

# Mount Sinai

MEDICAL CENTER

## 2020 COMMUNITY HEALTH NEEDS ASSESSMENT & IMPLEMENTATION STRATEGY





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SKOLNICK SURGICAL  
TOWER

HILDEBRANDT EMERGENCY

EMERGENCY



# 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. Health care organizations quickly reevaluated how to deliver health care safely. 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 health care-related challenges.

Mount Sinai was on the front line during this time, 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, and then 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 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 man-made 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 2,709,465; 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 and 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 races.

## 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 listed below.

Leading Causes of Disease-Related Death

- Heart disease
- Cancer
- Mental well-being/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 health care 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 [msmc.com](https://msmc.com). Public comment can be addressed to Mount Sinai Medical Center, 4300 Alton Road, Miami Beach, FL 33140.



# 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 the following:

- A description of the mission of Mount Sinai Medical Center
- A description of the community served by Mount Sinai Medical Center
- 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:

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

# Mission

## Mission Statement

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

## Mount Sinai Family

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

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:

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

## 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

**Miami Shores** Primary & Specialty Care

**Midtown** Primary & Specialty Care

**Skylake** Primary & Specialty Care

**Sunny Isles Beach** Primary & Specialty Care

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

## 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 that is helping to ensure 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.



# History

## Residency Programs

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

## Fellowship Programs

- Advanced Emergency Medicine  
Ultrasound
- Breast Imaging
- Cardiology
- Interventional Cardiology
- 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. Research is currently underway in the following areas:

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

Incorporated in 1946 and opened in 1949, Mount Sinai was founded by a group of philanthropists and early civil rights 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 U.S. Army Air Corps 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.

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 and 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 that 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 city staff, as well as police, fire, and medical staff during a declared community crisis.





# Primary and Secondary Service Areas

Mount Sinai is the only hospital and emergency service provider on the barrier islands of Miami-Dade County. These are 32 man-made 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 3 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.

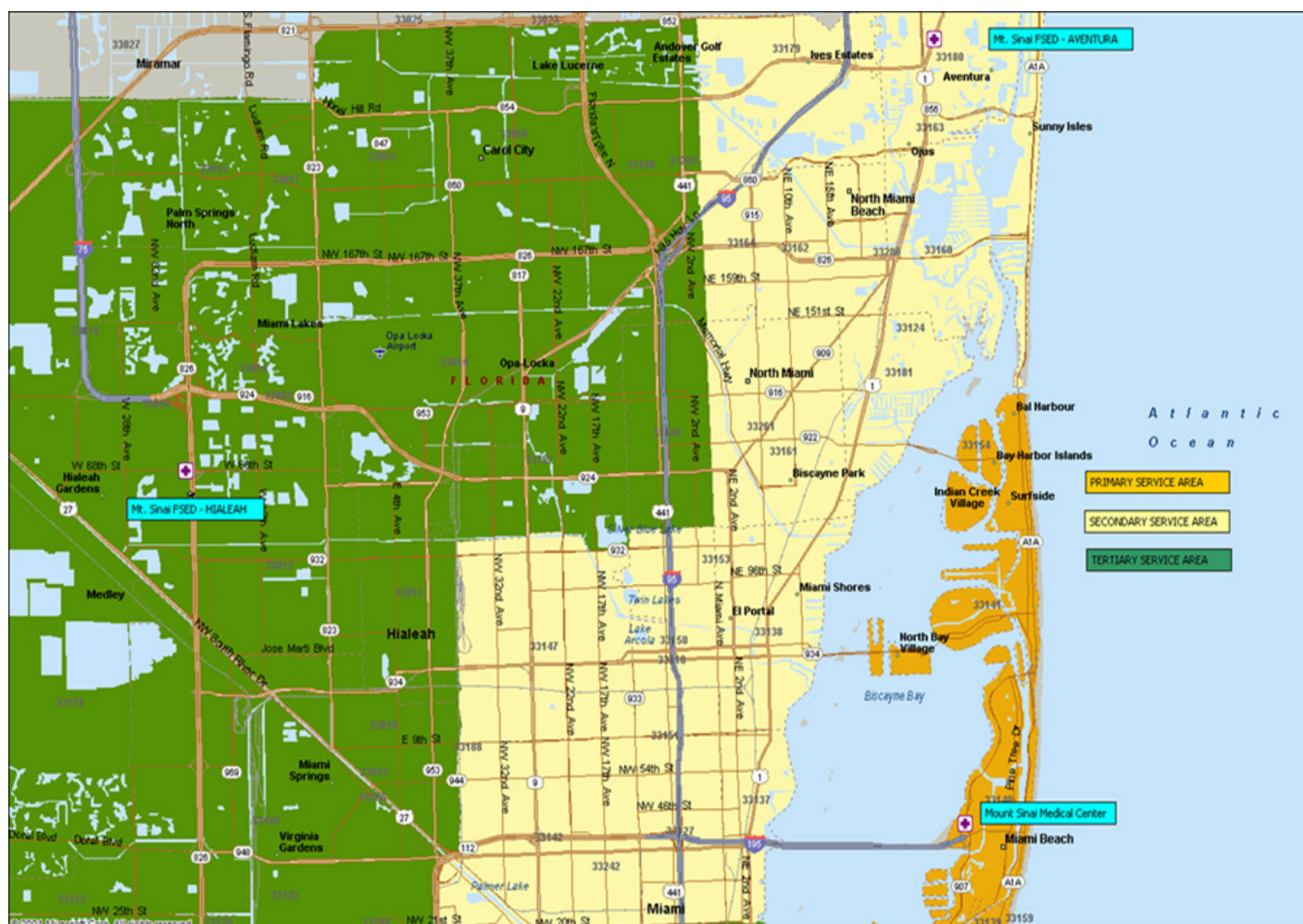
Northeastern Barrier Island Municipalities

**Bal Harbor**  
**Bay Harbor Islands**  
**Golden Beach**  
**Indian Creek**  
**Miami (island)**  
**Miami Beach**  
**North Bay Village**  
**Sunny Isles Beach**  
**Surfside**

## 2019 Population by Service Area

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

Table 1



2019 Population by Service Area



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**

## 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,

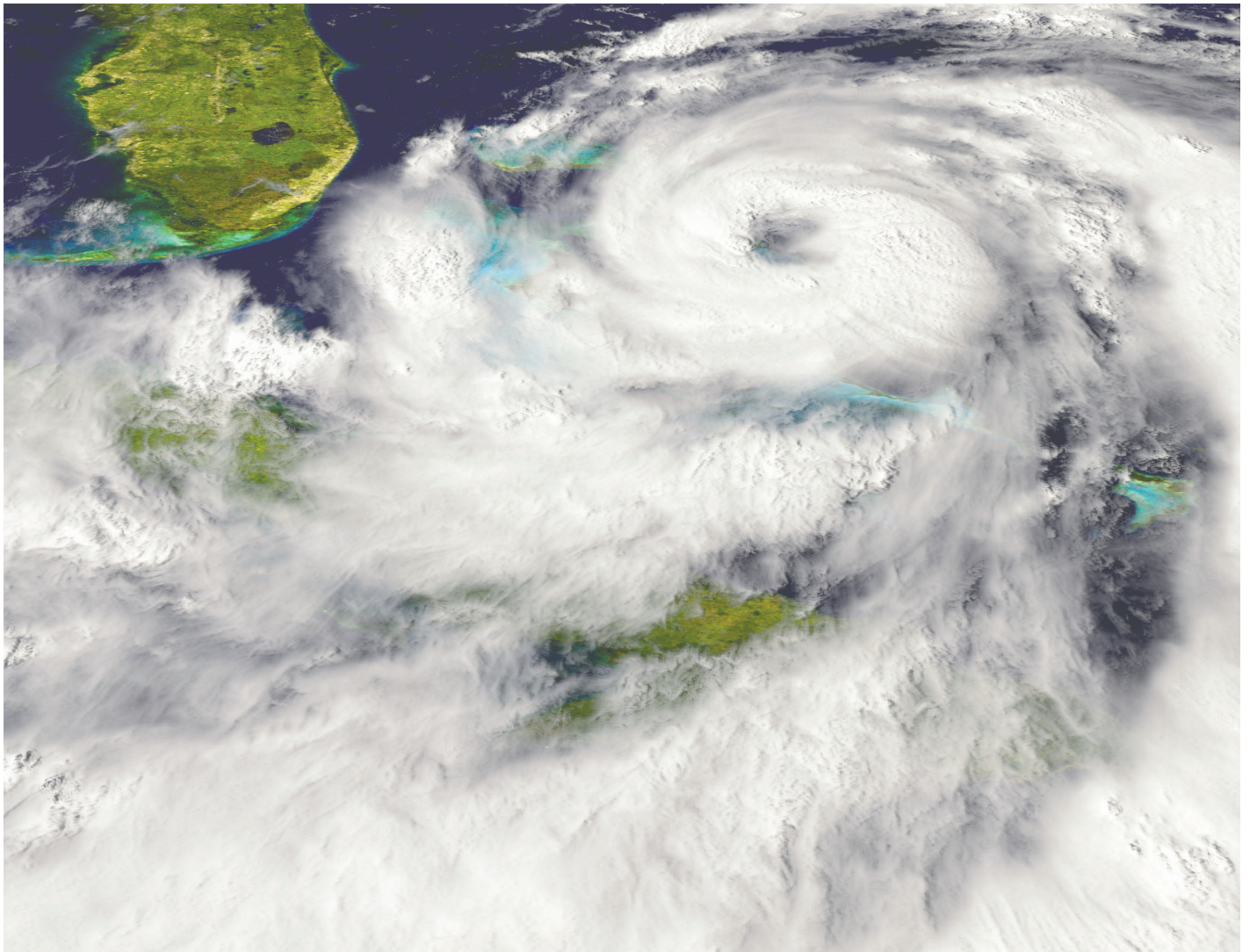
have tolls. The Julia Tuttle Causeway has an average daily two-way traffic count of 128,500.<sup>1</sup> It is a multilane interstate, connecting residents, visitors, and employees between Miami and Miami Beach. Mount Sinai's main campus is located at the terminus of the Julia Tuttle Causeway and Interstate 195.

## Emergency Services and Disaster Response

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

dependent residents, including those in intensive care who 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 lockdown by providing safe helipad service and access by boat. Mount Sinai also serves as a national stockpile drop location for counterterrorism measures.





# 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 key demographics:

## 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	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
<b>TOTAL</b>	<b>2,709,465</b>	<b>90,108</b>	<b>185,110</b>

Table 2

## Comparative Median Age

Miami-Dade County Source: Applied Geographic Solutions, 2021	City of Miami Beach Miami Beach, Florida Population 2020 Demographics, Maps, Graphs	Mount Sinai Total Cases 2020 Internal Data
<b>39.13</b>	<b>41.4</b>	<b>56.3</b>

Table 3

## 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	Mount Sinai Total Cases 2020 Internal Data
<b>Male</b>	<b>48.60%</b>	<b>51.69%</b>	<b>43.30%</b>
<b>Female</b>	<b>51.40%</b>	<b>48.31%</b>	<b>56.70%</b>

Table 4

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 Demographics

"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; 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%)."<sup>2</sup>



# Data Assessment

## Leading Causes of Death

In assessing health care 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 at No. 1 and No. 2. Cerebrovascular disease/stroke, suicide, and Alzheimer's 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's 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's 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's 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's 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%



# Health Improvement Plans

## A. State Plan



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

*Results from the State Health Improvement Plan Steering Committee Meeting on September 30, 2021*

Page 1 of 1

## B. County Plan

# Miami-Dade County

## Community Health Improvement Plan

April 2019 - December 2024



Prepared by the Florida Department of Health  
Office of Community Health and Planning  
[Miamidade.floridahealth.gov](https://miamidade.floridahealth.gov)

“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.**”

This plan has been prepared by the Florida Department of Health, Office of Community Health and Planning ([miamidade.floridahealth.gov](https://miamidade.floridahealth.gov)).

Figure 5



# Chronic Diseases and Conditions

As we see from the statistics in the Data Assessment section, heart disease and cancer remain as the top two leading causes of death. Treatment of these diseases is the primary focus at Mount Sinai Medical Center. Another emerging priority is mental well-being. The COVID-19 pandemic pointed a spotlight on various aspects of behavioral health. Mount Sinai's team has worked to adapt to and develop services in support of 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 affects the structure or function of the heart."<sup>3</sup> There are different types of heart disease. Some of which are congenital, and others are caused by medical conditions or lifestyle risks.

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

According to the Centers for Disease Control and Prevention, 4.6% of adults were diagnosed with coronary heart

disease, which led to over 650,000 deaths in 2019; heart disease accounted for 6.9% of physician office visits and 7.2% of emergency room visits.<sup>4</sup>

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.

### Heart Failure: Medicare Population County: Miami-Dade

17.9%

Source: Centers for Medicare & Medicaid Services 

Measurement period: 2018

Maintained by: Conduent Healthy Communities Institute

Last update: March 2021

COMPARED TO



FL Counties



U.S. Counties



FL Value  
(14.8%)



US Value  
(14.0%)



Prior Value  
(17.9%)



Trend

Figure 6







Heart disease accounts for approximately 2 out of 10 deaths in Florida. 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. 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. 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.<sup>5</sup>

## 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 program 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.

Mount Sinai is licensed by the Florida Agency for Health Care Administration as a designated Level 2 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 subspecialties 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



## 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.

Figure 7

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, with 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 the following:<sup>6</sup>

- **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<sup>+</sup> 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.

According to the Centers for Disease Control and Prevention, 9.5% of adults were diagnosed with cancer, which led to nearly 600,000 deaths in 2019. Cancer accounted for 26.3 million physician office visits in 2018.<sup>7</sup>



### Worldwide New Cancer Cases

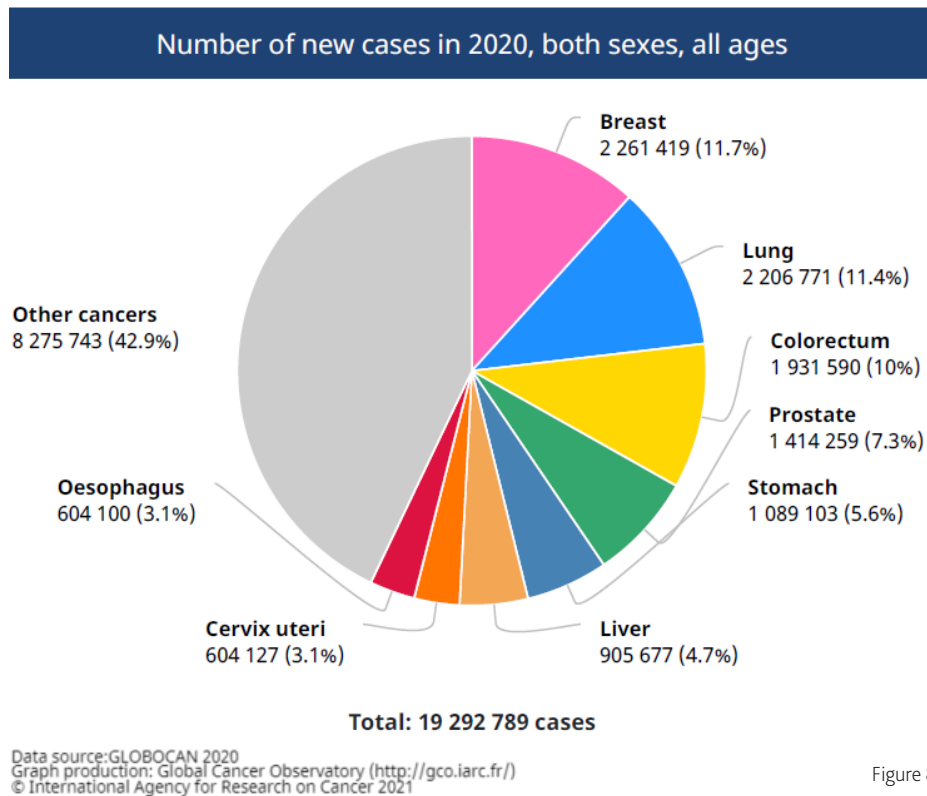


Figure 8

### Worldwide Cancer Deaths

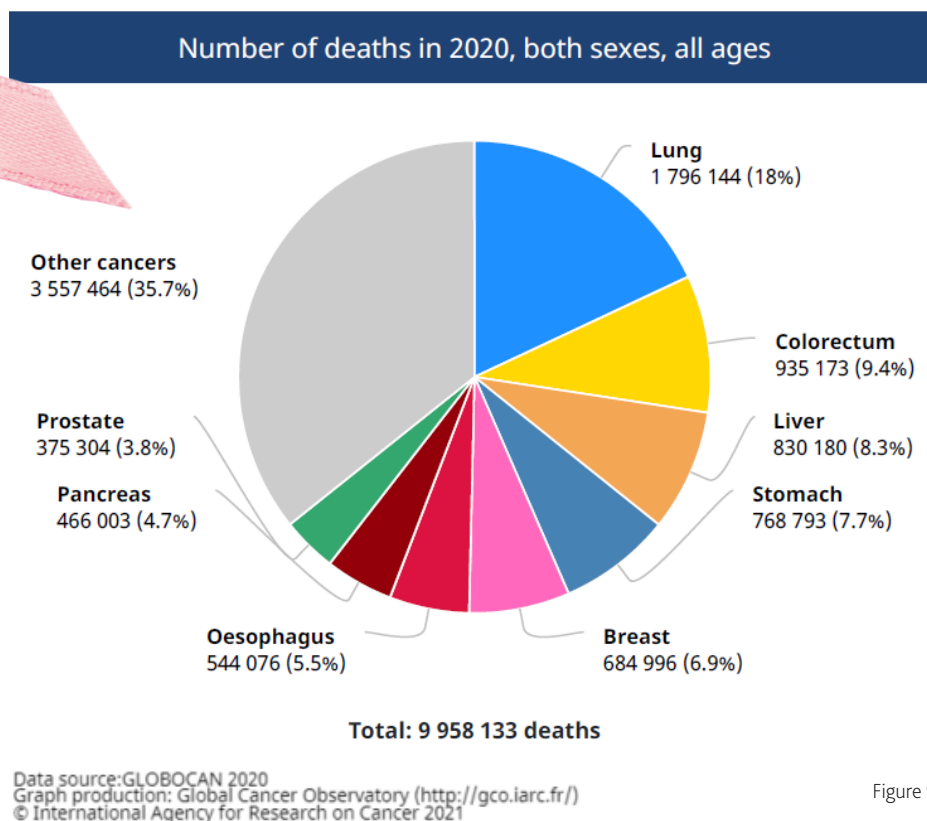


Figure 9





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 and 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 and bronchus, colorectal, non-Hodgkin's lymphoma, and melanoma. In males, the top five cancers were prostate, lung and bronchus, colorectal, melanoma, and bladder. Source: Florida Cancer Data System.<sup>8</sup>


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 the prior year, while remaining below state average.

#### All Cancer Incidence Rate

### County: Miami-Dade

397.1

cases/ 100,000 population

**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

COMPARED TO



FL Counties



FL Value  
(444.4)



Prior Value  
(392.0)



Trend

Figure 10

The patient trend at Mount Sinai is in line with overall Florida averages, with the top cancer diagnoses being lung and bronchus, prostate, breast, blood and 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.



## 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 (%)
<b>Overall Totals</b>	<b>2,934</b>	<b>(36.15 %)</b>	<b>2,960</b>	<b>(36.47 %)</b>	<b>2,222</b>	<b>(27.38 %)</b>	<b>8,116 (100 %)</b>
<b>TOP 5 Diagnoses</b>							
<b>Bronchus &amp; Lung</b>	<b>433</b>	<b>(35.99 %)</b>	<b>451</b>	<b>(37.49 %)</b>	<b>319</b>	<b>(26.52 %)</b>	<b>1203 (14.82 %)</b>
<b>Prostate Gland</b>	<b>429</b>	<b>(36.33 %)</b>	<b>423</b>	<b>(35.82 %)</b>	<b>329</b>	<b>(27.86 %)</b>	<b>1181 (14.55 %)</b>
<b>Breast</b>	<b>344</b>	<b>(35.54 %)</b>	<b>362</b>	<b>(37.4 %)</b>	<b>262</b>	<b>(27.07 %)</b>	<b>968 (11.93 %)</b>
<b>Blood &amp; Bone Marrow</b>	<b>247</b>	<b>(36.7 %)</b>	<b>243</b>	<b>(36.11 %)</b>	<b>183</b>	<b>(27.19 %)</b>	<b>673 (8.29 %)</b>
<b>Urinary Bladder</b>	<b>174</b>	<b>(32.58 %)</b>	<b>180</b>	<b>(33.71 %)</b>	<b>180</b>	<b>(33.71 %)</b>	<b>534 (6.58 %)</b>
November 2, 2021							

Table 9

### 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.<sup>9</sup>

## 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 Well-Being/ Behavioral Health

Issues related to mental well-being (such as suicide or Alzheimer's) are seen in the top 10 leading causes of death, and they were brought to the forefront during the COVID-19 pandemic.

According to the Centers for Disease Control and Prevention, 11.2% of adults expressed regular feelings of worry, nervousness, or anxiety; 4.7% of adults expressed regular feelings of depression; over 47,000 suicides were reported in 2019; and diagnosed mental disorders accounted for 55.7 million

physician office visits and 4.9 million emergency room visits nationally in the same year.<sup>10</sup>

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

#### Hospitalization Rates and Incidents of Diagnosis: 2018

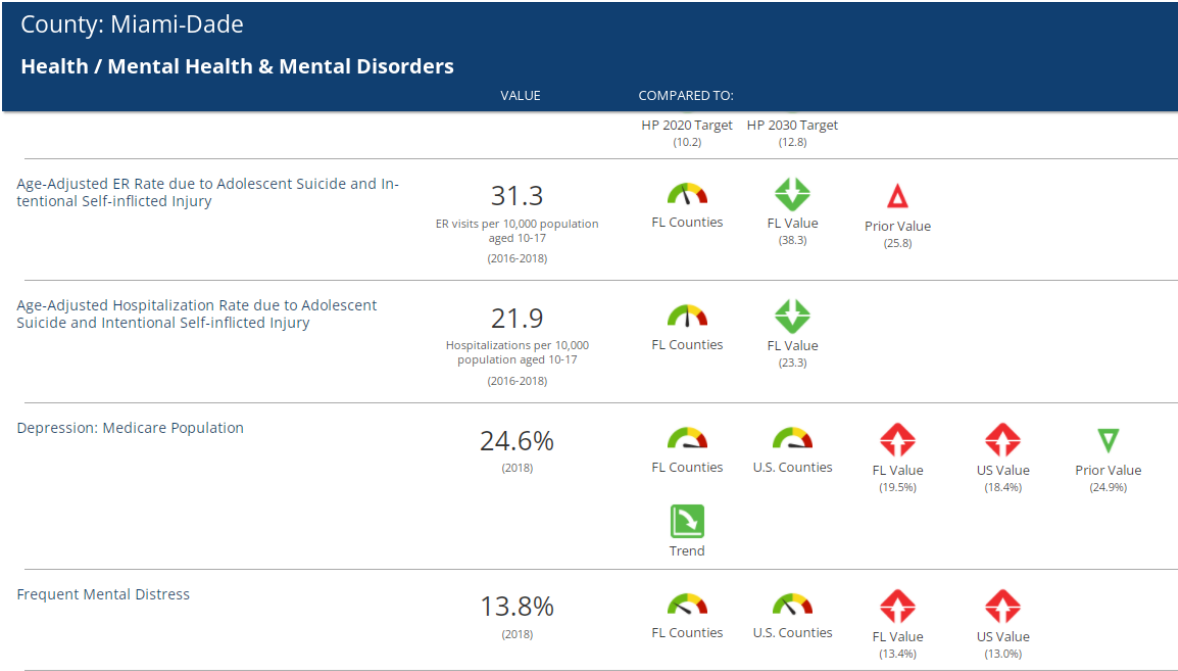


Figure 11

#### Mount Sinai Medical Center — Behavioral Health Case Volume 2017-2020

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

Table 10



## Florida State Health Improvement Plan (SHIP) 2017-2021

Florida's surgeon general charged a varied group of partners to create a health improvement blueprint for the state, which ultimately became Florida's State Health Improvement Plan (SHIP). SHIP is a five-year plan that details specific goals for Florida's public health system. Behavioral health is priority No. 6 in the SHIP plan.

### SHIP PRIORITY 6

## Behavioral Health—Includes Mental Illness & Substance Abuse

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.

<b>Goal</b>	<b>BH1</b>	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.
<b>Strategy</b>	<b>BH1.1</b>	Increase the number of child welfare-involved families with access to behavioral health services.
<b>Strategy</b>	<b>BH1.2</b>	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.
<b>Goal</b>	<b>BH2</b>	Decrease the number of newborns experiencing neonatal abstinence syndrome.
<b>Strategy</b>	<b>BH2.1</b>	Increase the number of pregnant women in treatment for opioid disorders.
<b>Goal</b>	<b>BH3</b>	Reduce the number of opioid overdose deaths among individuals with opioid use disorders.
<b>Strategy</b>	<b>BH3.1</b>	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.
<b>Goal</b>	<b>BH4</b>	Reduce the number of deaths by suicide in Florida.
<b>Strategy</b>	<b>BH4.1</b>	Provide training on the prevention of suicide and related behaviors to community and clinical service providers.
<b>Strategy</b>	<b>BH4.2</b>	Increase suicide prevention efforts for high-risk populations.
<b>Strategy</b>	<b>BH4.3</b>	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.

Figure 12



## Mental Health and the COVID-19 Pandemic

A KFF Health Tracking Poll from July 2020 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.<sup>11</sup> According to the Centers for Disease Control and Prevention, 13% of Americans reported starting or increasing substance use as a way of coping; 11% seriously considered suicide.<sup>12</sup>

“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.”<sup>13</sup> 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, found that having any psychiatric disorder resulted in a heightened risk for substance abuse.<sup>14</sup>

## Mount Sinai Response/Plan

Mount Sinai Medical Center has taken an informed dialectical behavioral therapeutic approach to treatment. This approach involves a multidisciplinary/multicultural team, providing a variety of outpatient services (see below) along with various community outreach programs (such as VALOR, Surfside tragedy support, First Responder Education, and CIT support).

MSMC Outpatient Behavioral Health Center’s vision is as follows:

- Provide access to integrated health care that enhances 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.<sup>15</sup>

“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.”<sup>16</sup>

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

### Homeless Populations Summary for FL-600 — Miami-Dade County

Date of Point In Time (PIT) Count: 1/21/2021

	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

Table 11



## 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 (such as Miami-Dade County Homeless Trust and 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 on-site administration and on-site 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 the need for rehospitalization.

### 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 post-graduate year (PGY).





D. Alzheimer’s Disease

According to the Centers for Disease Control and Prevention, Alzheimer’s disease ranked as the sixth leading cause of death.<sup>17</sup> 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

Dementia Care & Cure Initiative



Figure 13

their communities — with each interaction they have while out will be a positive one, created out of respect and understanding.

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

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.<sup>18</sup>

Alzheimer’s Death Rate: 2018

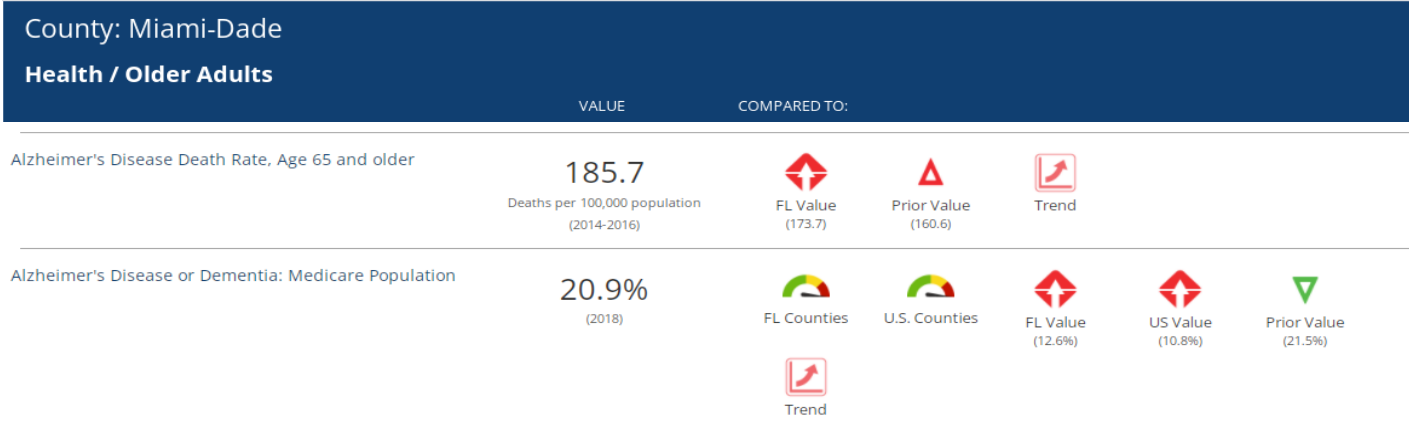
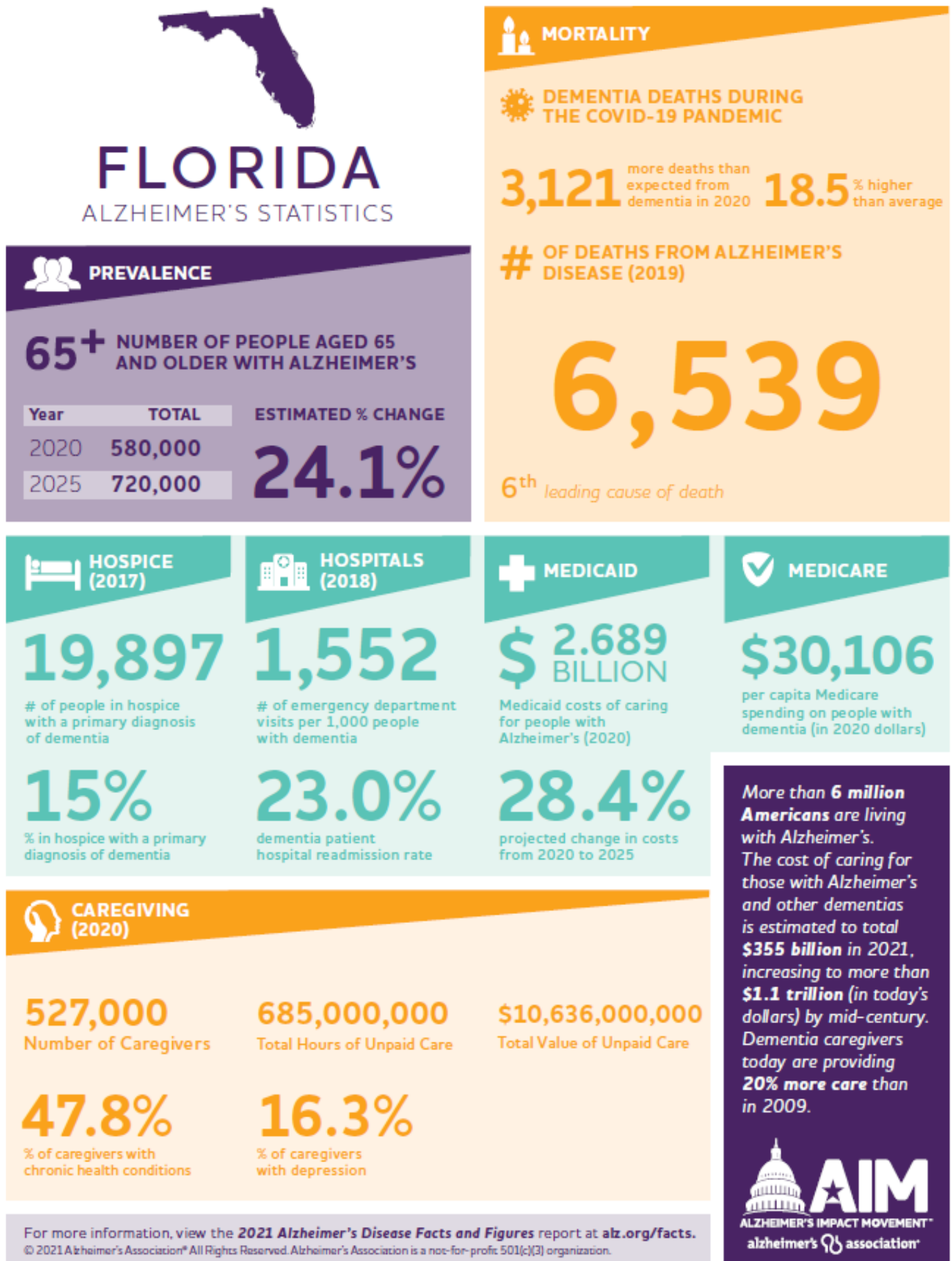


Figure 14



Figure 15





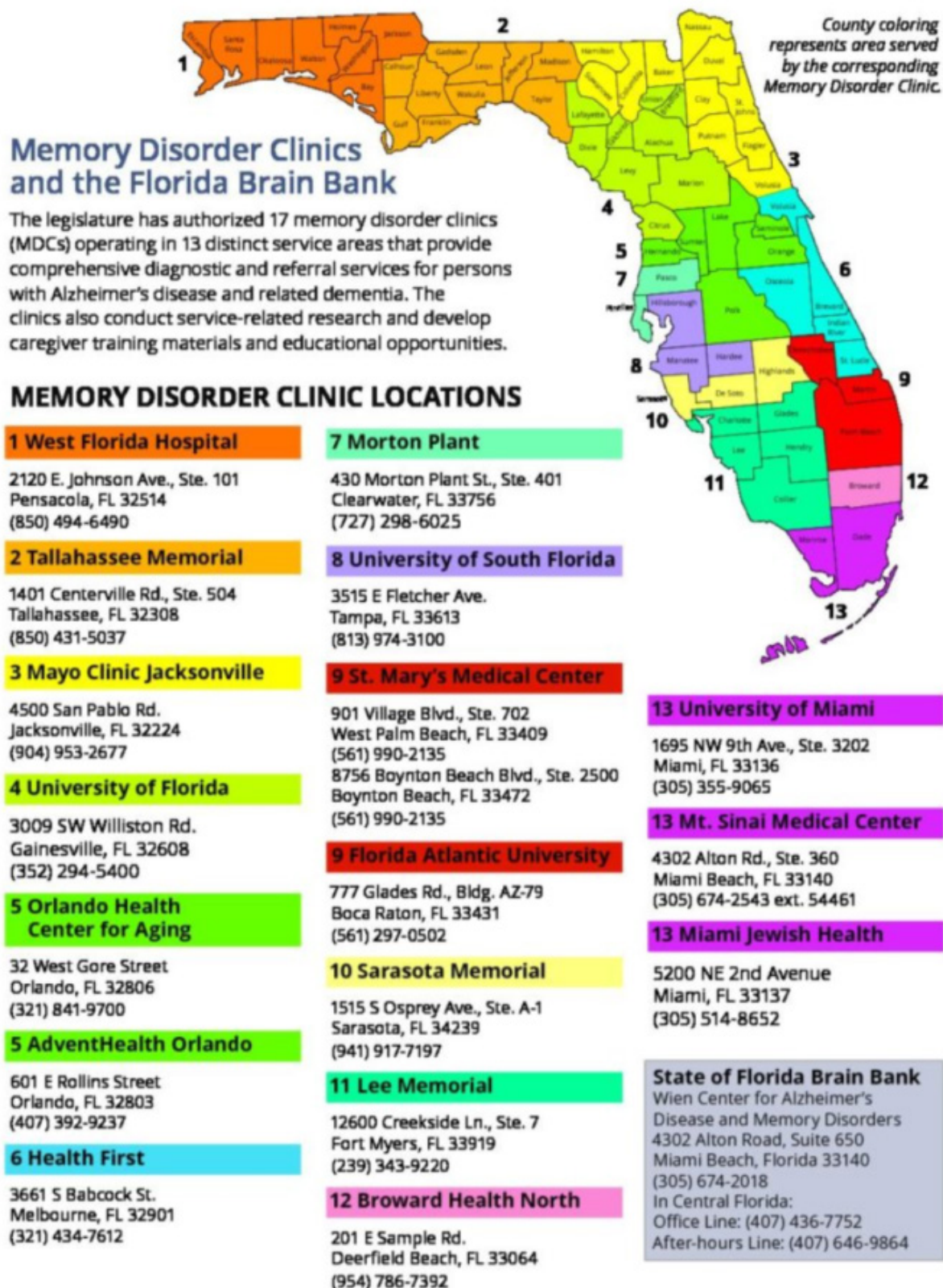


Figure 16



## 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.





# Initiatives/Vision/Implementation Strategies

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



Figure 17

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's goal is helping to keep our participants as active and independent as possible living their best lives at home.

## 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."<sup>19</sup> 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 Health Care

A growing trend in health care 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."<sup>20</sup>

"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."<sup>21</sup>

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 patient's health care record to provide more awareness in the patient's 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 are linked in the Epic system, allowing a notice to fire in Epic and 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, mental well-being/behavioral health 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

#### Education and Prevention:

- 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 age 50 and older

#### Healthy Eating and Weight Management:

- Continue partnership with South Florida Seniors in Action to distribute fresh, healthy food to low-income families, disabled veterans, and homebound individuals
- Offer educational lectures and seminars on healthy eating, proper nutrition, and exercise
- Encourage better health habits through weight loss and exercise challenges

#### Emotional Support — Comprehensive Cancer Center:

- 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

#### Emotional Support — The Wien Center for Alzheimer's Disease and Memory Disorders:

- 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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## Exhibits

Exhibit A. Miami-Dade Matters. "Cancer in Miami-Dade: Legend." *Miami Matters*, <http://www.miamidadematters.org/indicators/index/dashboard?alias=HCSF>.



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