsey-Seybold Clinic
Changing the way health cares: **Univision Radio 0:60**

["TESTIMONIAL: VIRTUAL HEALTH"
RADIO 104.9-PM / KOVE 106.5-PM
RECORDED: APR 02 2020
START: MAY 11 2020

Script: Marie Barden | Renzo Heredia | Juanito Perry

INTRO (Estándar)
RENZO Heredia: Este *Minuto Medico* traído a ustedes por la Clínica de KELSEY-SEYBOLD.

RENZO: [To listeners]
RENZO HEREDIA, here with my friend **MARIE** (BARDEN), who had a VERY POSITIVE experience using Kelsey-Seybold's **VIRTUAL HEALTHCARE** option.
Marie, what is **VIRTUAL HEALTHCARE**?

MARIE: It's consulting with your healthcare team - without going to a clinic.

RENZO: But how?

MARIE: By using your Smartphone - iPad - or telephone - it's easy - I had a **VIDEO VISIT** with a Family Medicine doctor at Kelsey-Seybold's Tanglewood Clinic without going there.
I called the Kelsey-Seybold Helpline - they told me how to do it - I then had my **VIRTUAL VISIT** with a doctor - and she was just fabulous.

SO WHAT NOW?

- COVID-19 does not affect everyone equally and has exposed inequities in the health system.
 - Who got tested more
 - Who has been vaccinated more
 - Who has had more hospitalization and deaths
- This is worldwide, not just in the USA.
- Population Health and Providers - Social determinants of health.
- Stop writing dissertations on the problem and develop solutions