

Mount Sinai

MEDICAL CENTER

2020

Community Health Needs Assessment And Implementation Strategy



Mount Sinai Medical Center

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Executive Summary

Methodology

The report includes statistical data and scholarly opinions from federal, state, and local government health agencies, private organizations and community stakeholders about the community health needs in the Miami Beach community. Additional input was sought from local health experts and people representing the broad interests of the community.

Mission

“To provide high quality health care to our diverse community enhanced through teaching, research, charity care and financial responsibility.”

The year 2020, was a challenging year due to the COVID-19 Pandemic. Healthcare organizations quickly reevaluated how to safely deliver healthcare. The new business model forced the temporary halt of elective procedures and drove patients and doctors to communicate via telemedicine. The forced quarantine of all Americans brought about a host of healthcare related challenges.

During this time, Mount Sinai was on the frontline offering COVID testing/screenings at our three emergency rooms as well as treating COVID admissions. Once the COVID vaccine was available, Mount Sinai was quick to create a vaccine clinic to offer vaccines beginning with frontline workers and first responders, than expanding to the community.

Mount Sinai is one of Florida’s original statutory teaching hospitals providing the next generation of health care providers. Each year, Mount Sinai annually invests more than \$34 million in its teaching programs to train approximately 190+ residents and fellows to be doctors in 17 medical specialties. On average, Mount Sinai also trains 200+ nursing students, 470+ undergraduate medical students and 150+ allied health students for health care professions.

Defining the Service Area

Mount Sinai is the only hospital and emergency service provider on the barrier islands of Miami-Dade County. These are 32 manmade islands, which total 10.5 square land miles. The city of Miami Beach is the largest Census Designated Place (CDP) on the Northeastern Barrier islands.

Demographic Summary

Population

Miami-Dade County’s population is 2,709,464; of this total, 90,108 are within the City of Miami Beach.

Gender

The primary service area is comprised of 52% males and 48% females. This is similar to the Miami-Dade County composition of males (49%) and females (51%).

Age

The primary service area is an older population. The median age is 41.4 years old. This is slightly older than the County and national median age. The significance of this is that disease related death increases with age.

Race & Ethnicity

The primary service area's residents are 56.7% Hispanic or Latino and 43.3% non-Hispanic or Latino. Of the non-Hispanic residents, 82.3% are white, 7.5% are black, and 10.2% are all other races. In Miami-Dade County, 67.8% of the residents are Hispanic or Latino and 32.2% are non-Hispanic or Latino, with non-Hispanic being 43% white, 47.1% black, and 9.9% all other.

Data Assessment

The community health priorities presented are based on an analysis of demographic, environmental, statistical, and behavioral public health data. We prioritize the conditions as below:

Leading Causes of Disease-Related Death Access to Care Priorities

- Heart Disease
- Cancer
- Mental Wellbeing/Behavioral Health
- Alzheimer's Disease

Initiatives/Vision/Implementation Strategies

Mount Sinai is committed to receiving input to better assess community health needs. In an effort to align our services with community needs, Members of the Mount Sinai team either participate in or are board members of various city committees, such as the City of Miami Beach, Senior Affairs Committee.

Feedback from these committees, communications with key community leaders and awareness of community as well as national healthcare trends play a strong role in formulating Mount Sinai's vision.

Public Access and Community Comment on this Health Needs Assessment

This report will be widely available on www.msmc.com. Public comment can be addressed to the Mount Sinai Medical Center, 4300 Alton Road, Miami Beach, Florida 33140.

I. Methodology

The purpose of this report is to comply with 501(r) of the Internal Revenue Code by providing a Community Health Needs Assessment for Mount Sinai Medical Center of Florida, Inc.

The report includes:

- A description of the mission of Mount Sinai Medical Center;
- A description of the community served by Mount Sinai Medical Center; and
- A description of community health needs identified through an assessment of statistical data from generally available national and local public health data that represents the community served by Mount Sinai Medical Center.

Statistical data and scholarly opinions referenced in this report include, but are not limited to, the following sources:

Centers for Disease Control & Prevention National Center for Health Statistics
U.S. Census Bureau
Agency for Health Care Administration
Florida Department of Health
Health Council of South Florida
Miami-Dade County Health Department Florida Hospital Association
International Agency for Research on Cancer – World Health Organization

II. Mission

Mission Statement:

To provide high quality health care to our diverse community enhanced through teaching, research, charity care and financial responsibility.

Mount Sinai Medical Center is South Florida's largest independent, not-for-profit teaching hospital with 664 licensed beds and over 4,300 employees.

Mount Sinai Family:

Total Employees	4,300+
Physicians	700+
Residents and Fellows	190
Undergraduate Medical	470
Allied Health Professionals	150
Volunteers	380

In addition to providing acute and emergency care, Mount Sinai has the following service lines:

- Cardiology
- Cardiac Surgery
- Vascular Surgery
- Interventional Radiology
- Urology
- Cancer Care
- General Surgery
- Orthopedics
- Obstetrics & Gynecology
- Neonatology
- Neuroscience
- Rehabilitation
- Behavioral Health
- Gastroenterology
- Pulmonary
- Memory Disorders & Alzheimer's

Mount Sinai's satellite locations provide freestanding emergency visits (Aventura, Hialeah), outpatient services and physician office visits.

Mount Sinai Satellite Locations:

Aventura	Emergency, Cancer Care & Diagnostic Center, Primary & Specialty Care
Coral Gables	Primary & Specialty Care
Hialeah	Emergency, Primary & Specialty Care
Key Biscayne	Primary & Specialty Care
Key West	Cardiology
Marathon	Cardiology
Midtown	Primary & Specialty Care
Miami Shores	Primary & Specialty Care
Skylake	Primary & Specialty Care
Sunny Isles Beach	Primary & Specialty Care

Training Tomorrow's Medical Professionals

Mount Sinai has a rich academic history. Mount Sinai became a teaching hospital in 1953, when it established its first medical residency program. Today, it is one of a select few original statutory teaching hospitals in the state of Florida helping to assure that our community has talented, well-trained doctors now and in the future. We bring together the best and brightest minds in medicine, creating a challenging environment where emerging doctors are trained by faculty who are well versed in the latest medicine based on the most current scientific data. Our academic mission attracts leaders in all fields and specialties to our medical center and develops dedicated new doctors with diverse backgrounds and skills who often stay to serve our region.

Residency Programs

Anesthesiology	Podiatric Medicine and Surgery
Emergency Medicine	Primary Care
Internal Medicine	Psychiatry
Obstetrics and Gynecology	Radiology
Pathology	Surgery
Pharmacy	Urology

Fellowship Programs

Advanced Emergency Medicine	Cardiology
Ultrasound	Interventional Cardiology
Breast Imaging	Surgical Pathology

Clinical Trials

Finding safer, more effective treatment options for all forms of disease is a primary focus of Mount Sinai's mission. Participation in clinical trials allows Mount Sinai to offer the most advanced care to patients. Studies currently underway include:

- Oncology Research
- Alzheimer's Research
- Cardiology Research
- Thoracic & Cardiovascular Surgery Research
- Interventional Radiology Research
- Interventional Neuroradiology Research

III. History:

Incorporated in 1946 and opened in 1949, Mount Sinai was founded by a group of philanthropists and early civil right leaders to provide medical assistance and training to all people regardless of race, creed, or nationality. It has grown from a small 55-bed community hospital to a comprehensive not-for-profit academic medical center with locations in five municipalities.

The first Mount Sinai Hospital was briefly located in South Beach before moving to the site of the iconic Jazz Age Nautilus Hotel built by Miami Beach developer Carl Fisher. The Nautilus had been seized by the US Army Air Corp during World War II for use as a hospital and was “government surplus” property. It was quitclaim deeded to Mount Sinai by the City of Miami Beach in 1949. On December 4, 1949, Mount Sinai Hospital of Greater Miami opened.



FIGURE 1 (BILL, 2016)

In 1968, the original structure that had been the Nautilus Hotel was demolished to make way for a more modern medical facility. This was the start of the footprint for Mount Sinai Medical Center as seen today.



Location & Facility

Mount Sinai's main campus, offering inpatient, outpatient, and emergency medical services, is located at 4300 Alton Road, at the intersection of Ed Sullivan Drive and Alton Road, near the terminus of the Julia Tuttle Causeway-Interstate 195. The Main Campus consists of 18 buildings with floor space that measures 1,400,000 gross square feet.

In conjunction with the City of Miami Beach and the State of Florida, Mount Sinai completed a \$275 million project to bring emergency services and upgraded disaster response services to the beach. The Skolnick Surgical Tower and Hildebrandt Emergency Center opened in February 2019.



The Skolnick Surgical Tower includes 12 state-of-the-art operating rooms, which provide patients with access to new and innovative lifesaving procedures. The surgical suites are located on the second floor of the tower, while the mechanical operations are located on the third floor. This design relocates critical services above the floodplain for the

special hazard flood zone. The raised height will help to provide emergency services for the state's second largest tourism area, which is also a high-velocity hurricane zone.

The Hildebrandt Emergency Center is 40,000 square feet with more than 50 treatment rooms. The facility can accommodate 100,000 patient visits.

The space also includes a City of Miami Beach Command Center and critical operations hub for activation during times of emergency. The Command Center will provide joint emergency operations for the city staff, police, fire and medical staff during a declared community crisis.



IV. Primary & Secondary Service Areas

FIGURE 2

Mount Sinai is the only hospital and emergency service provider on the barrier islands of Miami-Dade County. These are 32 manmade islands, which total 10.5 square land miles. The city of Miami Beach is the largest Census Designated Place (CDP) on the Northeastern Barrier islands. The main barrier island is separated from the Miami mainland on the west by up to three miles of Biscayne Bay; bordered on the east by the Atlantic Ocean; the south by Government Cut Canal; and the north by the Miami-Dade County line.

Northeastern Barrier Island Municipalities

Miami Beach
North Bay Village
Surfside

Bay Harbor Islands
Sunny Isles Beach
Indian Creek

Golden Beach
Bal Harbor
Miami (island)



FIGURE 3

Mount Sinai defines its primary and secondary service areas by the following zip codes.

Primary Service Area:

33139, 33140, 33141, 33154

Secondary Service Area:

33127, 33138, 33139, 33142, 33147, 33150, 33160, 33161, 33162, 33179, 33180, 33181

2019 Population by Service Area

Service Area	2019 Population
Primary	113,767
Secondary	461,375
Tertiary	2,200,076
Other Florida	39,025,945
Grand Total	41,801,163

Table 1. Cubit (US Census Bureau)

Facility Access: Causeways

Five east-to-west vehicular causeways and bridges connect the islands to the city of Miami. Two of these causeways, the Broad Causeway and the Venetian Causeway, have tolls. The Julia Tuttle Causeway has an average daily two-way traffic count of 128,500.¹ It is a multi-lane interstate connecting residents, visitors, and employees between Miami and Miami Beach. Mount Sinai's Main Campus is located at the terminus of the Julia Tuttle Causeway and Interstate 195.



Emergency Services and Disaster Response

The island geography and causeway vehicle access coupled with the area's international popularity emphasizes the responsibility for Mount Sinai's role in the first response and emergency management networks for the island communities.

Mount Sinai acts as a medical management disaster shelter for oxygen and electric dependent residents, including those in intensive care that cannot evacuate. Mount Sinai completed installation of 12 new dual-fuel generators in the Energy Center, which will supply critical power to the Medical Center.

The facility remains accessible during times when bridges are in lock down by providing safe helipad service and access by boat. Mount Sinai also serves as a national stockpile drop location for counter-terrorism measures.

V. Demographics/Patient Population

Mount Sinai resides in Miami-Dade County, which has a population of 2,709,465, while the City of Miami Beach has a population of 90,108. Following are some of key demographics:

Table 2

Comparative Population by Ethnicity			
Ethnicity	Miami-Dade County Source: Applied Geographic Solutions, 2021	City of Miami Beach (Miami Beach, Florida Population 2020 (Demographics, Maps, Graphs), n.d.)	Mount Sinai Total Cases 2020 (Internal data)
Hispanic	1,836,040	51,119	94,878
Black	411,393	2,935	9,769
White	375,369	32,103	71,663
Asian	57,219	2,073	1,470
Multiracial	21,702	696	5,068
Other	5,090	997	1,916
American Indian	2,178	48	154
Pacific Islander	474	137	192
TOTAL	2,709,464	90,108	185,110

Table 3

Comparative Median Age		
Miami-Dade County Source: Applied Geographic Solutions, 2021	City of Miami Beach (Miami Beach, Florida Population 2020 (Demographics, Maps, Graphs), n.d.)	Mount Sinai Total Cases 2020 (Internal data)
39.13	41.4	56.3

Table 4

Comparative Percentage Population by Sex			
Sex	Miami-Dade County Source: Applied Geographic Solutions, 2021	City of Miami Beach (Miami Beach, Florida Population 2020 (Demographics, Maps, Graphs), n.d.)	Mount Sinai Total Cases 2020 (Internal data)
Male	48.60%	51.69%	43.30%
Female	51.40%	48.31%	56.70%

Miami-Dade County is proud of its Hispanic/Latin heritage, which influences the community. Mount Sinai opened a freestanding emergency room and physician offices in Hialeah (predominately-Hispanic municipality) in November 2018. The facility is 63,000 square feet. The first floor houses an emergency department with 24 treatment bays, with physician offices and other clinical areas on the second and third floors. Mount Sinai also has physician offices in Coral Gables and Miami Lakes.



Hialeah Demographics² (Matters, n.d.)

“The City of Hialeah has a population of 237,285, of which 23.7% are living in poverty. 92.65% of Hialeah's residents identify as White and 52.35% identify as women, while 47.65% identify as men. 96.05% of the residents identify as Hispanic or Latino and the predominant language spoken at home is Spanish. Of the 237,285 residents in Hialeah, about 24% fall into the 65 and older age category. There is a larger percentage of older adults in Hialeah (23.6%) than Miami-Dade County (16.2%)”.

VI. Data Assessment

Leading Causes of Death

In assessing healthcare need, an important starting point is a review of the leading causes of death. Our review begins at a national level with data from the National Center for Health Statistics (Table 5), and then drills down to the state (Table 6) and local (Table 7) level with data from the Florida Department of Health. This type of view allows us to draw comparisons in community need, which helps align Mount Sinai's approach to care with the priorities identified at every level. There is a consistent trend at all levels with Heart Disease and Cancer related illnesses ranking numbers 1 and 2. Cerebrovascular/Stroke, Suicide and Alzheimer disease rank within the top 10. Each of these diseases/conditions are service lines offered as part of Mount Sinai's comprehensive approach to care.

Deaths: Leading Causes for 2019 (based on national top 10 causes)					
Table 5 United States					
Cause of Death	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other	Hispanic	Percent Total Deaths
All Causes	2,183,844	346,677	92,080	212,397	100%
Heart disease	512,600	81,306	19,003	41,794	23%
Cancer	460,950	70,513	21,433	43,079	21%
Chronic lower respiratory diseases	136,136	11,446	1,943	5,700	5%
Accidents (unintentional)	125,151	21,615	5,138	18,904	6%
Cerebrovascular disease	110,804	20,003	6,183	11,959	5%
Alzheimer disease	100,371	9,208	3,187	8,221	4%
Diabetes	57,168	5,415	4,030	10,166	3%
Influenza and pneumonia	38,066	5,363	2,230	3,808	2%
Intentional self-harm (suicide)	37,428	3,115	1,978	4,331	2%
Nephritis, nephrotic syndrome and nephrosis	35,081	9,740	1,984	4,488	2%
Table 6 State of Florida					
Cause of Death	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other	Hispanic	Percent Total Deaths
All Causes	150,536	23,114	5,551	27,774	100%
Heart disease	34,502	4,970	1,223	6,349	23%
Cancer	33,425	4,856	1,206	6,075	22%
Chronic lower respiratory diseases	9,990	698	197	1,120	6%
Accidents (unintentional)	9,454	1,342	495	1,922	6%
Cerebrovascular disease	9,557	1,751	360	2,200	7%
Alzheimer disease	4,746	394	89	1,302	3%
Diabetes	3,795	1,183	221	959	3%
Influenza and pneumonia	1,988	281	78	356	1%
Intentional self-harm (suicide)	2,652	195	137	443	2%
Nephritis, nephrotic syndrome and nephrosis	2,108	628	97	409	2%

Deaths: Leading Causes for 2019

(based on national top 10 causes)

Table 7 Miami-Dade County					
Cause of Death	Non-Hispanic White	Non-Hispanic Black	Non-Hispanic Other	Hispanic	Percent Total Deaths
All Causes	3,214	3,301	501	12,906	100%
Heart disease	842	751	138	3,381	26%
Cancer	703	659	109	2,849	22%
Chronic lower respiratory diseases	138	105	19	631	4%
Accidents (unintentional)	164	166	32	518	4%
Cerebrovascular disease	266	293	38	1,118	9%
Alzheimer disease	63	119	8	708	5%
Diabetes	76	167	16	445	4%
Influenza and pneumonia	54	39	3	174	1%
Intentional self-harm (suicide)	76	28	10	154	1%
Nephritis, nephrotic syndrome and nephrosis	41	77	11	163	1%

Utilizing the Florida Department of Health’s data by zip code, we have determined the total number of deaths within our key service areas for each of these leading causes and compared it to Miami-Dade County as a whole.

Deaths: Leading Causes for 2019

(based on national top 10 causes)

Table 8 Key Service Areas - By Zip Code					
Cause of Death	Miami Beach	Aventura	Hialeah	Total	Percent Total Deaths
All Causes	589	664	1,644	2,897	100%
Heart disease	166	164	505	835	29%
Cancer	117	167	324	608	21%
Chronic lower respiratory diseases	23	25	107	155	5%
Accidents (unintentional)	45	19	49	113	4%
Cerebrovascular disease	42	58	138	238	8%
Alzheimer disease	28	28	85	141	5%
Diabetes	10	15	57	82	3%
Influenza and pneumonia	8	7	33	48	2%
Intentional self-harm (suicide)	16	14	24	54	2%
Nephritis, nephrotic syndrome and nephrosis	7	8	22	37	1%

VII (a). State Plan

Figure 3 – (State Health Improvement Plan – SHIP)



2022-2026 State Health Improvement Plan: Identified Priority Health Issues and Topic Areas

Overarching Approaches and Frameworks

Addressing issues through the Life Cycle (Birth, Growth, Work, Live, Play, Age); Categorize by Population Group (Age – Children, Adolescent and Adult); Health Equity; Interoperable and Rapid Cycle Data; Vulnerable Populations

Alzheimer's Disease and Related Dementias

Alzheimer's Disease

Mental Wellbeing and Substance Abuse Prevention

Adverse Childhood Experiences (ACEs)

Adolescent and Young Adult Mental Health Issues

Tobacco Use

Alcohol Abuse

Mental Health Issues

Substance Use Disorder (including Opioid Use)

Suicide

Chronic Diseases and Conditions

Heart Disease

Cancer

Stroke

Diabetes

Respiratory/Lung Disease

Obesity

Chronic Disease Risk and Preventative Factors

Transmissible and Emerging Diseases

HIV/AIDS

Sexually Transmitted Disease/Infections

Immunizations

Emerging Infectious Diseases

Injury, Safety and Violence

Child Injury Prevention

Adverse Childhood Experiences (ACEs)

Suicide

Crime and Domestic Violence

Human Trafficking

Motor Vehicle Mortality

Unintentional Injuries

Maternal and Child Health

Maternal Morbidity and Mortality

Congenital Syphilis

Infant Mortality

Neonatal Abstinence Syndrome

Social and Economic Conditions Impacting Health

Economic Stability

Education Access and Quality

Health Care Access and Quality

Neighborhood and the Built Environment

Social and Community Context

Emergency Preparedness and Response

VII (b). County Plan

Figure 4 - (Miami-Dade County Community Health Improvement Plan, 2019)



“The Community Health Improvement Plan (CHIP) is Miami-Dade County’s five-year collaborative plan from 2019-2024 for developing policies and defining actions to target efforts that promote health.

The **six strategic health priority areas** identified for the CHIP include **Health Equity, Access to Care, Chronic Disease, Maternal Child Health, Injury/Safety/Violence, and Communicable Diseases and Emerging Threats.”**

Prepared by the Florida Department of Health, Office of Community Health and Planning. (MiamiDade.floridahealth.gov).

VIII. Chronic Diseases and Conditions

As we see from the statistics above, Heart Disease and Cancer remain as the top two leading causes of death. Treatment of these diseases are a primary focus at Mount Sinai Medical Center. Another emerging priority is Mental Wellbeing. The COVID-19 Pandemic pointed a spotlight on various aspects of Behavioral Health, which the Mount Sinai Team has worked to adapt to and develop services in support this need. These topics are further discussed in the following narrative.

A. Heart Disease

A broad definition of Heart Disease would be “any condition that effects the structure or function of the heart”.³ There are different types of heart disease some of which are congenital and others caused by medical conditions or lifestyle risks.

Heart Disease can be preventable by following heart-healthy steps and following your doctor’s advice.

According to the Centers for Disease Control and Prevention (CDC) (FastStats – Heart Disease, 2019)⁴, 4.6% of adults were diagnosed with coronary heart disease, which lead to over 650,000 deaths in 2019. Heart Disease accounted for 6.9% of physician office visits and 7.2% of emergency room visits.

On average, Mount Sinai performs approximately 4,000 cardiac related inpatient procedures per year.

On a local level, the indicator below from Miami-Dade Matters shows the percentage of Medicare beneficiaries in Miami-Dade County treated for heart failure. Miami-Dade ranks in the worst 25% out of 67 Florida counties.

Figure 5. - Heart Failure: Medicare Population Measurement Period: 2018 (Matters, n.d.)

County: Miami-Dade 

17.9%

COMPARED TO



FL Counties



U.S. Counties



FL Value
(14.8%)



US Value
(14.0%)



Prior Value
(17.9%)



Trend

Source: Centers for Medicare & Medicaid Services 

Measurement period: 2018

Maintained by: Conduent Healthy Communities Institute

Last update: March 2021



“Heart disease accounts for approximately 2 out of 10 deaths in Florida.¹ In 2018 there were 80,402 coronary heart disease hospitalizations (including both angina and myocardial infarction) or an average of 220 coronary heart disease hospitalizations each day.² In Florida, in 2017, 11% of adult persons with any disability reported ever having heart disease compared to 4% of adult persons with no disability.³ In the United States, more than half non-Hispanic black females and males had some form of cardiovascular disease, including heart disease and stroke in 2013-2016.”⁵

Mount Sinai Approach/Implementation

Mount Sinai worked together with New York’s prestigious Columbia University to create the Mount Sinai Heart Institute at Mount Sinai, the only Ivy League-affiliated programs in South Florida. This program combines the strengths of two leaders in cardiovascular care, enhancing the outstanding level of service and providing greater access to state-of-the-art technology, research and treatment options.

Figure 6 – (2021)



Mount Sinai Brings Robotic-Assisted Bypass Surgery to South Florida

Florida’s only robotic heart program. Specializing in minimally invasive robotic-assisted coronary bypass grafting, often called “robotic CABG” for short, this new program provides an alternative to open-heart surgery for certain patients. This unique procedure is only performed by highly-specialized surgeons at select institutions nationwide. Steve Xydas, MD, Chief of the Columbia University Division of Cardiac & Thoracic Surgery and Roy Williams, MD, Chief of Thoracic Surgery, have successfully joined forces to complete several of these procedures in the last few months, all with excellent outcomes.

Mount Sinai is licensed by the Florida Agency for Healthcare Administration as a designated Level II Adult Cardiovascular Services provider.

Mount Sinai's cardiovascular team includes physicians who are expert at performing a high volume of diagnostic cardiac catheterizations, as well as catheter-based procedures to treat heart disease. The electrophysiology program brings together experts from multiple cardiovascular sub-specialties to treat common and complex heart rhythm disorders, including the use of implanted pacemakers and internal defibrillators.

The Mount Sinai Heart Institute provides patients with complex coronary disorders access to cutting-edge, catheter-based treatment options without surgery. The Columbia University Division of Cardiology at Mount Sinai is skilled in transradial catheterization and percutaneous coronary interventions. The cath lab team also has expertise in treating "holes in the heart," implanting catheter-delivered heart valves (without surgery) and balloon-opening of narrowed valves without open heart surgery.

Mount Sinai is striving to meet the cardiovascular health needs within its primary service areas through the Columbia University affiliated Mount Sinai Heart Institute, research trials aimed at bringing cutting-edge treatments to patients. Mount Sinai is one of the partners of the Miami Heart Research Institute & Florida Heart Research Foundation, which helps sponsor projects such as: ⁶

Jose A Adams, MD, Mount Sinai Medical Center, *research study entitled: "Whole Body Periodic Acceleration (pGz) in Heart Failure"*

Gervasio A. Lamas, MD, Mount Sinai Medical Center, research study entitled: "Trial to Assess Chelation Therapy 3a (TACT3a)"

Jose R. Lopez, MD, Mount Sinai Medical Center, research study entitled "Cardioprotection in Diabetic Cardiomyopathy via upregulation of ATP-sensitive K⁺ channels"

B. Cancer

Cancer remains as the second leading cause of death. According to the World Health Organization, International Agency for Research on Cancer, there were over 19 Million new cases of cancer and nearly 10 Million deaths worldwide in 2020. The following charts illustrate these rates by type of cancer.

Figure 7: Worldwide New Cancer Cases - 2020

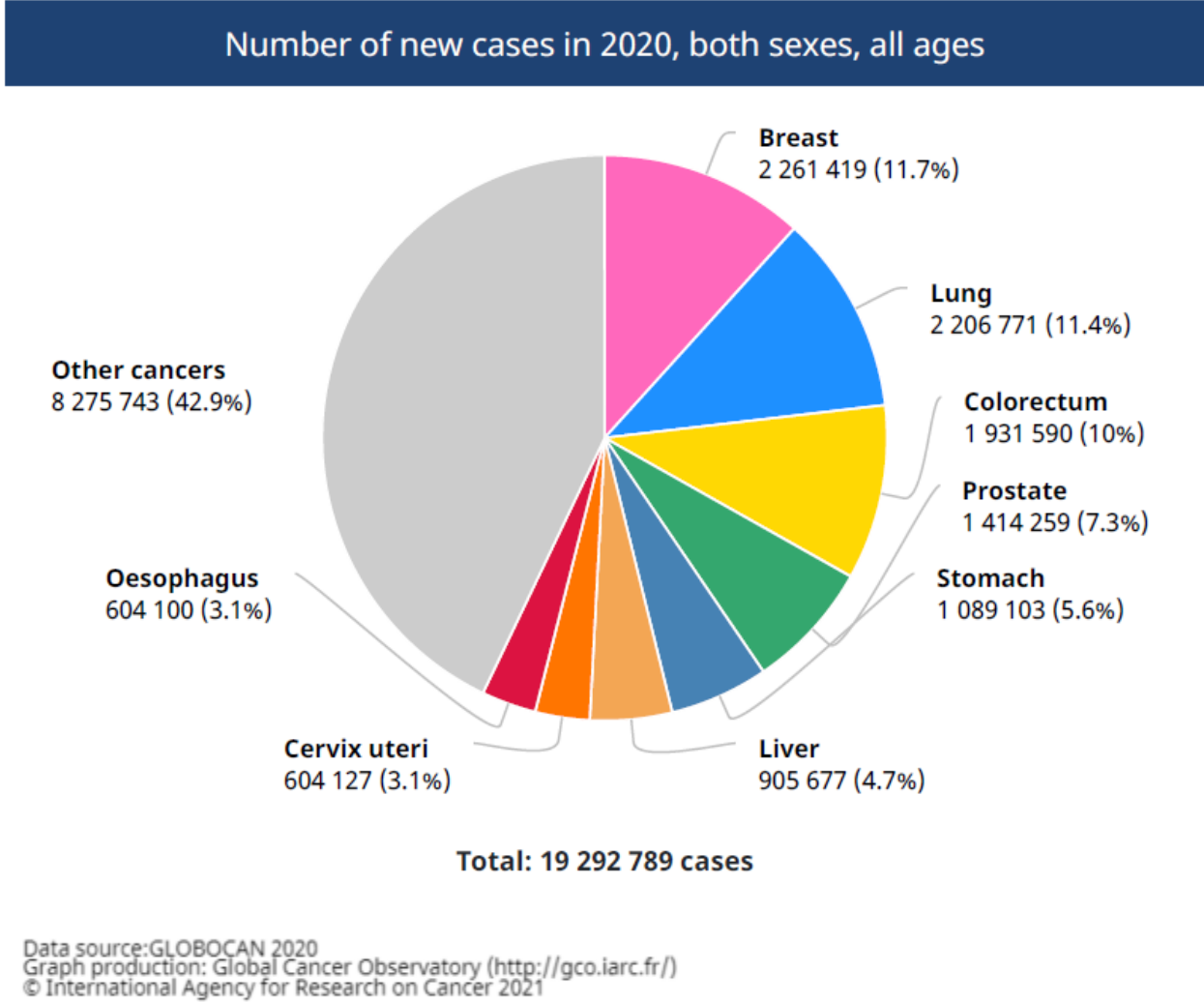
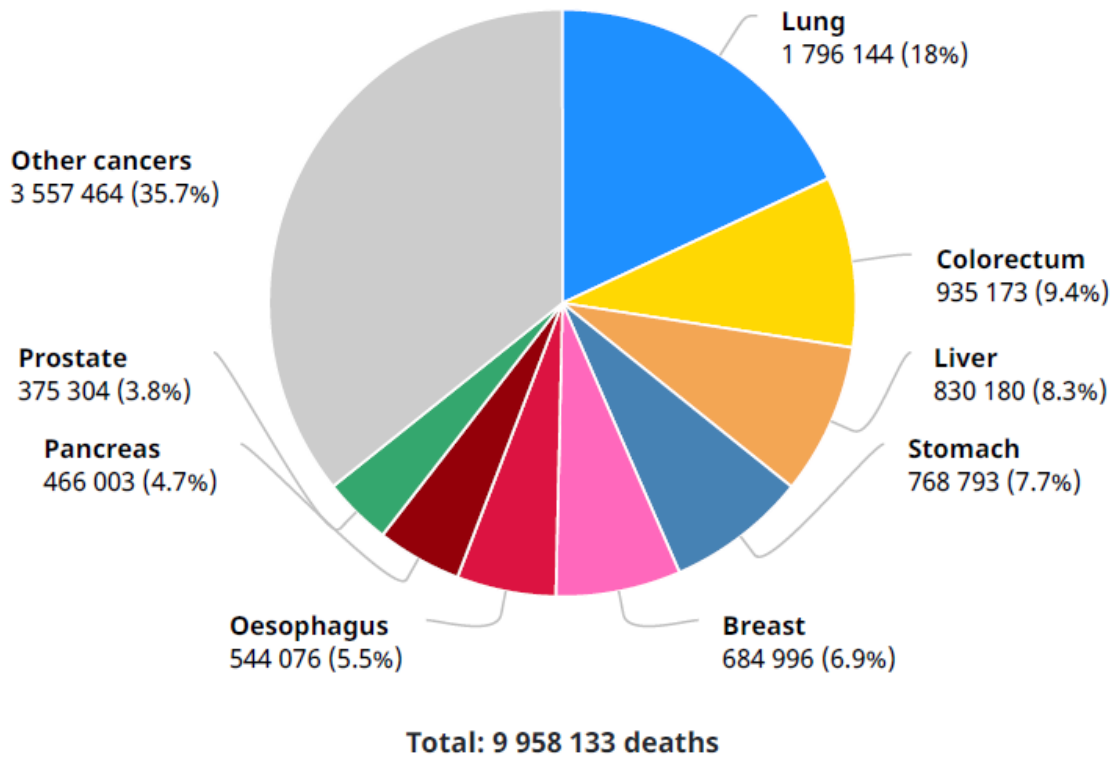


Figure 8: Worldwide Cancer Deaths – 2020

Number of deaths in 2020, both sexes, all ages



Data source: GLOBOCAN 2020
Graph production: Global Cancer Observatory (<http://gco.iarc.fr/>)
© International Agency for Research on Cancer 2021

According to the Centers for Disease Control and Prevention (CDC) (FastStats – Cancer, 2019)⁷, 9.5% of adults were diagnosed with cancer, which lead to nearly 600,000 deaths in 2019. Cancer accounted for 26.3 million physician office visits in 2018.



“Cancer is not just one disease but many diseases. There are more than 100 different types of cancer. Cancer occurs when abnormal cells divide without control and are able to invade other tissues. Most cancers are named for the organ or type of cell in which they start.

Florida has the second highest cancer burden in the nation. Since 2014, cancer has been the second leading cause of death in Florida, after heart disease. In the three year period from 2016-2018, the total number of cancer deaths was 132,614.

There’s an average of 115,000 new cancers diagnosed and reported each year to the statewide cancer registry, the Florida Cancer Data System.

The top five most frequently diagnosed cancers in Florida in 2017 accounted for just over half of all cancer diagnoses (50.3%). The top five cancers were lung & bronchus (17,138), breast (16,785), prostate (12,539), colorectal (9,908), and melanoma (6,798). In females, the top five cancers were breast, lung & bronchus, colorectal, non-Hodgkin's lymphoma, and melanoma. In males, the top five cancers were prostate, lung & bronchus, colorectal, melanoma, and bladder. Source: Florida Cancer Data System” 8

According to Miami-Dade Matters, since 2012, cancer cases in Miami-Dade County have been trending downward overall. However, 2018 cases saw a slight uptick from prior year, while remaining below state average.

Figure 9. - All Cancer Incidence Rate; Measurement Period: 2016-2018 (Matters, n.d.)

County: Miami-Dade

397.1

cases/ 100,000 population

COMPARED TO



FL Counties



FL Value
(444.4)



Prior Value
(392.0)



Trend

Source: University of Miami (FL) Medical School, Florida Cancer Data System

Measurement period: 2016-2018

Maintained by: Conduent Healthy Communities Institute

Last update: May 2021

The patient trend at Mount Sinai is in line with overall Florida averages with the top cancer diagnosis being lung & bronchus, prostate, breast, blood & bone marrow and urinary/bladder cancer. Mount Sinai did experience a drop in overall cases in 2020 due to the Covid-19 pandemic. Americans isolated at home and postponed treatment, while most hospitals cancelled elective procedures. Those patients who did seek treatment likely did so through telehealth, which became the trend in providing non-emergent medical care.

Table 9 – Mount Sinai Medical Center Patient Data – Cancer Cases by Year

New Cancer patients at Mount Sinai per year (Inpatient and Outpatient)								
	2018		2019		2020		Total Values	
	Number	(%)	Number	(%)	Number	(%)	Number	(%)
Overall Totals	2934	(36.15 %)	2960	(36.47 %)	2222	(27.38 %)	8116	(100 %)
TOP 5 Diagnosis								
Bronchus & Lung	433	(35.99 %)	451	(37.49 %)	319	(26.52 %)	1203	(14.82 %)
Prostate Gland	429	(36.33 %)	423	(35.82 %)	329	(27.86 %)	1181	(14.55 %)
Breast	344	(35.54 %)	362	(37.4 %)	262	(27.07 %)	968	(11.93 %)
Blood & Bone Marrow	247	(36.7 %)	243	(36.11 %)	183	(27.19 %)	673	(8.29 %)
Urinary Bladder	174	(32.58 %)	180	(33.71 %)	180	(33.71 %)	534	(6.58 %)
November 2nd, 2021								

Note: COVID-19 and Smoking

“Findings of new research published in the Journal of General Internal Medicine and conducted by investigators at Massachusetts General Hospital (MGH), Vanderbilt University Medical Center and the University Of Pittsburgh School Of Medicine; during the pandemic, 32% of respondents increased their smoking, 37% decreased their smoking, and 31% made no change. Those who increased their smoking tended to perceive more stress.

Also, 11% of respondents who smoked in January 2020 (before the pandemic) had quit smoking by the time the survey was administered (an average of six months later), while 28% of former smokers relapsed. Higher perceived COVID-19 risk was associated with a higher likelihood of quitting and a lower likelihood of relapse.”⁹

Mount Sinai Approach/Implementation

The Mount Sinai Comprehensive Cancer Center is a nationally-recognized, award-winning facility that utilizes a collaborative, multidisciplinary approach to diagnose and treat patients with different types of cancers. Mount Sinai is the first Florida hospital to receive the Commission on Cancer’s Outstanding Achievement Award three consecutive times and currently holds a Silver Level commendation. The commission created this award to recognize programs that strive for excellence in providing the highest quality cancer care.

Mount Sinai offers a collaborative approach to the diagnosis and treatment of cancer. Free or discounted screening mammograms are offered to the public during May and October, along with free Skin Cancer screenings. Lectures on cancer prevention and early detection are given throughout Mount Sinai’s service area. Mount Sinai Cancer Physicians are actively involved in approximately 53 cancer related clinical research trials.

Mount Sinai recently expanded oncology services to its’ Primary & Specialty Care Offices in Hialeah and is in the planning stages for a new cancer facility to replace existing services. Preliminary plans are for a 200,000 square foot facility including 62 exam rooms, 56 infusion suites and 20 imaging/breast center rooms. The goal is to be operational by 2025.

C. Mental Wellbeing/Behavioral Health

Issues related to mental wellbeing (Suicide, Alzheimer’s) are seen in the top 10 leading causes of death and were brought to the forefront during the COVID-19 pandemic.

According to the Centers for Disease Control and Prevention (CDC) (FastStats - Mental Health, 2019) ¹⁰, 11.2% of adults expressed regular feelings of worry, nervousness or anxiety. 4.7% of adults expressed regular feelings of depression. There were over 47,000 suicides reported in 2019. Diagnosed mental disorders accounted for 55.7 million physician office visits and 4.9 million emergency room visits nationally in the same year.

Following is a comparison of community indicators against state averages, county values, and target goals compiled by Miami-Dade Matters.

Figure 10 - Mental Health and Mental Disorders: Hospitalization Rates and Incidents of Diagnosis: 2018 (Matters, n.d.)

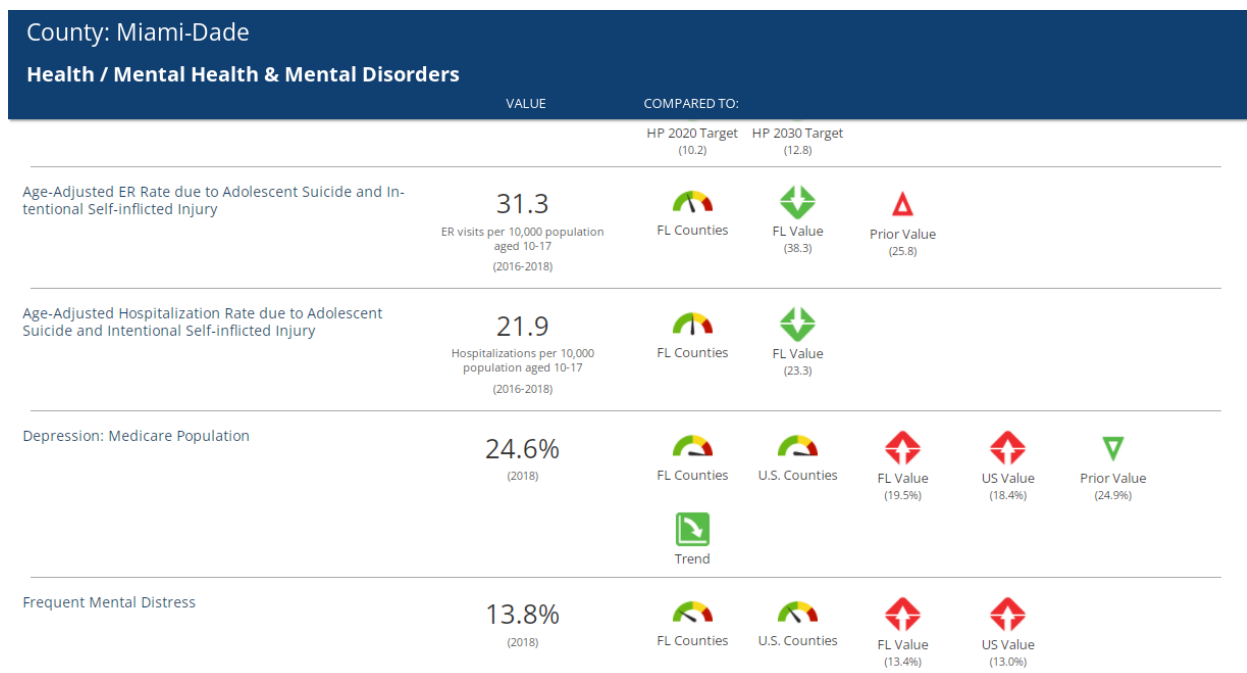


Table 10 – Mount Sinai Medical Center – Behavioral Health Case Volume 2017 - 2020

	2017	2018	2019	2020
HOSPITAL INPATIENT				
Cases	2,221	2,408	2,246	1,867
PARTIAL HOSPITALIZATION				
Cases	253	610	695	829

Florida State Health Improvement Plan (SHIP) 2017-2021

“Under the leadership of the State Surgeon General, the Department of Health tasked a diverse group of partners with creating a blueprint for action, culminating in Florida’s State Health Improvement Plan (SHIP). The five-year SHIP sets out goals for Florida’s public health system.”¹¹ Behavioral Health is priority number six in the SHIP plan.

Figure 11 – State Health Improvement Plan

SHIP PRIORITY 6	
Behavioral Health— Includes Mental Illness & Substance Abuse	
<i>Mental and emotional well-being enables individuals to realize their own abilities, cope with the normal stresses of life, work productively and contribute to his or her community.</i>	
Goal	BH1 Reduce mental, emotional and behavioral health disorders in children through improved identification and treatment of behavioral health disorders in parents who come in contact with the child welfare system.
Strategy	BH1.1 Increase the number of child welfare-involved families with access to behavioral health services.
Strategy	BH1.2 Increase the number of people trained in mental health first aid to identify, understand and respond to signs of mental illness and substance use disorders in the community.
Goal	BH2 Decrease the number of newborns experiencing neonatal abstinence syndrome.
Strategy	BH2.1 Increase the number of pregnant women in treatment for opioid disorders.
Goal	BH3 Reduce the number of opioid overdose deaths among individuals with opioid use disorders.
Strategy	BH3.1 Increase access to naloxone to individuals at risk of witnessing or experiencing an opioid-related overdose by distribution of naloxone kits in emergency departments, among first responders, and emergency responders.
Goal	BH4 Reduce the number of deaths by suicide in Florida.
Strategy	BH4.1 Provide training on the prevention of suicide and related behaviors to community and clinical service providers.
Strategy	BH4.2 Increase suicide prevention efforts for high-risk populations.
Strategy	BH4.3 The Florida Department of Health, in partnership with the Florida Department of Children and Families, will quarterly convene a group of subject matter experts to develop messaging and initiatives around suicide surveillance data from the Florida Violent Death Reporting System.

Mental Health and the COVID-19 Pandemic

A KFF Health Tracking Poll from July 2020¹¹ found that many adults reported specific negative impacts on their mental health and well-being, such as difficulty sleeping (36%) or eating (32%), increases in alcohol consumption or substance use (12%) and worsening chronic conditions (12%), due to worry and stress over the coronavirus. According to the Centers for Disease Control and Prevention (CDC)¹², 13% of Americans reported starting or increasing substance use as a way of coping, 11% seriously considered suicide.

“Understanding the impact of the pandemic on mental health, and on those with serious mental illness, is critical to the National Institute of Mental Health (NIMH) mission of responding with research that will pave the way for prevention, recovery and cure” (Gordon, 2021)¹³. The long haul effects of the pandemic will outlive the pandemic. Community collaboration is crucial to effectively implementing support services and viable solutions to the unforeseen avalanche of emerging community mental health needs.

Substance abuse is not new to the pandemic, but has been heightened during it. Research from as early as 1986 has proven substance abuse disorders are commonly comorbid/co-occurring with psychiatric disorders including personality disorders. Data from the National Comorbidity Survey Replication, Glantz et al¹⁴, found that having any psychiatric disorder resulted in a heightened risk for substance abuse.

Mount Sinai Response/Plan

MSMC has taken an informed Dialectical Behavioral Therapeutic approach to treatment. This approach involves a multidisciplinary/multicultural team, who provide a variety of outpatient services (see below) along with various community outreach programs (VALOR, Surfside tragedy support, First Responder Education and CIT Support).

MSMC Outpatient Behavioral Health Center Vision:

- *Provide access to integrated healthcare enhancing a Total Wellness approach to treatment*
- *Build a training platform for therapists to lead those experiencing pain to a place of compassion*
- *Participate in further studies to maintain the latest perspectives on treatment for specific populations*
- *Continue building a larger and stronger community outreach program*
- *Be a major contributor and leader in the mental health renaissance, which celebrates the human experience and destigmatizes the process of healing.*

Mental Disorders and Homelessness

A clear link has been identified between psychiatric disorders and homelessness. In turn, homelessness has been associated with poorer mental health outcomes and may trigger or exacerbate certain types of disorders. Findings indicate that homelessness is related to higher levels of psychiatric distress and lower perceived levels of recovery from serious mental illness.¹⁵

“Homelessness is associated with substantially increased morbidity and mortality from many causes including infectious diseases, cardiovascular disease, cancer, unintentional injury, suicide, homicide, and substance use. The unsheltered homeless have an even greater burden, with higher mortality than sheltered homeless.”¹⁵

There also is a strong association between psychiatric disorders and suicide in homeless populations

Table 11
Homeless Populations Summary for FL-600 - Miami-Dade County
Date of Point In Time (PIT) Count: 1/21/2021
Population: Sheltered and full unsheltered count

	Sheltered			Unsheltered	Total
	Emergency	Transitional	Safe Haven		
Adults with a Serious Mental Illness	471	84	10	283	848
Adults with a Substance Use Disorder	207	72	4	56	339
Adults with HIV/AIDS	38	11	0	15	64
Adult Survivors of Domestic Violence	111	61	0	0	172

Provided by: Miami-Dade County Homeless Trust

Mount Sinai Response/Plan/ Mount Sinai Services Overview

The MSMC Behavioral Health Team works closely with multiple Miami-Dade organizations and community-based outpatient health facilities (Miami-Dade County Homeless Trust, Thriving Mind South Florida) that reach underserved and homeless populations. These important relationships are part of Mount Sinai's commitment to serving patients who may otherwise have no access to mental health care. The medical center is a Baker Act receiving facility, and those needing behavioral health services can seek treatment at our emergency centers in Miami Beach, Aventura, and Hialeah.

Inpatient Behavioral Health Services

The Behavioral Health Department offers inpatient psychiatric services to adult and geriatric patients. This includes the treatment of a wide range of psychiatric illnesses and behavioral disorders, including major depression, bipolar disorder, schizophrenia, and psychosis. The goal is to create and maintain a quiet, safe, and supportive environment that fosters healing and growth so patients can return to the community in a healthy way.

Partial Hospitalization Program (PHP)

A nonresidential treatment program, the Partial Hospitalization Program offers intensive services traditionally found in an inpatient program, but in a less than 24-hour setting. These services include therapy with a mindfulness approach, nursing service, psychiatric evaluation, and medication management, as well as group, individual, and family therapy.

Intensive Outpatient Program (IOP)

The Intensive Outpatient Program is a moderate-intensity program designed to help people with mental health and substance use issues acquire coping skills to engage in and maintain recovery while improving the quality of their lives. The IOP can serve as a step down from residential or partial hospitalization level of care, or it can provide support and structure to prevent further deterioration when less intensive outpatient services cannot adequately meet the patient's needs.

Long Acting Injectable Clinic (LAIC)

The Long Acting Injectable Clinic provides onsite administration and onsite monitoring of long-acting antipsychotic medications for treatment of patients suffering from a wide variety of psychotic disorders. Our team works together with the patient to provide the best service and ensure medication compliance to prevent relapses, deterioration, and prevent the need for re-hospitalization.

Psychiatry Residency

Mount Sinai is one of eight Psychiatry residency programs in Florida. The program is ACGME (Accreditation Council for Graduate Medical Education) accredited as a four-year program with three slots per PGY (post-graduate).

D. Alzheimer Disease

According to the Centers for Disease Control and Prevention (CDC) (FastStats - Alzheimers Disease, 2019)¹⁶, Alzheimer Disease ranked as the sixth leading cause of death. Patients with Alzheimer’s account for:

- 27.6% Adult Day Care services
- 33.1% Residential Care Community residents
- 32.3% Home Health Agency patients
- 44.5% Hospice patients
- 47.8% Nursing Home residents
- Over 121,000 deaths in 2019.

Figure 12

Dementia Care & Cure Initiative



“The Dementia Care and Cure Initiative (DCCI) engages communities across Florida to be more dementia caring, promote better care for Floridians affected by dementia, and support research efforts to find a cure. Being a dementia-caring community means there are services and supports in place to make that community hospitable to someone living with dementia, their caregivers, families, and loved ones. DOEA wants those living with dementia to still play a vital role within their communities – with each interaction they have while out will be a positive one, created out of respect and understanding.

Alzheimer’s disease is the most common type of dementia, and Florida has the second-highest incidence in the country, with approximately 560,000 individuals living with Alzheimer’s. This number is expected to increase to 720,000 by 2025, and these statistics are not inclusive of other forms of dementia, nor the hundreds of thousands who serve as unpaid care partners.”¹⁷

Figure 13 – Health/Older Adults: Alzheimer’s Death Rate: 2018 (Matters, n.d.)

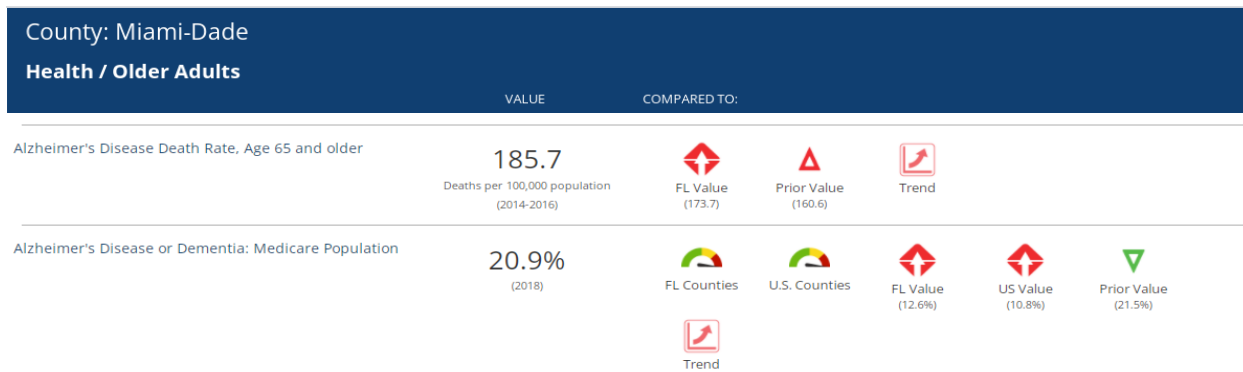


Figure 14 – Florida Alzheimer’s Facts and Figures

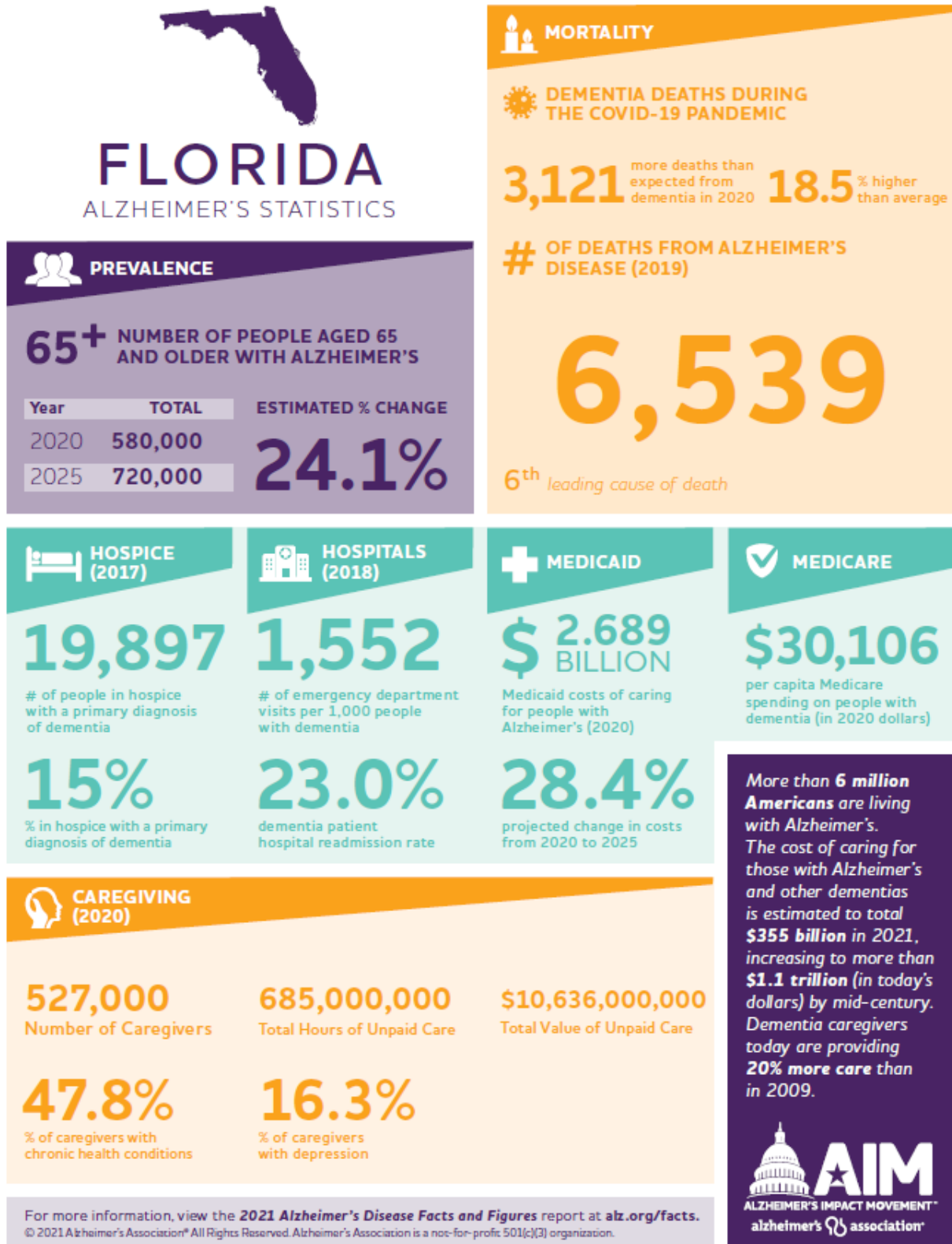


Figure 15 – Map – Florida Memory Disorder Clinics and Brain Bank



Mount Sinai Response/Plan

The Mount Sinai Wein Center is one of 17 State of Florida authorized memory disorder clinics. For more than a decade, the Wien Center has hosted the Mild Cognitive Impairment (MCI) Symposium, an international conference that focuses on advances in the study, diagnosis, prevention and treatment of mild cognitive impairment, which is the earliest stage of impairment at which Alzheimer's disease can be diagnosed. The conference includes a community educational forum designed to educate the general public, especially those at greater risk for Alzheimer's, about the latest advances in the diagnosis and treatment of Alzheimer's disease, as well as its prevention.

The Wien Center participates in national and international research and clinical trials for Alzheimer's treatment and prevention. The Wien Center is the lead institution for the Florida Brain Bank, which helps researchers gain a better understanding of Alzheimer's and other memory disorders and provides resources for researchers around the globe to study the disease. The center has earned a number of prestigious grants, including funding from the National Institutes of Health (NIH) to conduct cutting-edge research on Alzheimer's disease, and to be a major participant in an NIH initiative establishing Florida's first Alzheimer's Disease Research Center (ADRC), one of only 31 ADRCs in the nation.

Early diagnosis is the key to controlling Alzheimer's disease and other memory disorders. The Wien Center provides early assessments through its free memory-screening program for individuals age 50 and older.

IX. Initiatives/Vision/Implementation Strategies

A. Access to care – Program of All-Inclusive Care for the Elderly (PACE)



Mount Sinai Medical Center is in the process of starting up a new service called Mount Sinai Eldercare. Mount Sinai Eldercare is a federal and state sponsored Program of All-Inclusive Care for the Elderly (PACE).

The service offers comprehensive medical, social and recreational services to adults over the age of 55 who are living with chronic illness or disability and need coordinated medical care to continue living as independently as possible at home or in the community.

PACE is truly all-inclusive care

Mount Sinai Eldercare goal is helping to keep our participants as active and independent as possible living their best lives at home.

Figure 16 – PACE Interdisciplinary Team

B. Access to Care - Expand Primary Care Network

Mount Sinai continues to evaluate the community that it serves. According to Florida's Office of Economic and Demographic Research, an estimated 329,717 new residents settled in Florida between April 2020 and April 2021. "Florida's popularity isn't expected to end any time soon: it's expected to gain an average 845 new residents a day until 2025, according to state projections."¹⁸ Mount Sinai reviews available demographic data to determine which areas are in the most need of medical services.

C. Access to Care – Replacement/Expansion of Cancer Services

Preliminary plans are underway for a 200,000 square foot facility including 62 exam rooms, 56 infusion suites and 20 imaging/breast center rooms to replace/expand existing services. The goal is to be operational by 2025.

D. Personalized Healthcare

A growing trend in healthcare is personalization of diagnosing and treating individual patients.

“Hyper personalized medicine is the development of patient-specific, targeted, and tailored treatments offered to people based on more than just a diagnosis. By combining genomics, proteomics, metabolomics, and big-data-driven predictive analytics, precision medicine is now on a new level.”¹⁹

“By letting physicians customize patient treatment plans and giving them access to a reference bank of patient-specific predictive analytics, the hyper personalization of care will become increasingly bespoke. Hyper personalized medicine will improve the patient experience and health outcomes – ultimately saving lives.”¹⁹

Mount Sinai took the first steps toward building an electronic health record in 2011, by implementing clinical software developed by Epic. Since that time, the available functionality and tools have grown exponentially. Mount Sinai actively uses modules within the Epic system to make patients medical information more accessible. Currently Mount Sinai is using predictive modeling to identify if a patient is at risk for sepsis or at risk for falling. Predictive models trigger an alert in the patients healthcare record to provide more awareness in the patients plan of care.

Mount Sinai is exploring further personalization through the use of Pharmacogenetic testing. No two patients are exactly alike; therefore, each patient may metabolize prescribed medications differently. Through use of a third party vendor, content and lab testing is linked in the Epic system allowing a notice to fire in Epic alerting a prescribing physician as to whether the drug being prescribed is the best for the patient based on genetics.

E. Recap: Leading Causes of Disease-Related Death

Heart disease, cancer, stroke, chronic lower respiratory disease, and Alzheimer’s disease remain the leading causes of disease-related death in Mount Sinai’s primary and neighboring service areas and throughout Miami-Dade County. Our focus related to these diseases is on prevention, detection, education, and emotional support.




STRATEGIES
<p><u>Education and Prevention:</u></p> <ul style="list-style-type: none">• Offer free educational lectures on various diseases and medical issues including effective methods for screening, prevention methods, stress management, and the latest developments in treating diseases.• Provide biometric screenings at health fairs, community events, and on-site at local businesses.• Offer free/discounted screening mammograms for early detection of breast cancer.• Offer complimentary memory screenings for individuals aged 50 and older.
<p><u>Healthy Eating and Weight Management:</u></p> <ul style="list-style-type: none">• Continue partnership with South Florida Seniors in Action to distribute fresh, healthy food to low-income families, disabled veterans, and home-bound individuals.• Offer educational lectures and seminars on healthy eating, proper nutrition, and exercise.• Encourage better health habits through weight loss and exercise challenges.
<p><u>Emotional Support – Comprehensive Cancer Center:</u></p> <ul style="list-style-type: none">• Host support and activity groups for cancer patients.• Offer nutritional counseling for cancer patients.• Host bereavement groups for families who’ve lost a loved one to cancer.• Host caregiver support groups for family members and caregivers of cancer patients.
<p><u>Emotional Support – The Wien Center for Alzheimer’s Disease & Memory Disorders</u></p> <ul style="list-style-type: none">• Offer educational workshops and training opportunities to caregivers of individuals with Alzheimer’s disease and other dementias.• Host support groups for family members and caregivers of individuals with Alzheimer’s disease or other dementias.

Exhibit A

LEGEND – Miami-DadeMatters.org Indicators

Red  is bad; green  is good; blue  is not statistically different/neutral.




Compared to Distribution

-  the value is in the best half of communities.
 -  the value is in the 2nd worst quarter of communities.
 -  the value is in the worst quarter of communities.
-


Compared to Target

-  meets target;  does not meet target.
-




Compared to a Single Value

-  lower than the comparison value;  higher than the comparison value;  not statistically different from comparison value.
-

Trend

-   non-significant change over time;   significant change over time;  no change over time.
-

Compared to Prior Value

-  higher than the previous measurement period;  lower than the previous measurement period;  no statistically different change from previous measurement period.
-

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