



**SARASOTA
MEMORIAL**
HEALTH CARE SYSTEM

Sarasota Memorial Health Care System **Response to COVID-19 Pandemic**

A Three-Year Review

2020-2022 Community Report
February 21, 2023

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Methodology

On November 29, 2022, the Sarasota County Public Hospital Board voted to conduct a review of the care provided by Sarasota Memorial Health Care System (SMHCS) throughout the COVID-19 pandemic, through the Hospital Board's Quality Committee.¹ In collaboration with the Chair and Vice-Chair of the Quality Committee, the Chief of the Medical Staff, and the Chief Medical Officer, a COVID-19 Panel was assembled to review policies, procedures and practices instituted as part of its pandemic response. Made up of 70+ hospital and physician leaders, peer review specialists, pharmacists, clinical researchers, case managers, clinical educators, laboratory scientists, nursing, logistics, and other department managers, the COVID-19 Panel reviewed policies Sarasota Memorial employed to safeguard staff, patients and visitors throughout the pandemic; guidelines and references clinicians used in decision-making and treatment of COVID patients; strategies to manage staffing challenges and critical shortages of space, equipment, supplies and medications; and comparative measures that benchmark organizational performance and clinical outcomes. This Panel, the Hospital Board and Sarasota Memorial leaders thank the many physicians, staff members, patients and family members who shared their experiences, for contributing to our understanding and enabling this report.

¹ As part of its two-part review, the Panel also presented the results of confidential patient case reviews to the Quality Committee of the Sarasota County Public Hospital Board. Nine cases were reviewed by the Committee for Professional Enhancement and five were selected for presentation by the Board chair to the Quality Committee on Feb. 21, 2023. All cases met the standard of care.

Executive Summary

With all of the international destinations in Florida, no one expected Sarasota to become ground zero for the first confirmed COVID-19 case reported in Florida. But that's exactly what happened when the state announced Florida's first two cases on March 1, 2020 – one hospitalized in Sarasota County and a second in Hillsborough County.

Within the first few weeks of Sarasota's outbreak, Sarasota Memorial had more than 70 inpatients confirmed or presumed to have the novel coronavirus SARS-CoV-2. It quickly became clear that the extensive planning and preparations Sarasota Memorial's COVID Task Force had done in the two months leading up to its own Patient Zero was only the beginning of the work that would be required to manage the many critical issues that would face Sarasota Memorial, its staff and surrounding communities.

As community spread raised anxiety levels inside and outside the hospital, the need to address concerns internally and externally was urgent and ongoing as the community, local officials and the media turned to its public hospital for trusted information and advice. In gathering and disseminating information, it was necessary for the health system to stay up to date with the best, most scientifically-derived and reliable information available. This information would be vital to maintaining a high standard of care and ensuring clinical staff were equipped to quickly adapt procedures and protocols in line with the latest guidance.

As knowledge of the virus and its methods of transmission grew, Sarasota Memorial leaders were called upon to continually institute, review and adapt precautions to ensure the safety of patients, clinicians and frontline health care workers through multiple COVID surges. These policies also had to take into account the impact of global supply chain issues and the resultant shortages of medical equipment, supplies and medications, in addition to industry-wide staffing shortages. In this context, it was necessary for the hospital to rapidly develop solutions to enable the continued delivery of safe medical care.

Over the last three years of the pandemic, more than 70% of all COVID patients hospitalized in Sarasota County were cared for at Sarasota Memorial, including the new SMH-Venice hospital that opened during the Omicron wave in November 2021. As part of its assessment of the effectiveness of Sarasota Memorial's COVID care, the Panel benchmarked the performance of the health system utilizing data provided by Premier Inc., an independent quality improvement organization used by state and federal agencies and 1,300 hospitals across the nation. The Panel found that Sarasota Memorial performed strongly across a wide range of assessment areas when compared to other Florida hospitals and U.S. hospitals and was pivotal to the robust COVID outcomes in the Suncoast region.

This report is designed, as charged by the Hospital Board, to review the care that was provided to patients – both those with COVID and others – and to identify areas of success and opportunities for

improvement. These recommendations are aimed at ensuring Sarasota Memorial is equipped to apply lessons from the pandemic to refine its approach to care and to effectively prepare for future public health challenges.

The Panel also considered the heart-breaking comments and stories shared by some of the families of patients who did not survive to carefully examine what might be different when or if we are similarly challenged. It is with deep sorrow that we acknowledge the many friends, neighbors, family members and staff members lost to COVID-19. The disease was the third-leading cause of death in the U.S. from 2020 through mid-2022. We are thankful that COVID-19 has now dropped from the top five.

Additional questions and concerns shared at recent Hospital Board meetings are addressed in the appendices at the end of this report. (*Appendix A*)

Findings at a Glance

COVID MORTALITY LOWER (BETTER) THAN STATE/NATIONAL BENCHMARKS

Over the past three years, Sarasota Memorial's COVID mortality rate was 24% better than expected, according to an independent analysis by Premier Inc. In the analysis of 1,300 hospitals in Premier's database, Sarasota Memorial COVID mortality rates were lower (better) than Premier's national, South Atlantic, Florida and peer hospital benchmarks through each year of the pandemic, including the deadliest Delta phase. If all hospitals in Premier's analysis had the same observed mortality rate as Sarasota Memorial, an estimated 38,000 deaths could potentially have been avoided.

COVID COMPLICATIONS & HOSPITAL STAYS LOWER (BETTER) THAN STATE/NATIONAL BENCHMARKS

In Premier's comparative analysis, Sarasota Memorial had lower (better) complication rates and generally shorter lengths of stay than national, regional and peer benchmark groups.

COVID READMISSIONS AS EXPECTED, BUT HIGHER THAN STATE/NATIONAL BENCHMARKS

COVID patient readmissions remained near the expected levels, but were higher than some of Premier's comparison groups. The highest readmission rate occurred in 2021, during the deadly Delta wave, when Sarasota Memorial discharged patients earlier to free up beds for more severely ill patients. Mortality rates, however, continued to be lower (better) than benchmarks.

SEVERE SHORTAGE OF TESTING SITES/SUPPLIES LED TO EXTENDED HOSPITAL STAYS

Early in the pandemic, a lack of testing sites made it challenging to monitor patients/staff exposed to the virus; delayed results (often a week or more) led to extended hospital stays and strained availability of beds, personal protective equipment (PPE) and supplies. Sarasota Memorial invested nearly \$1 million to build a new testing platform that allowed it to perform all COVID tests in-house with results available within 24 hours, or in as little as 2 hours if results were needed urgently.

TREATMENT GUIDELINES EVOLVED RAPIDLY AS DOCTORS LEARNED MORE ABOUT THE VIRUS

With no known treatment or cure for COVID-19, doctors relied on standard therapies to manage patient symptoms, but few medications proved effective. It took nearly the full first year of the pandemic for researchers/physicians across the globe to gain a strong enough understanding of COVID-19's pathology to develop standardized protocols to manage the disease. During that time, the hospital participated in clinical trials and expanded access programs that gave patients earlier access to promising treatments, including monoclonal antibody therapy, remdesivir and convalescent plasma.

SARASOTA MEMORIAL CARED FOR MOST COVID PATIENTS IN REGION, AND THE MOST CRITICALLY ILL

One of the largest public hospitals in the nation, Sarasota Memorial has cared for 70% or more of all COVID patients hospitalized in Sarasota County over the course of the pandemic. Hospitals throughout the region relied on Sarasota Memorial, with its larger, well-equipped intensive care unit and highly specialized staff, to accept patient transfers (nearly 8,000 requests over the past three years) and care for the most critically ill patients.

MULTIPLE SURGES LED TO CRITICAL SUPPLY AND STAFFING CHALLENGES

Hospital teams worked 24/7 to manage critical staffing and supply shortages. Among other measures, the health system hired more than 900 employees in 2021 to support the opening of the new SMH-Venice hospital and the 8-story Oncology Tower, onboarding them early to support the Sarasota team while the buildings remained under construction; the health system also diverted critical supplies and ventilators purchased for the new facilities to the Sarasota campus, while its supply chain team worked with local, national and international organizations to source and secure PPE and other essential supplies.

CAPACITY STRETCHED BEYOND LIMITS FOR MOST OF PANDEMIC

The Sarasota campus was operating at full capacity before the onset of COVID-19, and stretched beyond its limits for most of the pandemic. The Sarasota hospital doubled its ICU capacity from 62 beds to 120 during multiple surges, and converted several hundred beds and over 10 patient care units to increase the number of isolation rooms for COVID patients and separate units for non-COVID patients. The SMH-Venice hospital has been operating at or beyond capacity since opening in late 2021 during the Omicron surge. Both campuses continue to manage the care of COVID patients while treating record-breaking volumes of non-COVID patients. The number of patients seeking care at Sarasota Memorial's two hospitals spiked following the abrupt closure of Venice Regional (ShorePoint Health) in the summer of 2022 and the temporary shut-down of south Florida hospitals damaged by Hurricane Ian last fall.

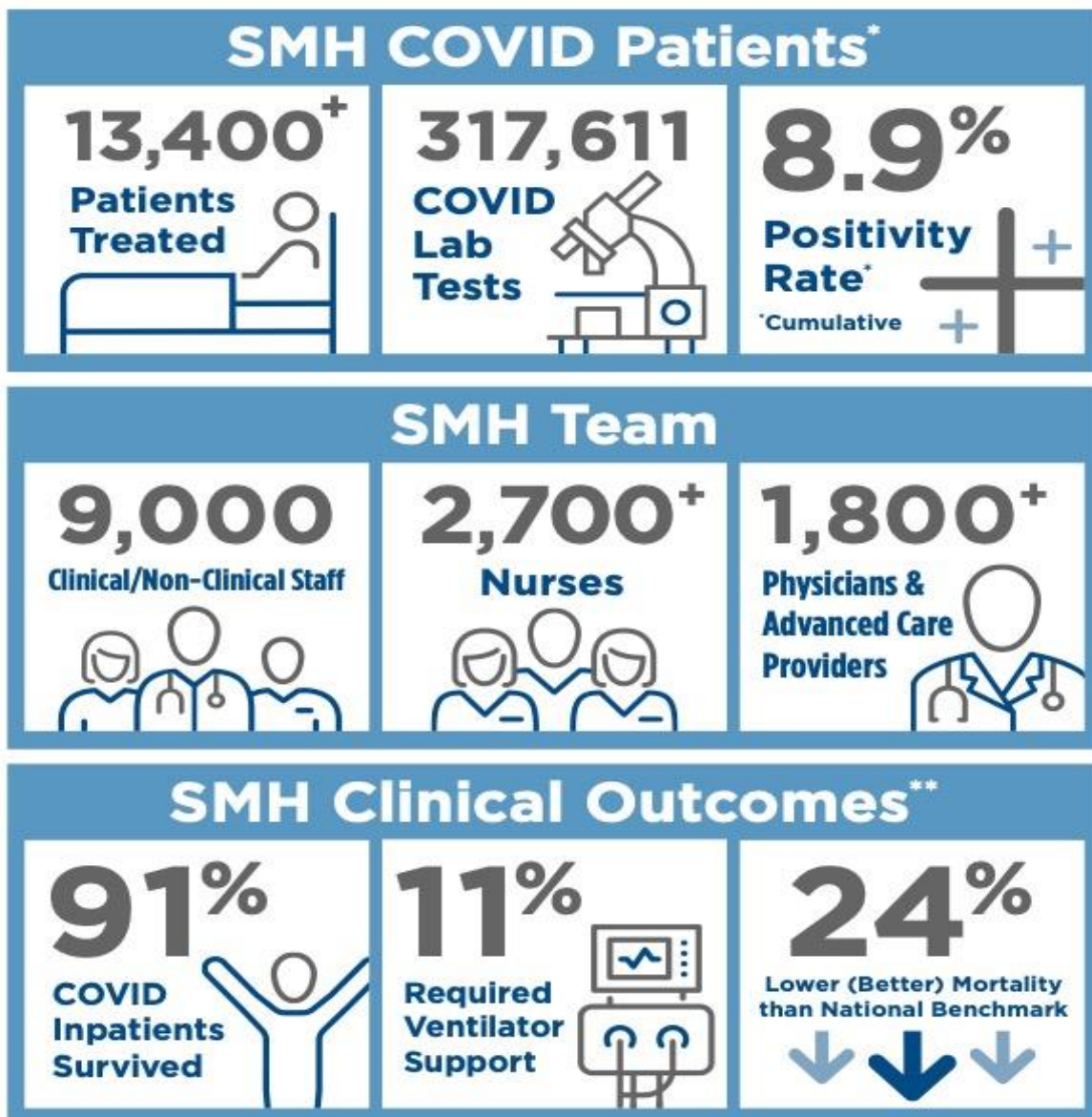
HOSPITAL VISITATION RESTRICTIONS TOOK A HEAVY TOLL ON PATIENTS AND FAMILIES

Visitation restrictions were implemented by Sarasota Memorial and other hospitals across Florida and the U.S. to reduce mortalities by safeguarding the health of essential frontline medical staff, vulnerable patients and members of the local community. These restrictions took a heavy toll on patients and their loved ones. Alternative means of connecting patients and their families were introduced and hospital staff played an enhanced role in facilitating communication and supporting patients. Florida's "No Patient Left Alone Act" now guarantees visitation as a fundamental right for hospitalized patients.

TOUGH FINANCIAL CHALLENGES LIE AHEAD

The health system sustained \$38 million in lost revenue and more than \$77 million in increased costs directly related to the pandemic. CARES Act funding helped to offset some of the financial impact caused by COVID-19. By September 2022, Sarasota Memorial had paid back all of its CARES Act temporary relief loans (CAAP funds). The health system continues to face significant financial challenges now, and in the years ahead, intensified by higher labor and supply costs, nationwide workforce shortages, and rapid inflation with the possibility of a recession.

COVID Care at a Glance



* Cumulative data collection from SMCHS: 3/2/20 to 2/1/23.

Includes COVID inpatient admissions and ER/observation patients who were treated and released.

** Independent analysis/data collection Premier Inc. Includes COVID inpatient admissions, 4/1/20 to 10/31/22.

Comparative Analysis: COVID Clinical Outcomes

The past few years tested the resilience and capabilities of our nation's hospitals like never before. The U.S. has recorded more than 100 million confirmed cases of COVID-19 illness since it detected its first case in January 2020, and sadly, more than 1 million deaths. As we enter the pandemic's fourth year, roughly 4,000 people continue to be admitted to U.S. hospitals each day and up to 500 people a day are still dying from the virus.

While age is the main determinant of COVID-19 related deaths, access to high-quality health care, especially for certain minority and high-risk populations, is a significant factor that influences a hospital's and community's COVID mortality rate.

There are multiple clinical outcomes and processes that help measure how well individual hospitals have cared for COVID patients, but among the most key is COVID-related mortality. This section of the report shares in-hospital mortality for adult patients admitted to Sarasota Memorial with primary or secondary diagnoses of COVID-19, compared to national and regional benchmarks. It also shares secondary clinical outcomes, including complications, length-of-stay, and readmission rates specific to COVID patients.

Retrospective studies show that patients who had access to large, well-equipped hospitals like Sarasota Memorial, with a robust team of multi-disciplinary specialists, fared better than those in rural communities or hospitals with limited access to specialty care.

Comparative analysis was provided by Premier Inc., an independent quality improvement organization used by state and federal agencies and 1,300 hospitals across the nation to benchmark effectiveness and quality of care. The review includes adult inpatients (18 years or older) admitted to acute care hospitals with COVID-19 as a primary or secondary diagnosis, from April 1, 2020 (when the federal government assigned DRG codes to COVID-related care) through October 31, 2022 (the most recent data set available from Premier at the time this report was prepared).

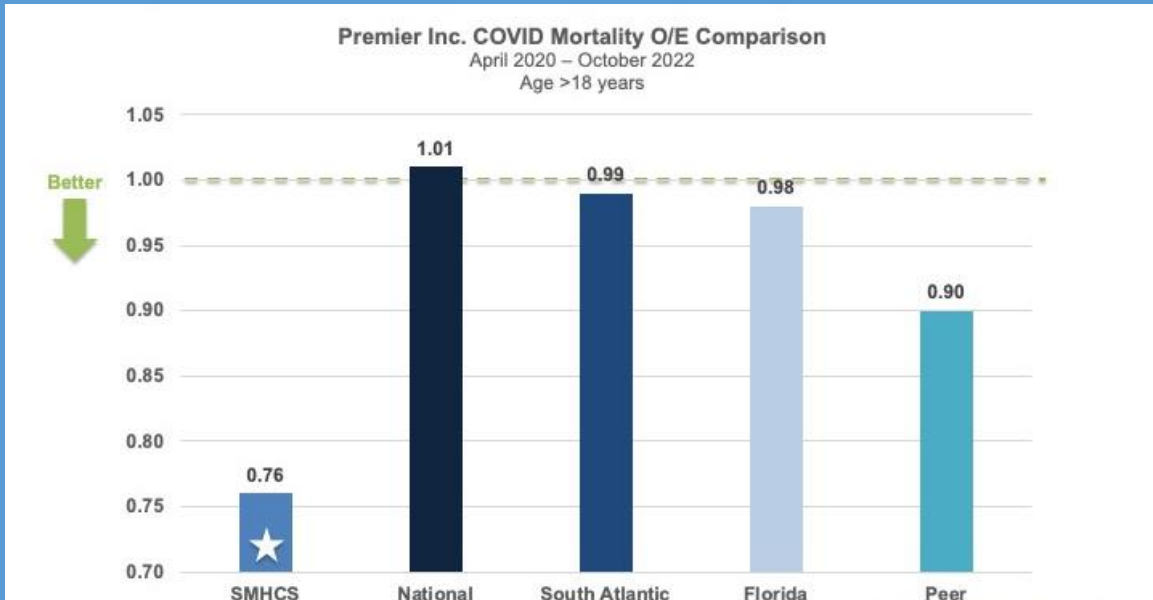
In-Hospital Mortality

By all comparative measures, Sarasota Memorial's mortality rates were lower (better) than most hospitals in Premier's database. During the analysis period, Sarasota Memorial treated 6,410 adult inpatients with COVID-19.¹ More than 90% (5,833) were treated and safely discharged. During the same time period, Sarasota Memorial had 577 COVID-related inpatient deaths, for a raw mortality rate of 9%.²

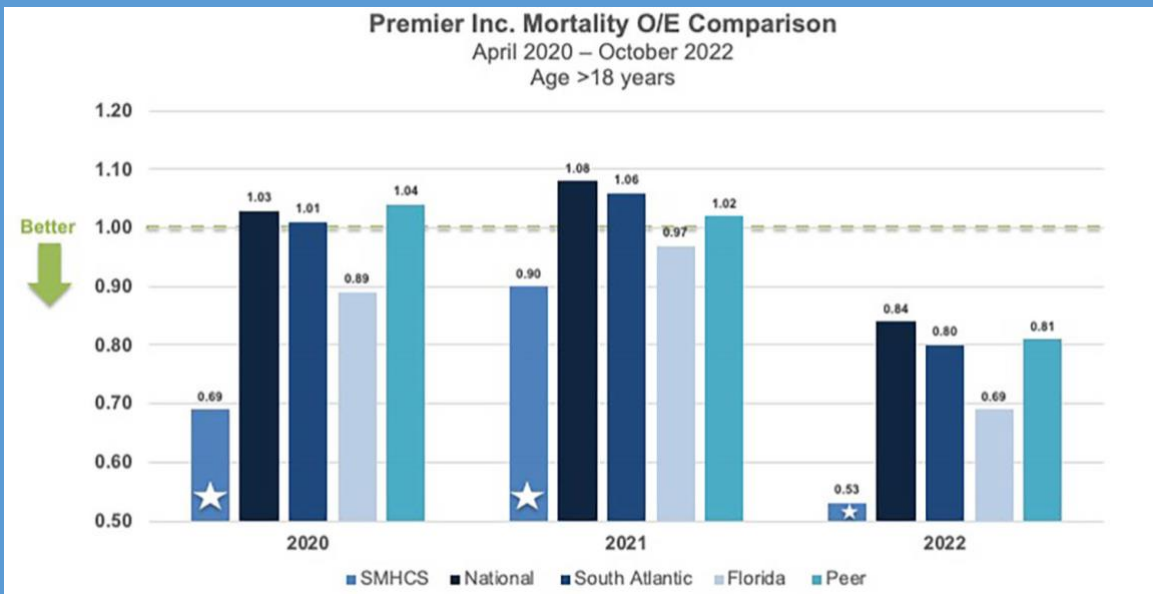
¹ Premier analysis excludes ER/observation patients, as well as those treated before and after the analysis period (4/1/20-10/31/22).

² Actual # of deaths, not risk adjusted (also known as crude mortality rate)

More Lives Saved ... Over the past three years, Sarasota Memorial’s COVID mortality rate was **24% better** than expected, **outperforming** national, South Atlantic, Florida and peer hospitals in the Premier database. By this metric, if all hospitals in Premier’s database had the same observed mortality rate as Sarasota Memorial, **as many as 38,000 deaths** could have been **avoided**.



O/E Mortality Ratio ... To compare COVID mortality and other clinical outcomes with national and regional benchmarks, Premier used the industry-standard, risk-adjusted “observed” vs. “expected” (O/E) ratio. “Observed” mortality represents the actual number of COVID patients who died in the hospital, while “expected” is the expected number of deaths based upon patients’ age, clinical acuity and severity of comorbidities. If a hospital's observed rate is lower than its expected rate (an O/E ratio less than 1), then the hospital performed better than the reference population with an equivalent patient case mix.



The comparative data demonstrates that Sarasota Memorial’s COVID-related mortality is lower (better) than Premier’s national, regional, Florida and peer benchmarks, and that the health system sustained lower/better mortality rates through each year of the pandemic, including the deadly Delta phase.

Complications, Lengths-of-Stay & Readmissions

The risk of developing complications from COVID-19 that increase length of hospital stay is much higher for people over age 65 and those with certain underlying or immune-compromising conditions. Potential complications in COVID patients include sepsis, heart attack and pneumonia, among other conditions. (See Appendix B)

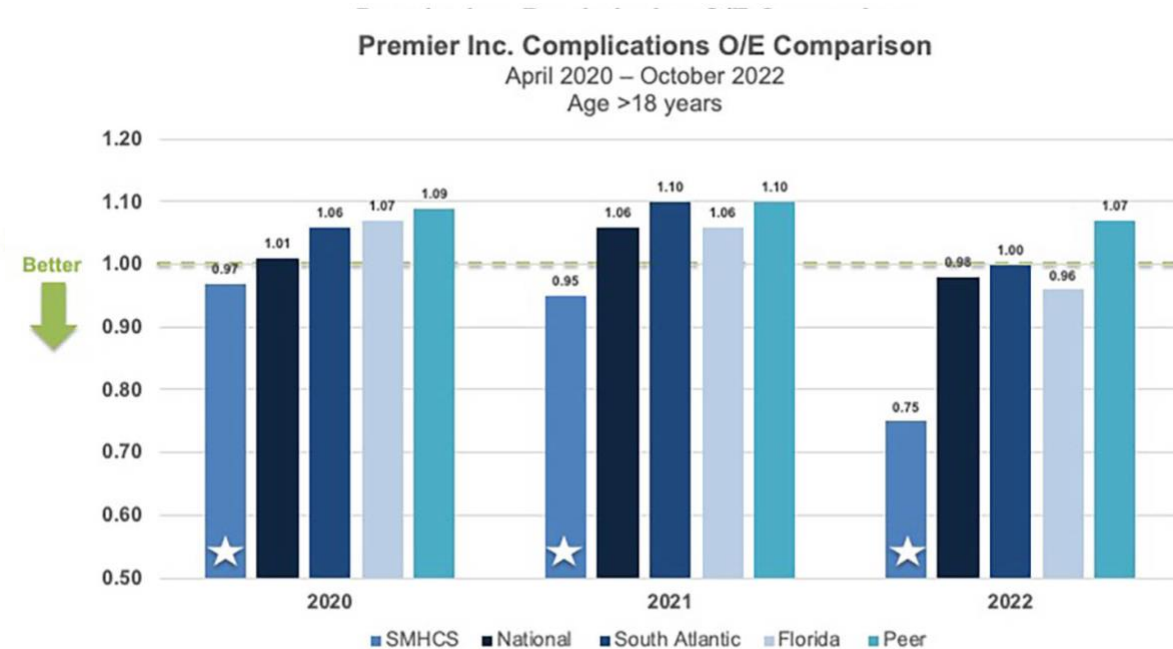
Premier’s Comparative Benchmarks

- **National** – all 1,300 hospitals in Premier’s national database
- **South Atlantic** – 218 hospitals from Delaware to Florida
- **Florida** – 90 Florida hospitals
- **Peer** – 33 hospitals in Premier’s national database of comparable size/scope of service (teaching hospitals with 500+ beds, and 3-star or higher quality rating)

(See Appendix B for a list of hospitals in Premier’s benchmark groups)

Sarasota Memorial also had lower (better) complication rates and generally shorter length-of-stays than its national, regional and peer benchmark groups, according to Premier’s risk-adjusted data.

The number of COVID patients readmitted within 30 days of discharge from Sarasota Memorial remained consistent with expected levels during 2020 and 2022. In 2021, readmission rates at Sarasota Memorial were higher than some of Premier’s comparison groups, reflecting the additional strain placed on large medical centers during the surge of the Delta variant.

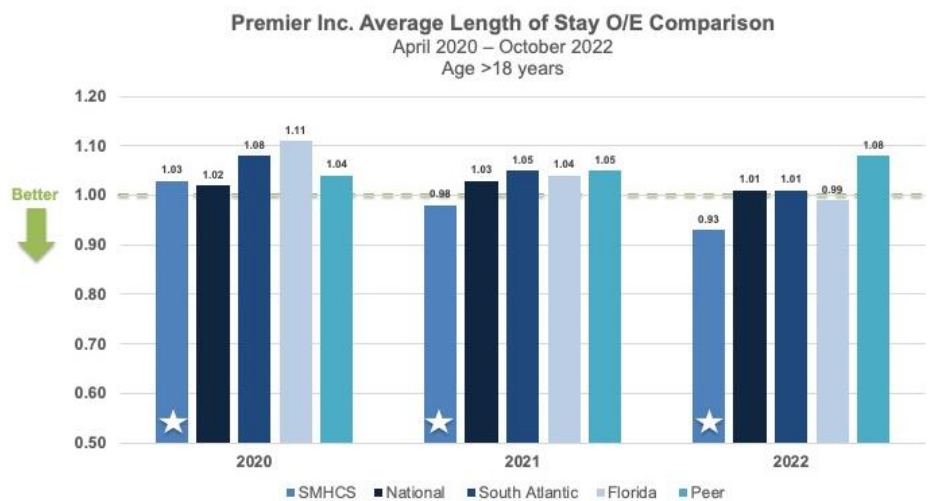


COVID surges in 2020 and 2021 challenged inpatient capacity of hospitals nationwide. Through the provision of home health and post-acute care services, Sarasota Memorial strengthened its capacity by discharging stable patients to be cared for in non-hospital settings, thus freeing up beds for more severely ill patients. Meanwhile, mortality rates remained better/lower than all benchmark groups in the Premier analysis throughout this period. More than 50% of patients were discharged to post-acute care facilities, including skilled nursing, assisted living and long-term care facilities, or went home with wearable sensors that allowed Sarasota Memorial's disease management nurses and hospitalists to monitor their vital signs throughout the day (See Pg. 27 for more details).

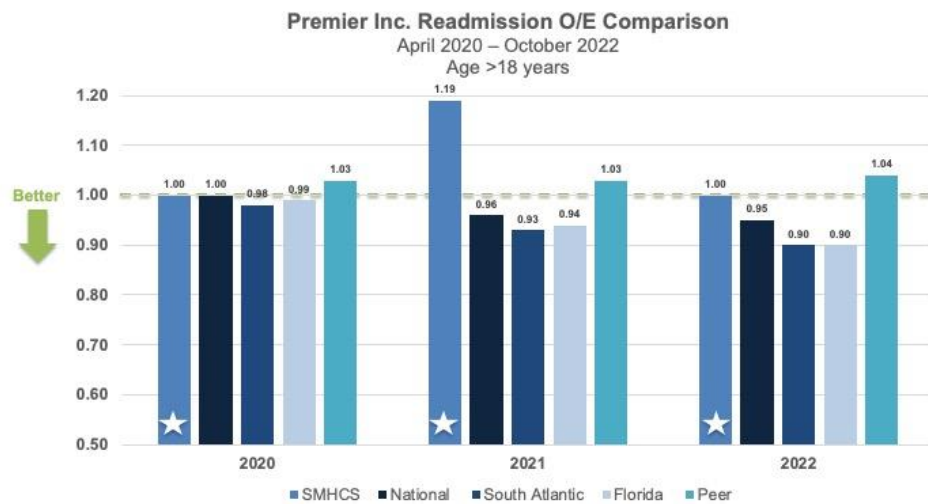
A review of all COVID patients readmitted within 30 days of discharge indicates that 20% were readmitted for reasons unrelated to COVID-19, and roughly a third were over the age of 80.

Our review found that patients were readmitted for a wide number of reasons, many of which were not directly connected to COVID-19. For example, many of those who were enrolled in the home monitoring program were living with previously existing conditions, including congestive heart failure, chronic obstructive pulmonary disease or other chronic diseases, and were readmitted to the hospital due to those conditions, rather than a recurrence or worsening of their COVID illness.

Average Length of Stay



Readmission



COVID Precautions, Testing & Care Teams

In January and February 2020, as the novel virus spread rapidly inside and outside of China and into Europe, hospitals had to rapidly update their screening and isolation guidelines and educate their teams about managing a new infectious disease. Despite efforts to prepare, when COVID-19 spread to Florida's Suncoast on March 1, 2020, there were still many unknowns and health care systems in Florida and nationwide had to contend with a volley of unprecedented challenges few could have predicted.

Testing Limitations

At the onset of the pandemic, the lack of testing sites and supplies made it difficult for Sarasota Memorial and other Florida hospitals to test and monitor patients and staff for possible exposures.

COVID-19 presented as an atypical pneumonia-like illness, with symptoms that mirrored those of the flu and common respiratory viruses circulating at the time. While hospitals were able to use in-house tests to rule out other illnesses, they lacked the specialized equipment or supplies to detect the novel virus. At the time, COVID testing was coordinated by the Florida Department of Health, and patients had to meet strict criteria to be eligible for testing, which initially included recent international travel or exposure to a confirmed COVID-positive individual.

Most people who came to Sarasota Memorial with mild to moderate symptoms did not meet the state criteria and were treated and advised to isolate at home until their symptoms resolved. Those with more serious symptoms were admitted and placed in isolation as a person under investigation (PUI) while Sarasota Memorial awaited COVID test results, a process which, at that time could take a week or more.



COVID Testing at Sarasota Memorial

Throughout the pandemic, testing remained one of Sarasota Memorial's highest priorities. In addition to helping guide treatment plans, obtaining fast, reliable results have been essential to:

- Clear patients from isolation if their results were negative and ensure staff used protective gear when indicated
- Clear staff to return to work
- Assist with contact tracing early in the pandemic to reduce the risk of community spread
- Safely discharge patients to nursing homes and assisted living facilities (most post-acute care facilities required two negative tests before accepting patients from hospitals)
- Predict surges in COVID hospitalizations – which typically would rise a few weeks after a spike in the hospital's weekly positivity rate

As the virus spread rapidly in Florida, testing became available to all symptomatic patients, but limited supplies and overwhelmed state labs led to even longer wait times for results, averaging 14 days or more. While Sarasota Memorial built a COVID testing platform of its own, the health system took steps to shorten turnaround times, partnering with private laboratories and academic centers.

Dedicated COVID Units & Specialized Teams

Within the first few weeks of Sarasota's outbreak, Sarasota Memorial had more than 70 inpatients confirmed or presumed to have the virus.

The World Health Organization declared COVID-19 a global pandemic and Florida began setting daily records for the number of infected patients.

By the end of March and early April, the state had shut down bars, limited the operation of restaurants, issued statewide stay-at-home orders and prohibited hospitals from providing non-emergency surgeries to free up hospital beds and mitigate impacts during Florida's first wave.



In April 2020, Sarasota Memorial installed new equipment to begin limited in-house testing (approximately 35 tests per day). By the end of 2020, the hospital laboratory had expanded its capacity to run 10,000 tests per month, with swift turnaround times (as little as 2 hours for symptomatic inpatients). This was an important milestone that allowed Sarasota Memorial to perform all COVID testing in-house and begin universal testing of patients admitted to the hospital.

As testing supplies became more readily available, Sarasota Memorial established an outpatient testing site for staff and later expanded services to the community.

Backup equipment installed in 2021 effectively doubled Sarasota Memorial's COVID testing capacity. The hospital reached a record 20,000 tests/month when the highly infectious Omicron variant began its rapid spread in the community in December 2021. Sarasota Memorial invested more than \$1 million in its molecular testing platform. Unlike less sensitive antigen testing, the Nucleic Acid Amplification Testing (NAAT) platform detects SARS-CoV-2 molecular targets with higher sensitivity and greater specificity to reduce the chance of inaccurate results. One shortfall of molecular testing, or other highly sensitive tests, is that it does not differentiate between live and dead (non-replicating) virus, so some people could test positive even after they are no longer infectious.

Since the start of the pandemic, Sarasota Memorial has performed more than 300,000 tests with a cumulative 8.9% positivity rate. The hospital continues to test the majority of patients admitted for overnight stays. Patients who test positive, even if asymptomatic, are placed in isolation to prevent the virus from spreading to other patients, visitors and staff. Exceptions are made for patients with a positive test within 90 days. Those cases are promptly reviewed by the Infection Prevention and Control team as the patients may harbor non-replicating virus detected by the NAAT test and may not require isolation.

Visitation at nursing homes and elder care facilities was prohibited, and Sarasota Memorial and other Florida and U.S. hospitals suspended visitation to protect vulnerable patients and staff.

As isolation and intensive care rooms quickly filled up with COVID patients and PUIs, Sarasota Memorial began converting entire patient care units and ICU pods into dedicated COVID wards and, at the recommendation of the hospital's Medical Executive Committee (MEC¹), assigned its team of medical hospitalists and intensivists to direct the care of COVID patients.

Hospitalists (physicians whose specialty is caring for complex needs of hospitalized patients) managed the care of patients recovering in dedicated COVID medical units, while intensivists (physicians who have specialized training in the care of critically ill patients) oversaw care in COVID ICU units. In addition to guiding the care of COVID inpatients, hospitalist and intensivist teams also consulted and worked closely with subspecialists and COVID patients' primary care providers. The MEC protocol served a dual purpose: it allowed primary care physicians to safely care for people in their offices, without the added risk of a potential hospital exposure, and ensured COVID patients received the most current standard of care based on rapidly evolving guidelines and emerging therapies.



Members of the COVID care team huddle outside a COVID patient room, coordinating assessments, treatments and procedures to limit the number of clinicians who entered each room – a necessary safeguard to avoid unnecessary exposures and conserve a rapidly dwindling supply of personal protective equipment (PPE) during initial waves of the pandemic.

¹The Medical Executive Committee (MEC) is the governing body of the hospital's medical staff; it consists of about 40 physician leaders representing all medical specialty departments. They are voted into their leadership positions by the Medical Staff.

COVID Treatments

People hospitalized with COVID-19 can experience a multitude of symptoms, many with complex multi-organ complications that could quickly cascade into life threatening conditions -- acute respiratory distress syndrome, kidney failure, stroke, pulmonary embolism, arrhythmias and heart failure, to name a few.

With no known treatment or cure, physicians relied on standard and supportive therapies in the early phases of the pandemic to manage COVID patients' symptoms. Clinicians used the steroid dexamethasone to try to reduce inflammation and stop the disease from progressing to the more deadly inflammatory stage, and also medications with well-established anti-inflammatory properties, including hydroxychloroquine, as potential early treatments for COVID-19.

Treatment guidelines evolved rapidly as the world learned more about the virus and the efficacy of different treatments. In early March 2020, Sarasota Memorial formed a COVID Treatment Task Force to provide physicians practicing at the hospital with a scientific, unified and evidence-based approach to caring for inpatients and to develop critical care treatments. The Task Force acted as a forum where specialists representing a wide variety of clinical fields vetted and recommended "living guidelines" for all physicians treating COVID patients at the hospital. (*Appendix C*)

Working with the MEC, members of the the Task Force volunteered their time to contribute presentations, reports and recommendations. Materials and guidance were updated regularly and covered all aspects of COVID-19 treatment, including therapeutics, ventilation methods, testing, early discharge protocols, as well as review of evidence-based literature. Each iteration also included the latest recommendations from the



Of the 6,410 adult COVID patients in Premier's comparative analysis, 10.5% required ventilator support during their hospitalization at Sarasota Memorial – another quality indicator that was lower (better) than Premier's national benchmark.

COVID Treatment Task Force

Multi-specialty representation was key to the effectiveness of Sarasota Memorial's COVID Treatment Task Force. The Task Force was made up of representatives from the following areas: Critical Care, Emergency Medicine, Hospitalist Medicine, Infectious Disease, Primary & Concierge Care, Pulmonary Care, Physical Medicine & Rehabilitation, Internal/Emergency Medicine Residency, Palliative Care, Respiratory, Pharmacy, Nursing, Case Management, Clinical Research, and Hospital Leadership. Cardiology, Nephrology, Surgery and other subspecialists also assisted. Recommendations were reviewed by Sarasota Memorial's Pharmacy & Therapeutics Committee and Medical Executive Committee.

National Institutes of Health, U.S. Centers for Disease Control and Prevention, World Health Organization, Infectious Diseases Society of America, and medical societies representing different disciplines. Therapies with limited clinical trials, such as hydroxychloroquine and ivermectin, were reviewed and discussed at length throughout the course of the pandemic, and the Task Force looked closely at multiple evidence-based trials pertaining to those treatments.

Experimental Treatments Studied at Sarasota Memorial

By April 2020, the Task Force was guiding Sarasota Memorial physicians toward promising clinical trials and emerging treatments. The hospital was among select sites approved to participate in multi-center, national and international trials and FDA-approved early access programs. Some of the more significant included:

- **Monoclonal antibody treatments** – Sarasota Memorial was the first hospital in Florida offering Regeneron Pharmaceuticals’ experimental monoclonal antibody treatment (REGN-COV2) to COVID-19 inpatients who met the study criteria. The hospital also participated in two related clinical trials: one evaluating the effectiveness of the antibody treatment on non-hospitalized patients with milder symptoms, and the other studying whether the treatment could prevent infection among people who had close exposure to a COVID patient, such as a family member.

- **Convalescent plasma** – Sarasota Memorial participated in an expanded access program of antibody-rich blood plasma from people who had recovered from COVID-19, giving local patients hospitalized with COVID early access to the therapeutic infusion while researchers continued to study its benefits.



- **Remdesivir** – Sarasota Memorial also applied to be part of an expanded access program for remdesivir, an antiviral drug that previously showed promise in the treatment of other coronaviruses. Given the lack of available treatment options at the time, the program allowed patients to get access to the therapy while researchers studied the medication’s effectiveness at reducing viral replication and improving outcomes in COVID-19 patients. Hospitalized patients meeting strict eligibility criteria were allowed to receive remdesivir under the protocol and followed closely for safety.

As study results began to indicate the benefits of these therapies, the FDA granted emergency use authorization to make them more widely available. Meanwhile, some repurposed drugs, including hydroxychloroquine, remained available by physician order but were not recommended after further study found they did not reduce the incidence of severe disease or death in patients hospitalized with COVID-19. (See Appendix C)

After the onset of the pandemic, it would take nearly a year for researchers and physicians across the globe to gain a strong enough understanding of COVID-19's pathology to develop standardized treatments to manage the disease. Among other findings, physicians learned that earlier treatment with remdesivir led to better outcomes, convalescent plasma was not as effective as first thought, and the efficacy of monoclonal antibodies, which helped stave off severe disease in the first two years of the pandemic, began waning against new viral variants.



As the severity of the virus shifted and fewer patients required intensive care, Sarasota Memorial resumed normal admission processes in 2021. In consultation with infectious disease and other specialists, admitting physicians now oversee the care of their COVID patients.

Inpatient COVID-19 Treatments

While other treatments have remained available if ordered by a physician with privileges to practice at Sarasota Memorial, the COVID treatments the health system's physicians recommend today, based on the latest clinical evidence, include dexamethasone, remdesivir, tocilizumab and baricitinib. (*Appendix C*)

Remdesivir is an antiviral medication FDA-approved for the treatment of COVID-19 in both hospitalized and non-hospitalized patients. It works by inhibiting key proteins essential for viral replication and is currently used in the early phase of the disease when the virus levels are highest.

Dexamethasone is a steroid medication used for many health problems, including allergies, asthma, adrenal gland problems, and other inflammatory syndromes. In COVID-19 patients, it helps decrease inflammation commonly seen in hospitalized patients who have progressed to severe disease and require supplemental oxygen.

Baricitinib/Tocilizumab are immune-modulating medications the FDA approved for severe rheumatoid arthritis and now COVID-19. In COVID-19 patients, the drug is used to blunt the pro-inflammatory response seen in hospitalized patients who have progressed to severe disease and require supplemental oxygen. It is often used in combination with dexamethasone.

Evidence Supporting Use

Drug	Key Benefits to Patients	Safety Profile
Dexamethasone	<ul style="list-style-type: none"> - Lower risk of mortality in patients on oxygen or ventilator - Shorter hospital stay - Greater probability of discharge within 28 days 	<ul style="list-style-type: none"> - Well tolerated overall - May have a small increased risk of elevated blood sugars and secondary infections
Remdesivir EUA: May 1, 2020 FDA Approval: Oct. 22, 2020	<ul style="list-style-type: none"> - Decreased time to recovery from 15 days to 10 days <ul style="list-style-type: none"> - May allow earlier discharge of patients - 87% decrease in risk of COVID-related hospitalization (when given to outpatients with mild to moderate COVID) - Like other antivirals, largest benefit seen in patients early in disease (e.g., within 5-7 days of symptom onset) 	<ul style="list-style-type: none"> - Well tolerated overall, no safety concerns found - Serious side effects were numerically lower in patients who received Remdesivir vs. placebo - No significant improvement in mortality
Baricitinib EUA: Nov. 19, 2020 EUA Revised: Jul. 28, 2021 FDA Approval: May 10, 2022 Tocilizumab EUA: Jun. 24, 2021 FDA Approval: Dec. 21, 2022	<ul style="list-style-type: none"> - Lower risk of mortality at 28 days in patients on oxygen or ventilator - Shorter hospital stay 	<ul style="list-style-type: none"> - Well tolerated overall and no safety concerns found - May have a small increased risk of secondary infections, however not found to be significant in clinical trials

Analysis of Alternative Treatments

Drug	Information
Hydroxychloroquine (HCQ) EUA: March 28, 2020 EUA Revoked: June 15, 2020	<ul style="list-style-type: none"> - Large, high-quality, randomized, controlled trials (e.g., Recovery, Solidarity) have shown no benefit in the treatment or prevention of COVID, including mortality, length of stay or need for ventilation - The use of HCQ for the treatment of COVID has the potential for serious harm, including heart rhythm abnormalities, severe liver inflammation, and kidney failure
Ivermectin	<ul style="list-style-type: none"> - Early clinical studies that showed positive effects were of low quality, observational, and several were retracted - High-quality, double-blind, randomized, placebo-controlled trials (e.g., ACTIV-6, COVID-OUT, TOGETHER, IVERCOR-COVID 19, I-TECH Trial) totaling >5,000 enrolled COVID patients, have failed to demonstrate benefit of Ivermectin
Multiple Vitamins (Vitamin C, Vitamin D, Zinc)	<ul style="list-style-type: none"> - According to the National Institutes of Health (NIH) COVID Treatment Panel, there is insufficient evidence to recommend either for or against the use of these vitamins and supplements for the treatment of COVID - Vitamin D deficiency has been associated with poorer outcomes in patients with COVID, however multiple clinical trials have shown no benefit from giving supplementation to patients diagnosed with COVID - There is a lack of quality evidence showing any clear benefit of Vitamin C or Zinc supplementation on improving outcomes in patients with COVID; Excessive doses and prolonged use may cause harm

(See Appendix C for research references)

Requests for Alternative Treatments

The Delta strain was the most virulent of the variants, and the surge it fueled in the summer of 2021 in Florida was the most deadly. As deaths and hospitalizations mounted, the number of people requesting that Sarasota Memorial physicians begin treating patients with ivermectin increased along with the virus. A highly politicized national debate revolving around recommendations by a small but vocal group of physicians administering higher-than-recommended doses of ivermectin for COVID patients in the U.S. and abroad fueled friction between physicians and family members of patients hospitalized with COVID-19.



Ivermectin has been used in COVID patients at risk of *Strongyloides* infection, or as part of a clinical trial. As with any medication or medical procedure, treatment decisions are made between patients and their doctors, but most physicians at Sarasota Memorial and across the nation do not recommend or use ivermectin for hospitalized COVID patients due to lack of proven efficacy in large, randomized and controlled trials. (*Appendix C*)

Over the past three years, ivermectin has remained available at Sarasota Memorial by physician order. Sarasota Memorial developed a “Shared Decision-Making and Waiver Form” and care guidelines to facilitate the use of treatments like ivermectin that fall outside traditional guidelines (*Appendix D*). Although it did not restrict or recommend such treatments, the guidelines were developed to facilitate a pathway in the event a physician and patient/family agreed to proceed with the treatment.

Caring for the Critically Ill

As the largest health system in Sarasota County and one of the largest public hospitals in the U.S., with an extensive physician base, strong record of quality care and access to advanced treatments and drug trials, Sarasota Memorial cared for a large number of COVID patients, and those at highest risk of dying from the disease.

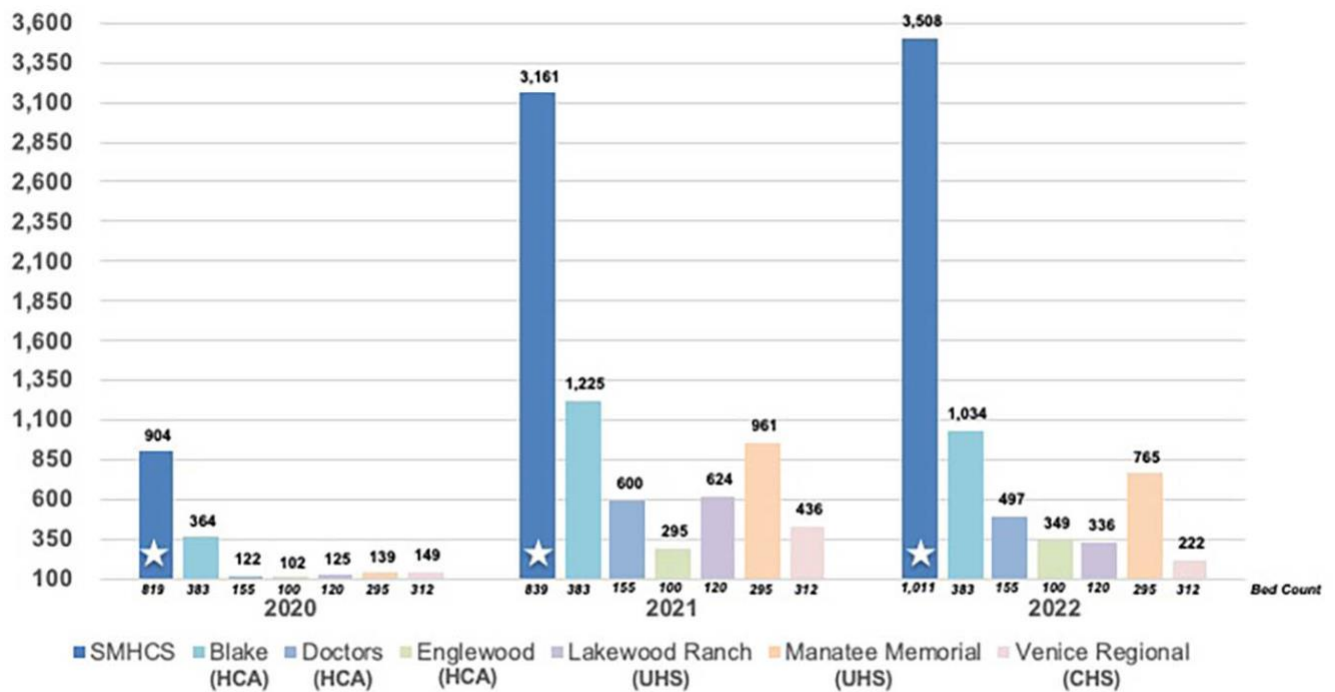


Over the course of the pandemic, Sarasota Memorial cared for 70% or more of all COVID patients hospitalized in Sarasota County, and over a third of those hospitalized in the four-county region.



Alongside the large numbers of patients who chose Sarasota Memorial for their care, hospitals across the region relied on Sarasota Memorial to accept patient transfers (nearly 8,000 over the past three years), particularly during COVID surges, and to care for patients at highest risk of dying from COVID and many other conditions.

Local Hospital Comparison: COVID-19 Inpatient Admissions¹
July 2020 – December 2022



(Closed Sept. 2022)

SMHCS Market Share ¹	Apr. – Dec. 2020	Jan. – Dec. 2021	Jan. – Jun. 2022
Sarasota County	67%	67%	72%
4-County	31%	33%	37%

1. HHS COVID-19 Inpatient Admissions by Hospital data

2. AHCA data; Principal Diagnosis Code U07.1 implemented for Covid on April 1, 2020; Only Q1-Q2 published for 2022 as of January 2023

Communication with Families & Visitation Policies

Throughout the pandemic, Sarasota Memorial physicians, advanced practice professionals, nursing staff and leaders, met regularly to discuss visitation guidelines, review community indicators and evaluate the safety of patients and staff. Over the course of multiple surges, the leadership team made adjustments to practices and protocols in consultation with the COVID Task Force and in accordance with federal and state guidelines. The health system was responsive to shifting risk and was able to ease restrictions when transmission rates and case counts fell to safer levels.

In May 2020, COVID cases began to drop and Florida's governor lifted the ban on non-emergency and elective procedures. Sarasota Memorial eased visiting restrictions while stepping up other precautions, including temperature checks and universal masking, to reduce the risk of transmission in the hospital.



Within a month, however, the hospital's COVID census began to climb again, roughly doubling every two weeks. ICU admissions also spiked, requiring hospital leaders to curb elective surgeries and convert some procedural areas into critical care units. Community spread had an impact on staffing levels, with clinical staff frequently having to isolate due to increased levels of COVID exposure and infection.

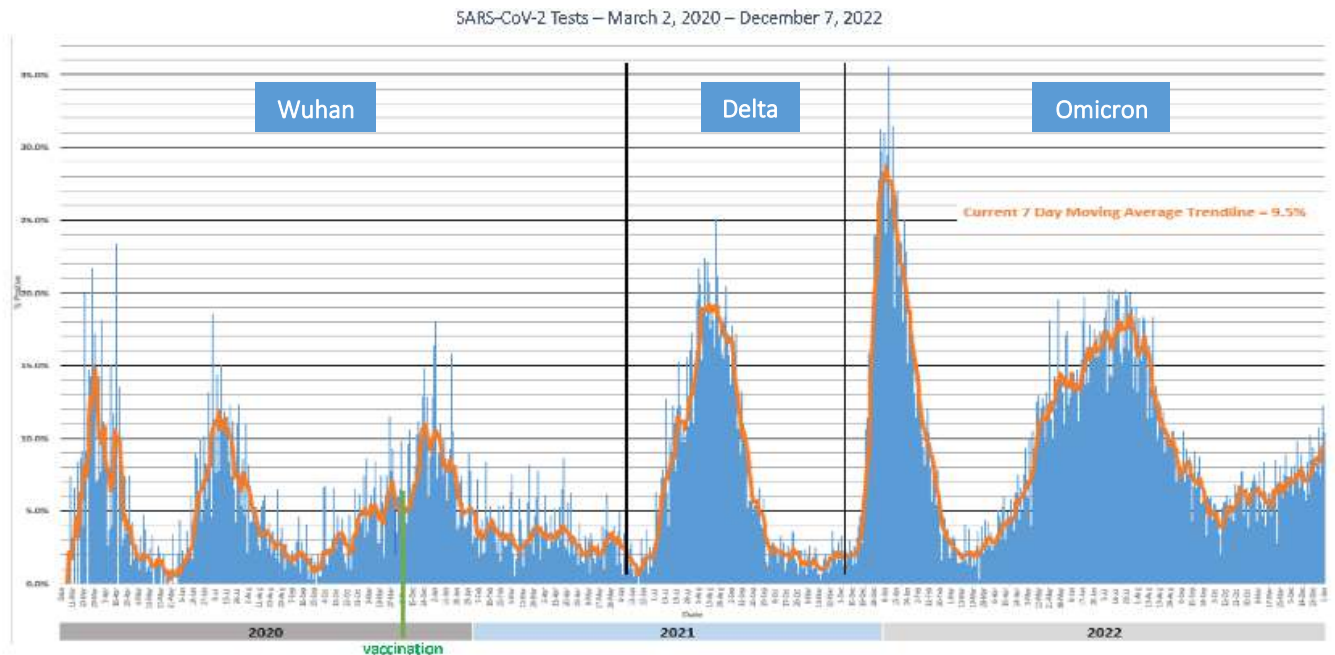
In response to increasing risk, staff shortages and changing guidance, Sarasota Memorial reinstated visiting restrictions at the end of June 2020, with limited exceptions for childbirth, neonatal intensive care and pediatric patients, and certain extraordinary circumstances.

Being separated – emotionally and physically – took a heavy toll on patients and loved ones, and staff had to play an enhanced and challenging role in facilitating communications between patients and their families and providing ongoing support.



In the context of increased safety precautions and more restrictive visitation policies, Sarasota Memorial provided alternative means of connecting patients, families and physicians. The hospital deployed over 100 iPads with FaceTime and similar apps throughout the units and expanded a family-to-clinician app that allowed families and caregivers to communicate and share secure updates via text messages.

The imposed physical separation during this period was overwhelming for many families, especially those whose loved ones were deteriorating and dying from COVID. The hospital's palliative and spiritual care teams played a significant role in providing emotional support to patients and families, and in supporting nurses helping families say their final good-byes; however, the toll on patients and families was significant.



Sarasota Memorial leaders used the hospital’s rolling COVID testing positivity rate to help monitor community spread, evaluate hospital visitation policies and predict hospital surges. Local hospitalizations typically began rising a few weeks after a spike in the hospital’s positivity rate.

In 2021, as knowledge around the virus improved and PPE became more readily available, Sarasota Memorial began allowing family members and loved ones to visit COVID patients, enabling patients and their loved ones to spend time together in isolation rooms and providing the personal protective gear necessary to make those visits possible.



As cases surged to their highest peak during the summer Delta surge in 2021, however, Sarasota Memorial restricted visitation once again, with exceptions for end-of-life and other extraordinary situations. By the end of 2021, when the less deadly Omicron variant became the dominant strain in the community, and many individuals had greater immunity through vaccination or prior infection, hospital leaders had begun easing restrictions again.

The health system resumed full visitation on April 1, 2022. On April 6, 2022, the governor signed the “No Patient Left Alone Act,” guaranteeing Florida families the right to visit their loved ones receiving care in hospitals, hospices, and long-term care facilities.

Capacity Challenges

The Sarasota campus was operating at full capacity before the onset of COVID-19. The virus spread extremely quickly in Florida, and the hospital was soon forced to operate well beyond its previous limits, with capacity remaining extremely stretched for most of the pandemic. Sarasota Memorial's leadership, the COVID Task Force and MEC formed a centralized command team, working in partnership to address surging patient volumes, infection control, contact tracing, staff exposures, bed availability, delayed discharges, dwindling supplies and other concerns.

To manage the influx of COVID patients, Sarasota Memorial's team made rapid changes to limit or pause wider health care services, particularly elective surgeries. Some of the more significant changes the health system implemented included:

- Scaling back the provision of non-emergency surgeries and converting pre- and post-operative areas into inpatient and ICU beds. The Sarasota hospital doubled its ICU capacity from 62 beds to 120 during multiple surges and adjusted several hundred beds and over 10 new units to increase the number of isolation rooms for COVID patients as well as specialty units for non-COVID patients recovering from surgery, injuries or illness.



Physicians, nurses, respiratory therapists and other clinicians worked overtime and extra shifts to keep pace with rising caseloads and patient surges. Leaders worked around the clock to manage space, supplies and staffing during multiple surges. The photos above show a surgical recovery unit during normal use (left) and how it was converted and equipped with life-saving equipment to care for non-COVID critical care patients during a pandemic surge (right).

- Pairing critical care nurses with medical/surgical nurses and developing a team approach to help staff the expanded ICU. The flexible care model allowed ICU nurses to provide critical care to more patients, while medical/surgical nurses took care of non-critical nursing tasks in the ICU.
- Deploying its rehabilitation team to train and assist with proper proning of certain ICU patients, a complex positioning technique that can improve oxygenation and potentially reduce the risk of a COVID patient developing severe respiratory distress requiring mechanical ventilation.
- Deploying a COVID rapid response team to respond to critical, life-threatening situations.
- Deploying a team of SMH-FSU emergency, internal medicine and palliative care resident physicians to work volunteer shifts to support supervising faculty and attending physicians caring for patients.
- Expanding telehealth capabilities for the management of chronic illnesses, such as congestive heart failure, to protect vulnerable patients from unnecessary hospital visits while monitoring their health. The health system also established telehealth capabilities at its network of primary and specialty physician offices.



- Onboarding nurses hired for the new SMH-Venice hospital early so they could work at the Sarasota campus as "Helping Hands" while the new hospital was still under construction.
- Reconfiguring the design of the new SMH-Venice hospital's intensive care unit during construction to make it pandemic ready. When it opened in November 2021, the ICU pods could be used partially or fully as negative pressure COVID units. Project managers also updated plans for the new Oncology Tower to ensure it was ready to help manage the high volume of patients hospitalized on the Sarasota campus.

The SMH-Venice hospital has been operating at or beyond capacity since opening in late 2021 during the Omicron wave. In 2022, both campuses continued to care for COVID patients and record-breaking volumes of non-COVID patients, due in part to the permanent closing of Venice Regional (ShorePoint) that summer and temporary closure of southwest Florida hospitals damaged by Hurricane Ian in September.

Sourcing & Securing Critical Supplies

Sarasota Memorial's supply chain team played a central role throughout the pandemic, and particularly during the first waves of COVID-19. The Panel found that the team effectively navigated critical shortages

Average Monthly Utilization	Pre-Covid-19	Covid-19		
	2019	2020	2021	2022
CAPR Shields	100	2,320	5,168	1,697
N95 Masks	342	5,742	22,451	27,455
Isolation Masks	2,111	141,277	251,275	219,819
Isolation Gowns	16,930	39,490	63,327	37,851

The number of protective masks, face shields and isolation gowns used on a daily basis was extremely high. In 2021, for example, average monthly utilization of N95 and isolation masks topped 273,000, dwarfing the average monthly usage of 2,400 prior to the pandemic.

in vital supplies, including masks, gowns, gloves, tubing for IV poles, oxygen and other medical gases, disinfectants and other essential supplies. The solutions developed by the team meant that frontline staff at the hospital did not run out of personal protective gear, and the health system was able to expand its supply of ventilators and in-house COVID testing capacity.

Among other measures, the supply chain team:

- Researched and implemented a process to sanitize, sterilize and extend the life of N95 masks using the TRU-D disinfection robot and ElectroClave decontamination technology.
- Worked with local, national and international organizations to obtain donated supplies.
- Partnered with the hospital's biomedical engineering team to produce vital break-away tabs for CAPRs (controlled air-purifying respirators), which extended the life of the helmet's protective face shields. The team used a 3D printer to safely recreate the routine replacement part that manufacturers could not provide during the early months of the pandemic.
- Worked with the Sarasota Memorial Healthcare Foundation to purchase additional ventilators, TRU-D disinfecting robots, COVID testing supplies and sub-zero freezers that could be used to store COVID vaccines.



Barriers to Discharge

In 2020, Sarasota Memorial and other Florida hospitals cared for a majority of elderly patients, many of whom were transferred to the hospital from nursing homes and assisted living facilities after contracting COVID. These patients often stayed in hospitals for longer than medically necessary due to limited places to safely discharge them.

Nursing homes throughout Sarasota and the Suncoast region were severely understaffed and unable to open all of their beds. The state assisted by opening post-acute COVID care facilities for nursing home and senior care residents; however, the closest such facility to Sarasota Memorial (located in Charlotte County) had significant capacity issues and was usually unable to accept patients from Sarasota Memorial. A state requirement for COVID patients to have two negative COVID tests before returning to or being admitted to area nursing homes further contributed to discharge delays.

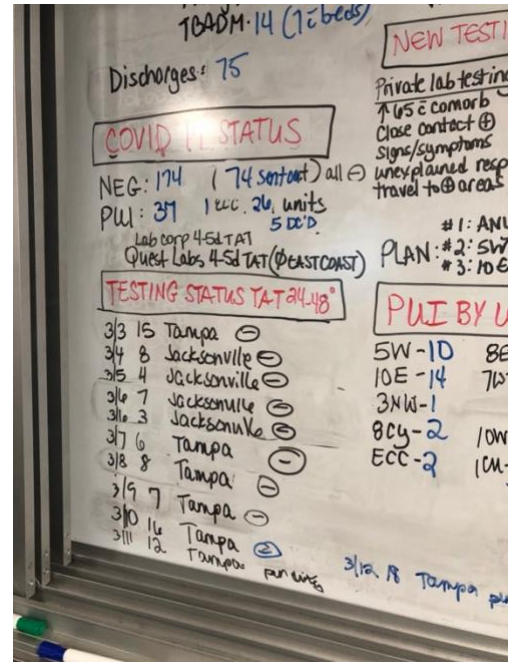
Other high-risk patients, including homeless people and those who living in crowded or congregate living quarters, also posed discharge challenges.

To manage this issue, Sarasota Memorial case managers worked with a Sarasota assisted living facility (ALF) to create an isolation wing in its facility for COVID patients ready to be discharged from the hospital, and coordinated outpatient and home health services to support the care of COVID patients in the ALF. The case management team also worked with local motels to create alternative care settings where meals could be delivered to patients and home health nurses could monitor their recovery after discharge.

Home Monitoring Program

While every phase of the pandemic led to capacity issues, the Delta wave presented particularly significant challenges with a swift, steep and deadly surge of cases in the summer of 2021.

To overcome capacity challenges during this time, Sarasota Memorial deployed a remote patient



Sarasota Memorial leaders worked around the clock during the first year of the pandemic to secure the space, supplies and resources to get patients tested, admitted, cared for and safely discharged as soon as possible.



monitoring program that allowed the early discharge of stable COVID patients to free up beds for more severely ill patients. Through continuous at-home monitoring of patients' oxygen saturation levels, heart rate and other vital signs, the program offered a vital resource for those who no longer needed acute hospital care, but who would benefit from additional days of real-time medical supervision. Patients who enrolled in the program were discharged with wearable sensors that allowed clinicians to keep track of their vital signs throughout the day. Disease management nurses checked in with patients by phone on a daily basis and reviewed their recovery progress with physicians on the hospitalist team, intervening if they noticed a deterioration in their status.

Not every patient could be enrolled or wanted to participate in this free program, however, clinical outcomes were strong. Of 343 patients who participated in the remote monitoring program, only 18 had to be readmitted for closer observation in the hospital. The program was particularly valuable to patients without primary care physicians, providing them with the ability to contact dedicated nurses with any questions or medical concerns.

Transparency and Public Education

In addition to clinical care, the Panel found that Sarasota Memorial performed an essential role in strengthening COVID outcomes in the region by providing real-time data and guidance as the community, staff and local, state and federal officials were making important personal and public health decisions.

Lines of Communication with Local and State Government Officials

- Sarasota Memorial leaders reported extensive COVID-related data to the state’s Emergency Status System multiple times per week — and as often as twice a day at the onset of the pandemic — which helped officials to monitor capacity and other trends.
- Hospital leaders worked closely with the Florida Hospital Association and the Safety Net Hospital Alliance of Florida, which provides advocacy, education and support for Florida safety net hospitals, to share status reports and concerns with the governor’s office and other state and federal officials about a wide range of COVID-related issues, including capacity, staffing, supply chain challenges and allocation/distribution of vaccines and medications. Sarasota Memorial’s CEO chaired the Safety Net Hospital Alliance of Florida’s board of directors in 2021-2022 and serves on the FHA’s Policy Committee.
- Sarasota Memorial participated in frequent statewide COVID update conference calls with leaders of Florida’s Agency for Health Care Administration and the Florida Department of Health, which allowed hospitals around the state to voice issues and concerns.
- Sarasota Memorial’s Chief Medical Officer participated in updates with other CMOs throughout the region to discuss best practices and collaborate on solutions to regional challenges.



At a joint press conference with Sarasota Memorial on March 3, 2020, Congressman Vern Buchanan called for more federal funding and a faster process to test for the virus.

Public Education

From confirming the very first cases of COVID-19 in March 2020 to providing daily updates with key COVID statistics to the public that continue to this day, Sarasota Memorial played a significant role in keeping local communities fully informed of hospital trends and indicators and providing guidance on what residents could do to protect themselves as the crisis unfolded.

The hospital was consistently approached by community members, local officials and media to provide information and advice. Sarasota Memorial's communications team took the following steps to share information:

- Shared its daily dashboard of key COVID indicators (testing positivity rates, hospitalizations and deaths) on its website. The hospital was among the first in the nation reporting daily statistics, and is one of the few that continue to share regular updates today. The webpage has been a trusted source of information that has received more than a million visits (and repeat visits) since the pandemic began.
- Shared regular updates with reporters and the public on a centralized COVID-19 information page on smh.com.
- Posted updates on social media, including links to videos and nearly 60 COVID-related blog posts to help clarify confusing or conflicting guidance from various sources.

Longstanding Public Mission

One of a limited number of public health systems in Florida and the nation, Sarasota Memorial Health Care System has a robust record of transparency. Governed by the publicly elected members of the Sarasota County Public Hospital Board, Sarasota Memorial is a government institution, owned and accountable to the community and citizens it serves.

The health system complies with regulations governing public entities, including Florida's Government-in-the-Sunshine law, which prohibits Hospital Board members from discussing hospital issues outside of publicly noticed meetings. With few exceptions, Hospital Board meetings are always open to the public and community members are welcome to attend and share comments on any issue.

This stands in contrast to investor-owned hospitals in Sarasota-Manatee-Charlotte counties that are frequently directed from distant corporate headquarters operating outside Florida's Sunshine laws. In such hospitals, the local community usually does not have a say in matters of hospital oversight and often has limited access to information about hospitals' internal policies, procedures and practices.

Posted: Jan 11, 2022
COVID Testing & Treatments Amid Omicron Surge
With Critical Care Pulmonologist Joseph Seaman, MD, & Infectious Disease Specialist Manuel Gordillo, MD
Sarasota Memorial Infectious Disease Specialist Manuel Gordillo, MD, and Critical Care Pulmonologist Joseph Seaman, MD, discuss our area's COVID-19 surge, the Omicron variant, available treatment options, and when to get a COVID test (or re-test) in this Ask An Expert Q&A video blog post.
1763 [Read more](#)

Posted: Jan 7, 2022
COVID-19 Treatment & Recovery at Home
With SMH-Sarasota Critical Care Pulmonologist Joseph Seaman, MD
Although area hospitals are caring for an influx of inpatients with COVID-19 or COVID-19 complications, most people experience mild to moderate symptoms and can recover at home, without hospital care. Sarasota Memorial Critical Care Pulmonologist Joseph Seaman, MD, explains what you need to recover from COVID infection at home, what to do and when to seek medical care.
3437 [Read more](#)

Posted: Dec 20, 2021
Omicron, the Holidays & What's to Come | Ask An Expert
With SMH Infectious Disease Specialist Manuel Gordillo, MD
Sarasota Memorial Infectious Disease specialist Manuel Gordillo, MD, addresses common questions about the COVID-19 Omicron variant and discusses how we can safely celebrate the holiday season, in this Ask An Expert video blog post.
3098 [Read more](#)

Internal Communication

When in-person gatherings were paused to limit exposure to the virus, Sarasota Memorial leaders and clinicians stepped up communications through virtual tools, emails, videos, blogs and podcasts.

- To keep more than 9,000 staff working in Sarasota Memorial facilities from Bradenton to North Port updated, the CEO e-mailed more than 200 “COVID Updates” organization-wide from March 2020 through September 2022. The frequency ranged from daily to weekly, based on the urgency of the information the organization was sharing. These emails kept staff updated on the number of COVID patients in the hospital, positivity rates, deaths and other key indicators, provided reminders and updates about COVID-related practices and kept staff informed about the health system's response to myriad challenges.
- Sarasota Memorial’s CEO also shared about two dozen “State of SMHCS” video updates to address staff questions and concerns when in-person meetings and town halls were suspended.
- Sarasota Memorial created a “COVID Resources” intranet (Pulse) site that provided important references and information for staff in one centralized location. The site continues to be updated with a comprehensive manual for patient care staff, Human Resources updates, PPE education, infection prevention resources, staff counseling/support programs and other helpful links.
- The Nursing COVID Advisory Group met regularly to address clinical issues and concerns, and nursing educators made multiple rounds (for day and night shift teams) to provide education and support.



Mask Wearing 101: How to Properly Use & Re-use a Mask

SMHCS • 928K views • 2 years ago

In order for a mask to offer protection — rather than becoming a vehicle for COVID-19 germ-spreading — it must be handled, worn and stored properly. This step-by-step video on mask-wearing...

CC

Early in the pandemic, Sarasota Memorial produced a Mask Wearing 101 video tutorial for its staff, which it posted on the health system’s YouTube education channel. The video received nearly 1 million views from people across the U.S. and abroad, and was also used, with permission, by other employers that wanted to help their employees learn how to safely don, doff, and store their masks.

COVID Vaccination

In December 2020, Florida hospitals were the first to receive shipments of the COVID vaccine (which was in extremely limited supply at the time) and they began to administer shots in accordance with the state's distribution plans. Sarasota Memorial received its first supply Dec. 22, 2020, and while it did not at any point mandate COVID vaccinations, there was significant uptake among staff. The Panel heard that, within three hours of the vaccine becoming available, physicians and frontline staff lined the hallways to get the shot.



In January and February 2021, Sarasota Memorial held vaccine events at the hospital for vulnerable elderly residents and worked with community and faith leaders to host a similar event at Sarasota Memorial's Internal Medicine Practice in Newtown with the aim of providing convenient access and help with scheduling shots for at-risk community members.



The governor's executive orders initially limited vaccine administration to frontline healthcare workers and elderly or vulnerable populations, but vaccine eligibility was gradually expanded throughout 2021. Before the vaccine became widely available at retail pharmacies, Sarasota Memorial operated a vaccine clinic at its Clark Road campus for staff and community members who met state eligibility requirements.





Sarasota Memorial worked to raise awareness of the vaccine and answer any questions or concerns from the general public and staff in an effort to protect vulnerable patients and community members and reduce hospitalizations and deaths.

Some staff were hesitant to get the vaccine for personal reasons. Like others in the community, some felt they were at low risk for developing complications from COVID-19 and simply did not want to get the shot. Others were concerned about allergies or vaccine safety, or expressed distrust or spiritual objections to vaccination.

In September 2021, the federal Centers for Medicare & Medicaid announced a vaccine mandate requiring staff at health care facilities to receive a COVID vaccination or submit an exemption as a condition of participation in Medicare and Medicaid programs. The majority of Sarasota Memorial’s patients – 62 percent – depend on Medicare and/or Medicaid, so the continued care for thousands of community members became contingent on staff vaccinations. As a public entity, Sarasota Memorial also was subject to a new Florida law that stated “a governmental entity may not impose a COVID-19 mandate for any [employee].”

The federal mandate was slated to come into effect November 2021, but was delayed until 2022 due to legal challenges.

In this context, while vaccination was strongly encouraged, Sarasota Memorial never enacted its own vaccine mandate. The Panel heard that administrative leaders wanted staff to feel inspired, not forced, to choose to get a vaccine, and that Hospital Board leaders wanted staff to be free to choose the decision that best aligned with their personal health values. The health system deployed a diverse, multi-disciplinary team of vaccinated physicians and clinicians to meet 1-on-1 and in small groups to address staff questions and concerns and help dispel vaccine myths and misinformation. The health system also introduced a vaccine incentive payment of \$500 to employees who were fully vaccinated by October 1, 2021.

Sarasota Memorial was able to comply with both state and federal rules by giving staff the choice of getting vaccinated or submitting an exemption form, including the religious form distributed by Florida's Department of Health in November 2021, which allows staff to "decline the COVID-19 vaccination because of a sincerely held religious belief, which may include a sincerely held moral or ethical belief."
(Appendix E)

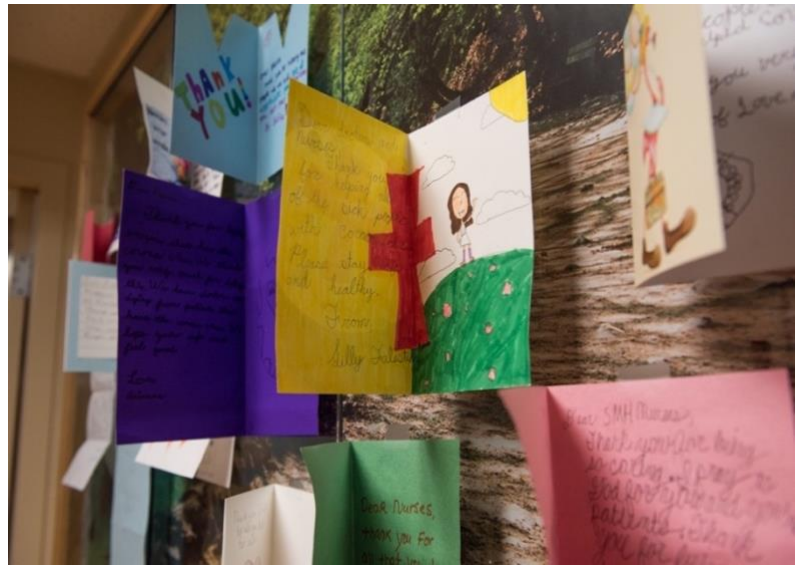
More than 7,500 Sarasota Memorial employees have voluntarily opted for vaccination, while about 1,100 received an exemption.

Staffing During the Pandemic

The COVID-19 pandemic challenged the resilience of clinicians and frontline healthcare workers as they took on a new virus and new roles and responsibilities to help manage an increasing wave of patients seeking treatment and testing for COVID-19. Sarasota Memorial staff had to adapt to the uncertainties of multiple COVID surges amid the most significant expansion in the health system's nearly 100-year history.



The health of communities across the U.S. depended on the dedication, resourcefulness and sacrifice of these caregivers, and the outpouring of community support in Sarasota and across the region showed the depth of appreciation for their work.



When reviewing care provided by Sarasota Memorial, the Panel found that, despite concerns for their own personal safety, Sarasota Memorial's physicians and staff were resolute in their commitment to their patients and the community.



Sarasota Memorial offered around-the-clock counseling and support to help staff cope with the emotional strain, and provided ongoing wellness, stress reduction and resiliency training programs to help prevent burnout and fatigue. Over the past three years, the health system invested more than \$4 million to recognize and support staff, including grocery and gas gift cards, free lunch/dinner/dessert events, a fall

festival and \$250-500 appreciation payments for part- and full-time staff members. The tokens of gratitude followed a challenging first year, when the state paused non-emergency and elective procedures just one month into the pandemic. Steep decreases in patient volumes were seen in many areas of the health system, at the same time Sarasota Memorial was redirecting significant funds and resources to respond to the pandemic.

To help manage the financial impact, Sarasota Memorial implemented several cost-cutting measures, including reducing staff hours, redeploying staff to other work assignments, cutting senior managers pay and furloughing approximately 9% of its staff. The health system supported affected employees by advancing paid time off (PTO) and extending other benefits. Sarasota Memorial avoided layoffs, ended the furlough period within three months and resumed full operations in compliance with Florida’s phased reopening plan (*Appendix F*).

As the pandemic continued to unfold, however, surges created significant staffing shortages. During the 2020 summer surge, more than 450 employees were unable to work due to COVID illness, and more than 400 missed work during the Delta wave in the summer of 2021. The number of employees infected with COVID jumped to 1,100 during the Omicron wave from December 2021 to February 2022.

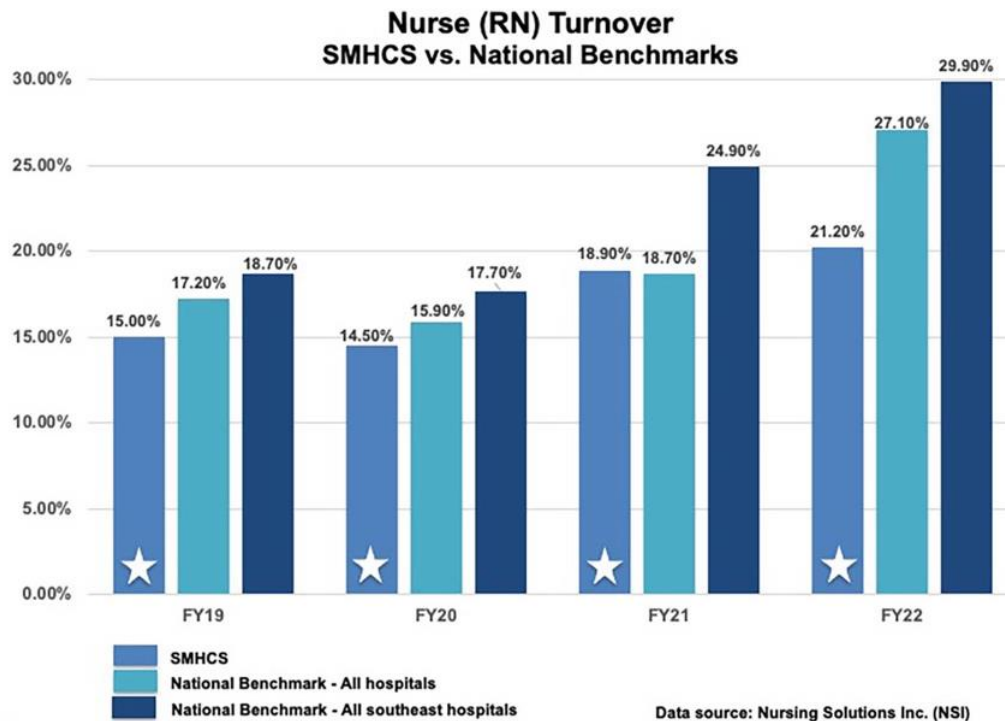


Sarasota Memorial hired more than 900 additional employees in 2021 in preparation for the opening of the SMH-Venice hospital and the Brian D. Jellison Cancer Institute Oncology Tower – onboarding them early to support the Sarasota campus team while construction continued on those facilities.



To fill remaining staffing gaps, Sarasota Memorial hired short-term contract staff and created a “Helping Hands” Labor Pool program that allowed employees to sign up for shifts and support areas in need outside their own departments. This provided essential resilience during times of peak community spread, when hundreds of employees had to stay home to care for sick children, family members or themselves.

Hospitals across the country experienced record employee turnover rates during the pandemic; however, the dedication of Sarasota Memorial's staff to the community was shown by the fact that it held onto its core team, with a number of Sarasota Memorial's veteran staff postponing their retirement plans to support the health system and its patients.



While hospitals across the nation experienced record employee turnover, Sarasota Memorial's staff and nurse retention rates outperformed the national average the past few years.

The sentiments Sarasota Memorial staff shared as part of a Gallup employee survey, conducted during the Delta surge, earned the health system an "Exceptional Workplace Award" in 2022. The world leader in measuring employee satisfaction, Gallup gave the award to just 41 of nearly 1,500 organizations across the world surveyed that year, commending them for their "resiliency, determination and commitment to making their people a priority during another unprecedented and challenging year."



Financial Impacts

In March 2020, Congress passed the Coronavirus Aid, Relief and Economic Security (CARES) Act to provide quick and direct economic assistance for industries, small businesses, and individuals impacted by the pandemic. As part of the CARES Act, the federal government distributed \$175 billion to hospitals and other health care entities.

Federal assistance provided support to help Sarasota Memorial address unbudgeted and unprecedented challenges from the pandemic. The health system was eligible for and received assistance from three main sources of funding from the CARES Act:

1. Provider Relief Funds (PRF)

The health system received \$40.5 million from the PRF program – \$38 million that helped offset revenue losses associated with capacity constraints/government-mandated shutdowns, including Florida’s pause in non-emergency and elective procedures; and \$2.5 million to help offset higher operating expenses due to the pandemic. Use of the funds complied with terms and conditions imposed by the U.S. Health and Human Services Department, including federal reporting, compliance and audit requirements.

2. COVID-19 Accelerated and Advance Payment (CAAP) Program (short-term loan)

In April 2020, Sarasota Memorial received \$146 million in advance payments through the CAAP program. Unlike the PRF program, the advance payments served as temporary relief loans that were paid back through future claims. In April 2021, the Centers for Medicare & Medicaid Services began reducing the payment amount of each new claim from Sarasota Memorial to pay back the outstanding balance. By September 2022, Sarasota Memorial had fully paid back all of the advance payments.

3. Additional claims reimbursement for COVID Medicare patients

The third source of CARES Act funding is a 20% add-on payment for COVID Medicare inpatients. CMS added the 20% payment in early 2020 to reflect the additional resources and costs associated with the care of COVID patients. In November 2020, CMS also approved an add-on payment for new COVID treatments, including the anti-viral drug remdesivir. These add-on payments are subject to regular CMS audits, including confirmation of a positive COVID test in the patient’s medical record. As of September 2022, Sarasota Memorial received approximately \$9.4 million from the Medicare claim add-ons.

It is uncertain how much longer the add-ons will continue, as the payments are set to expire following the end of the Public Health Emergency on May 11, 2023.

Over the past three years, Sarasota Memorial sustained a \$38 million loss in revenue and more than \$77 million in increased costs directly related to the pandemic. While CARES Act funding helped offset the financial impact, Sarasota Memorial's net loss over the past three years amounts to nearly \$66 million. This does not include the significant inflation the health system is currently experiencing in labor/supply costs.

Type of Financial Impact	Amount
PRF Program	\$40,500,000
Medicare Add-On Funds	\$9,400,000
Lost Revenue	(\$38,000,000)
Increased Expenses	(\$77,610,000)
Net Loss	(\$65,710,000)

Moving Forward

Though the crisis period of the pandemic has passed, hospitals continue to face some of their toughest financial challenges since the outbreak began (*Appendix G*). Ongoing vigilance and proactive measures will be required in 2023 as leaders manage the aftermath of the pandemic, including:

- Higher costs to recruit and retain qualified workers in a severe, nationwide labor shortage
- Rising expenses for PPE, drugs, medical and laboratory supplies, and equipment
- Rapid inflation with the possibility of a recession

Sarasota Memorial has sound fiscal management policies, overseen by the Sarasota County Public Hospital Board, and is taking steps to ensure the financial stability of the health system without raising the hospital tax rate. In its most recent audited financials (FY 2022), taxes made up 4.7% of the health system’s operating revenue, which equates to about 19 days of expenses. Although tax revenue has increased due to new construction and increasing property values, the Hospital Board has not raised the tax rate for more than a decade (and reduced it twice in fiscal 2016 and 2017).

Quality, Safety & Growth

Despite continuously emerging COVID-related challenges over the past three years, Sarasota Memorial continues to grow and meet essential community needs.

In the summer of 2020, Sarasota Memorial opened its first Radiation Oncology Center, followed by a new inpatient and surgical Oncology Tower in late 2021. Work also began on an outpatient Oncology Pavilion, all part of the developing Brian D. Jellison Cancer Institute. In 2021, the health system also opened its new hospital in Venice, now in the midst of expansion, and in 2022 broke ground on the new Cornell Family Behavioral Health Pavilion.

These projects go a long way in addressing pressing community needs. The Oncology Tower and the SMH-Venice hospital increased system-wide inpatient capacity from 839 beds to just over one thousand, allowing the organization to better respond to evolving patient needs and improve access to care. The behavioral health pavilion expands essential services at a time when more people are struggling with depression, anxiety and other mental health challenges.



Meanwhile, Sarasota Memorial continues to lead the region in quality and safety. The Sarasota hospital maintained its 5-star rating for overall quality from the federal Centers for Medicare & Medicaid – the only hospital in Florida, and one of only 33 in the nation, to consistently earn CMS' highest quality award since the rating system launched in 2016.

Other rating organizations that have reviewed Sarasota Memorial's quality and safety during the pandemic include:

- **Fortune/Merative 100 Top Hospitals** – Judged on performance in 2020, Fortune/Merative analysts said the 2022 list represents those hospitals that held up best against the pandemic’s ongoing stress test. SMH-Sarasota ranked among the nation’s 100 Top Hospitals, the nation’s 40 top teaching hospitals and 50 top cardiovascular hospitals, achieving superior results on a wide range of performance indicators that measured not only mortality, complications, length of stay and other clinical outcomes, but also operational efficiency, patient experience and financial health.



- **The Leapfrog Group** – SMH-Sarasota continued its straight-A streak in Leapfrog’s twice annual report on U.S. hospital safety and quality performance. While the hospital has earned A’s on every report card since 2016, Leapfrog reported that many other hospitals received lower scores in the pandemic-era timeframe, reflecting how patient care worsened due to strains on the nation’s health care system and workforce.



• **U.S. News Best Hospitals** – Of the nearly 5,000 hospitals U.S. News evaluates each year, Sarasota Memorial has been repeatedly listed among the top performing providers. In 2022, it ranked among the 50 best in two specialties – rehabilitation and urology care, and among top performers in 15 other conditions and procedures. Sarasota Memorial consistently ranks #1 in the Sarasota-Bradenton-North Port region and ranked #6 in Florida in 2022.



• **Newsweek’s “World’s Best Hospitals”** – Sarasota Memorial has made this list every year from 2019 through 2022 based on superior clinical indicators, including low mortality, complication and readmission rates, as well as recommendations from medical professionals and patient survey results.



• **Patient Satisfaction** – According to the federal Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), Sarasota Memorial's “likelihood of recommending” score hovered above the 85th percentile from fiscal 2019 through fiscal 2022, and for most of the pandemic more than 10 percentage points higher than other participating hospitals.

Conclusions

Following a comprehensive review of Sarasota Memorial Health Care System's COVID-19 pandemic response, the Panel has identified both strengths and areas for improvement in the health system's approach to care. As we look forward, it will be important for Sarasota Memorial to apply learnings from the pandemic to ensure it continues to deliver robust clinical outcomes and a high standard of care now and into the future.

Strengths

Many of the innovations and adaptations Sarasota Memorial undertook during the pandemic were effective in managing the challenges of this public health crisis and enabling the hospital to deliver the best possible standard of care. These strengths should become part of Sarasota Memorial's organizational DNA and can be built upon to further enhance the health system's clinical care and resilience.

- **Precautions taken by Sarasota Memorial helped save lives in the Suncoast region.**

The health system's approach to safety and patient care resulted in a COVID mortality rate that was 24% lower (better) than national benchmarks, reflecting many lives saved over the past three years.

- **Sarasota Memorial demonstrated organizational flexibility and effective leadership.**

The health system was nimble in its response to emerging challenges, and staff members were encouraged and supported as they adapted and pivoted to care for patients in very adverse circumstances.

- **Sarasota Memorial's innovative management of testing, capacity, and supply and staffing shortages strengthened the community's COVID resilience.**

This enabled Sarasota Memorial to step up and provide care for over 70% of COVID patients in Sarasota County in the face of unprecedented pressures on the Suncoast region's health care infrastructure.

- **The COVID Treatment Task Force was crucial to Sarasota Memorial's COVID response.**

The Task Force was able to support the health system and quickly adapt its approach to care in response to unpredictable developments and in line with evolving information and guidelines.

- **Sarasota Memorial served as a vital source of up-to-date information, advice and education.**

Throughout the pandemic, Sarasota Memorial's effective communication ensured community members, local leaders and businesses and organizations were well-informed of emerging clinical developments and the latest COVID-19 guidance.

- **Sarasota Memorial’s discharge planning and home health and post-acute services reduced the length of hospital stays.** This allowed certain patients to be discharged more quickly with the resources to be safely and comfortably cared for at home and in non-hospital settings.

- **Sarasota Memorial adapted construction plans for its new Venice hospital, which opened in November 2021, to facilitate new best practices in patient care.** The intensive care units in the Venice facility were equipped to safely isolate COVID patients from others requiring critical care. These changes were based on learnings from caring for COVID patients on the Sarasota campus.

Areas for Improvement

There are lessons to be learned from Sarasota Memorial’s evolving approach to care during the pandemic and the impact it had on patients and their families, staff, and the wider community. Alongside the strategic and operational strengths that should be carried forward, the Panel also identified specific areas for improvement:

- **Despite innovations, discharge barriers remained and hospital readmission rates were higher than expected.** Sarasota Memorial cares for many high-risk patients, including the elderly. These patients continue to face prolonged hospital stays due to a lack of capacity in non-acute care facilities. Once discharged, many of these patients are readmitted due to preexisting and chronic health conditions.

- **Limitations on communications and visitation took a major toll on patients and their families.**

The pandemic posed challenges to many of the established practices in this area. Restrictions introduced by the hospital to enhance safety were detrimental to the spiritual and emotional wellbeing of patients and their loved ones. Sarasota Memorial’s visitation policies will remain consistent with Florida’s new “No Patient Left Alone Act,” which guarantees Florida families the right to visit their loved ones receiving care in hospitals, hospices, and long-term care facilities.

Recommendations

One of the strengths of Sarasota Memorial is its willingness to engage in self-critical analysis. While the precise circumstances of the COVID-19 pandemic may never arise again, there are takeaways from the last three years that present opportunities for improvement. Based on the findings of the review, the Panel makes the following recommendations to the Sarasota County Public Hospital Board.

1. The formation of a Health Emergency Response Committee to help Sarasota Memorial effectively and efficiently respond to future operational challenges and public health events.

The COVID Task Force should serve as a model for an expanded rapid-deployment committee to provide a unified pathway for responding to unexpected clinical and operational challenges. We recommend that the Medical Staff work with administration to establish a Health Emergency Response Committee that:

- Will be activated as a novel health challenge is identified
- Will be comprised of medical staff leaders and physicians from all impacted areas, senior administrative leaders, and representatives from impacted areas, including nursing, pharmacy, the emergency care, center, supply chain, food and nutrition, environmental services and others
- Will include representatives from the Patient Advocacy Department
- Will include representatives to advocate for staff and provide a clear pathway for consideration of employee concerns
- Will include dedicated communications staff to ensure messaging is consistent, timely, and accurate
- Will serve as the clearinghouse for evaluating novel treatments or preventative measures
- Will make recommendations regarding the implementation of measures to ensure communication between and among patients, families, and the clinical team, including the use of patient advocates
- Will provide regular reports on their activities to the Board

This recommendation addresses issues related to rapid evaluation of novel therapies, patient and family communication concerns, and creates a clear pathway for the Hospital Board review of the ongoing response to any health emergency.

2. Continued development of home health and post-hospital services and resources, including remote monitoring capacity, to reduce the length of hospital stays and strengthen the community and health system's resilience going forward.

As capacity issues continue to challenge the community and health system in the future, the ability to provide patients with step-down care after they leave the hospital is critical. Particularly during surges, patients who are relatively less sick may be able to recover safely at home and in non-hospital settings

with sufficient monitoring and support to face health challenges that develop after discharge. We recommend that Sarasota Memorial continue to develop and expand resources to support discharged patients, including:

- Evaluation of “Hospital at Home” and other programs to allow eligible patients to be safely cared for outside the hospital, with continued investment and growth in remote monitoring capacity and capability.
- Continued investment and development of sub-acute home health services to keep patients on a wellness trajectory and quickly identify when patients are facing health challenges, especially those that could result in readmission to the hospital.

This recommendation addresses issues related to discharge barriers and hospital readmission rates.

3. The deployment of more dedicated staff and increased utilization of technology, such as iPads, to improve communications with family members and between patients and their loved ones.

While the pandemic exacerbated the communication challenges in ensuring that patients, their families, and caregivers face, the challenges are not unique to a health emergency.

We recommend enhancing the use of virtual meeting technology, including the use of easily available tablets and devices, to provide patients and their families with a convenient, reliable way to communicate when they cannot be physically together.

This recommendation addresses issues related to patient and family communication concerns.

4. Build on established strengths in communications and information sharing by enhancing awareness of communication pathways for employees, medical staff, and the public.

The pandemic posed challenges to the normal flow of information to and within Sarasota Memorial at a time when many people wanted to communicate with the organization. While Sarasota Memorial has a variety of established formal and informal communication pathways, not everyone was aware of all the communication channels available to them.

As Sarasota Memorial, and the community it serves, continues to grow, it is important to raise awareness of the different ways that patients, family members, physicians, staff and other community members can make their voices heard.

We recommend that Sarasota Memorial develop an outreach and education plan to highlight the ways that stakeholders can communicate anonymously or by name with medical staff leadership, senior administration, and the Board.

Appendix A

Additional Questions & Concerns

The information below is a summary of COVID-related questions and concerns raised during recent board meetings and additional e-mails/correspondence sent to members of the Sarasota County Public Hospital Board. While the Hospital Board encourages individuals to share matters of importance for discussion and potential action, some of the concerns raised about COVID vaccine safety, studies and recommendations issued by federal agencies fall outside the authority of the local Hospital Board. We recommend individuals with questions about federal policies and protocols established by the Food & Drug Administration, Centers for Disease Prevention & Control and National Institutes of Health to contact their Congressional representatives to determine how best to engage with those federal agencies.

COVID TESTING & TREATMENT

Do Sarasota Memorial’s COVID testing protocols lead to false positive results? Why are patients who refuse testing, or who have other conditions but test positive, considered to be COVID patients by default?

Sarasota Memorial’s laboratory is accredited by the College of American Pathologists and follows industry standards and federal requirements related to testing protocols, procedures and results reporting to maintain accreditation and certification to provide diagnostic testing.

For COVID testing, Sarasota Memorial exclusively uses nucleic acid amplification testing (NAAT), designed to detect genetic material from the virus. Unlike commonly available antigen tests that detect proteins from the virus, the molecular NAAT tests are highly specific and sensitive and designed to minimize the chance of inaccurate results. That said, molecular testing does not differentiate between live and dead (non-replicating) virus, so some people could test positive even after they pass the infectious stage of the disease.

Sarasota Memorial’s laboratory results are correlated across multiple platforms and multiple locations, including external providers, performed by highly trained laboratory scientists and interpreted by medical providers who also take into account their patients’ medical history and condition when making diagnostic and treatment decisions.

Sarasota Memorial continues to test patients admitted for overnight stays in an effort to prevent the virus from spreading to other patients, visitors and staff. Patients who test positive, even if asymptomatic, are placed in an isolation room. Exceptions are made for those with a previous positive test within 90 days. Those cases are promptly reviewed by the Infection Prevention and Control team since those patients may harbor the non-replicating virus detected by the NAAT test and may not require isolation. While pre-

admission testing is the current standard of care, hospital leaders continue to evaluate the scope of testing necessary given the decreasing virulence of the virus.

Sarasota Memorial's laboratory has been recognized as a center of excellence and serves as a model for best practices. The lab was the first in the United States to fully automate chemistry, hematology, coagulation, and immunochemistry testing on a single Siemens Aptio automation line. In 2020, during the onset of the pandemic, the Microbiology section of the laboratory became the first in Florida to successfully implement a Copan WASPLab bacteriology automation system.

See the COVID Precautions, Testing & Care Teams section in the accompanying Community Report for more information.

Why are some COVID patients placed on ventilators?

People hospitalized with COVID-19 can experience a multitude of symptoms, many with complex multi-organ complications that can quickly cascade into life-threatening conditions – including infection that spreads to the lungs that can result in hypoxic respiratory failure and acute respiratory distress syndrome (ARDS).

In many cases, respiratory failure in COVID patients can be mild with a minimally decreased oxygen level. If the patient is otherwise stable, physicians may administer “low flow” oxygen support (less than 6 to 8 liters of pure oxygen delivered per minute), using a nasal cannula or simple face mask. Physicians can adjust the treatment to achieve a "high flow" rate of 8 to 15 liters of pure oxygen per minute if more support is needed. Should the patient's condition continue to deteriorate, physicians may transition to a heated and humidified high-flow delivery device that delivers up to 60 liters of pure oxygen per minute, or to noninvasive positive pressure ventilation, such as a CPAP (continuous positive airway pressure) or BiPap (bilevel positive airway pressure).

The decision to intubate a patient and place them on mechanical ventilation is based on the amount of oxygen a patient requires and whether they can continue to breathe on their own. If a patient is unable to breathe adequately on their own, they will deteriorate quickly and begin exhibiting visible distress, confusion, chest pain, an irregular heart rhythm, kidney failure, or other complications. Failure to intervene with advanced oxygen delivery devices and mechanical ventilation can lead to significant suffering, harm and death.

Who developed the Sarasota Memorial's protocols/standards for COVID care?

At the recommendation of Sarasota Memorial's Medical Executive Committee (MEC), the hospital assembled a COVID Treatment Task Force made up of several dozen specialists in each field of medicine who discussed, vetted and recommended “living guidelines” for all physicians treating COVID patients at the hospital. The recommendations, updated regularly, addressed all aspects of COVID treatment,

including therapeutics, ventilation methods, testing, early discharge protocols and review of evidence-based literature. Each iteration of the Task Force’s guidelines also included the latest recommendations from the National Institutes of Health, U.S. Centers for Disease Control and Prevention, World Health Organization, Infectious Diseases Society of America, and medical societies representing different disciplines. Alternative therapies, such as hydroxychloroquine and ivermectin, were reviewed and discussed multiple times and at length throughout the course of the pandemic, as well as the evidence-based trials pertaining to those treatments.

See the COVID Treatment section in the accompanying Community Report for more information.

Why does Sarasota Memorial use remdesivir, and does it lead to increased ventilator usage?

While Sarasota Memorial Health Care System equips its hospitals and physicians with the tools and treatments they need to provide quality patient care, treatment decisions are made between patients and their physicians.

Remdesivir was one of the most promising treatments in the early days of the pandemic based on antiviral action against coronaviruses, including SARS CoV-2, and preclinical research. Sarasota Memorial applied to be part of an FDA-approved expanded access program that gave physicians and their patients access to the therapy as researchers studied whether the medication could help reduce viral replication and improve outcomes in COVID-19 patients. Hospitalized patients meeting strict eligibility criteria were allowed to receive remdesivir under the protocol and followed closely for safety. As study results showed the benefits of remdesivir, the FDA granted emergency use authorization to make it more widely available. While the treatment’s impact on mortality remains unclear, studies continue to demonstrate benefits for COVID patients, including faster recovery times of hospitalized patients (from 15 to 10 days) and an 87% decrease in hospitalization when given to outpatients with mild-to-moderate COVID illness.

The Panel review found that treatment with remdesivir at Sarasota Memorial did not increase ventilator usage during the pandemic. Approximately 11% of COVID patients who received remdesivir required a ventilator as part of their care – a utilization rate consistent with that of all COVID patients treated at Sarasota Memorial during Premier’s analysis period (April 2020 through October 2022).

*See the COVID Treatment section in the accompanying Community Report for more information.
Additional references are available in Appendix C.*

Has Sarasota Memorial prohibited or restricted the use of ivermectin and hydroxychloroquine? Can patients/family representatives insist they receive the medications?

Sarasota Memorial has not prohibited or restricted either drug. As with any medication or medical procedure, treatment decisions are made between patients and their doctors. Both treatment options

have remained available with a valid physician order (physicians must be credentialed members of the hospital's Medical Staff), as long as there were no clinically significant drug interactions or contraindications, a precaution that applies to any drug dispensed to patients.

Hydroxychloroquine: Because of its well-established, anti-inflammatory properties, hydroxychloroquine was used as a potential early treatment for COVID-19, and given emergency use approval (EUA) by the FDA in March 2020. That approval was rescinded less than 3 months later after further study found it did not reduce the incidence of severe disease or death and could cause harm to patients hospitalized with COVID. Sarasota Memorial did not prohibit the drug, even as recommendations changed over time, but after the EUA was rescinded and randomized controlled trials showed no benefit, Sarasota Memorial removed it from its COVID treatment guidelines.

Ivermectin: In general, ivermectin has been used in COVID patients at risk of *Strongyloides* reactivation due to use of corticosteroids, or as part of clinical trials, but most physicians at Sarasota Memorial and across the nation do not recommend or use it for hospitalized COVID patients due to lack of proven efficacy from large, well-designed randomized controlled trials.

Physicians apply their knowledge, training and judgement in every single case. While they are not obligated to prescribe medications insisted upon by patients/family members, medical freedom gives patients/family representatives the right to seek a second opinion or choose another medical provider.

During the Delta phase of the pandemic, Sarasota Memorial developed care guidelines and a "Shared Decision-Making and Waiver Form" to facilitate the use of ivermectin or other treatments that fall outside traditional guidelines.

See the COVID Treatment section and Appendix D in the accompanying Community Report for more information.

Review the morbidity and mortality numbers associated with Sarasota Memorial's COVID-19 standard of care protocols with remdesivir, molnupiravir and ventilation.

Age and pre-existing medical conditions are among the strongest factors associated with COVID-related mortality, as they are with other causes of death. The care of COVID patients is multi-faceted and often involves a combination of medications and supportive therapy. Because of the many variables associated

with COVID care, Sarasota Memorial cannot fully assess the effectiveness of a single treatment unless it engages in a well-designed, placebo-controlled clinical trial of the drug in question.

The Panel notes, however, that Sarasota Memorial's COVID mortality rate was 24% lower/better than expected, according to an independent analysis by Premier Inc. In a comparative effectiveness analysis of 1,300 hospitals in Premier's database, Sarasota Memorial COVID mortality rates were lower (better) than Premier's national, South Atlantic, Florida and peer hospital benchmarks through each year of the pandemic, including the deadliest Delta phase. Premier reported that if all 1,300 hospitals in its national database had the same observed mortality as Sarasota Memorial, as many as 38,000 deaths could have been avoided.

See the COVID Clinical Outcomes section in the accompanying Community Report for more information.

How many patients were denied ivermectin when they requested it? And how many people exercised the option to get compassionate usage authorization for ivermectin or other protocols for COVID?

Sarasota Memorial has administered ivermectin to patients, when ordered by a physician, throughout the pandemic. From March 1, 2020 through December 31, 2022, 151 patients had an order placed and fulfilled for ivermectin by 41 different providers, with the greatest number of orders occurring in 2021. Sarasota Memorial cannot track how many patients requested but did not receive the drug, as providers do not typically document medications requested by patients in the medical records.

See the COVID Treatment section in the accompanying Community Report for more information.

Can Sarasota Memorial conduct a clinical trial of ivermectin for COVID treatment/prevention?

Yes, if the study and principal investigator follow standard procedures and processes established by the Sarasota Memorial Institution Review Board (IRB), which consists of physicians, nurses, pharmacists, other hospital representatives, non-affiliated community members, and other regulatory agencies if needed. The principal investigator must be a member of Sarasota Memorial's Medical Staff. Sarasota Memorial participates in many clinical trials and regularly considers requests from physicians on its Medical Staff. Clinical trials are typically sponsored by the companies testing a drug or device and must be approved by the FDA and IRB. Trials that involve Sarasota Memorial patients must be reviewed and approved by Sarasota Memorial's Research Institute, the Sarasota Memorial Institutional Review Board, and Sarasota Memorial's Research Resource and Feasibility Committee. Clinicians can contact Sarasota Memorial's Research Institute for more information.

Would doctors at Sarasota Memorial be open to hearing from nationally renowned doctors who have saved thousands of COVID patients’ lives so that our team can learn from them?

Yes. Sarasota Memorial is accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for physicians and other health care providers. Providers can submit suggestions for speakers and topics to Sarasota Memorial's Medical Education Committee, which meets monthly to evaluate pressing issues and concerns.

COVID VACCINES

Did Sarasota Memorial force staff to get COVID vaccines or fire any staff members who refused to get vaccinated?

No. In compliance with state law and federal requirements, Sarasota Memorial gave staff the choice of getting vaccinated or submitting an exemption form, including the religious exemption distributed by Florida’s Department of Health in November 2021, which allows staff to “decline the COVID-19 vaccination because of a sincerely held religious belief, which may include a sincerely held moral or ethical belief.” More than 7,500 Sarasota Memorial employees voluntarily opted for vaccination, while about 1,100 received an exemption. Proof of booster shots is not required. As Sarasota Memorial hires new staff, new employees are required to show proof of vaccination or submit an exemption, and that documentation is maintained by Employee Health, not managers, to demonstrate compliance with a federal vaccine mandate for health care organizations participating in Centers for Medicare & Medicaid Services programs. The majority of Sarasota Memorial patients – 62 percent – depend on Medicare and/or Medicaid, so compliance with the federal mandate ensures the continued care for thousands of community members.

Has Sarasota Memorial seen increased mortality since the vaccine rollout? And does that include an assessment of all-cause mortality in vaccinated vs unvaccinated people where any person who received any COVID vaccine even one hour earlier is counted as “vaccinated.”

Sarasota Memorial's electronic medical record (EMR) system is equipped with filters and tools to provide clinicians with immediate access to the personal and medical information they need to treat patients. While vaccine history is documented in patient's medical records, and used when necessary to guide clinical decision-making, the EMR was not designed to extract aggregate vaccine data and is not a reliable source for this kind of analysis.

Independent analysis of COVID-related mortality data by Premier Inc. demonstrates that the mortality rate for COVID patients has dropped significantly since the start of the pandemic, the result of better treatments, increased immunity from vaccines and prior infections, and evolution of the virus.

Why did Sarasota Memorial recommend that pregnant women get vaccinated?

Vaccination is a personal choice and Sarasota Memorial always encourages patients to discuss the benefits and risks of vaccination with their physicians. To help keep the public informed throughout the pandemic, the health system has shared the latest guidelines and recommendations from the CDC, the American College of Obstetrics and Gynecology and Society for Maternal-Fetal Medicine, the American Academy of Pediatrics and other medical societies. Their recommendations to vaccinate pregnant and nursing mothers are based on continuing evidence accumulated since their authorization, both here in the U.S. and in many other countries worldwide, that the vaccines are safe and effective, and an important safeguard because pregnant women are at higher risk for developing severe disease and birthing complications from COVID-19.

The CDC also encourages vaccination during pregnancy to help protect babies who cannot be vaccinated. Recent data shared by the CDC reports infants (0 to 1 year) were hospitalized at a higher rate than other children and adolescents (age 2 to 17 years), and they had a mortality rate four times higher than older children and teens (Vaccines and Related Biological Products Advisory Committee January 26, 2023 Meeting Presentation- COVID-19 Update on Current Epidemiology of the Pandemic and SARS-CoV-2 Variants). The report is available for download at: www.fda.gov/media/164814/download.

Additional research references are available in Appendix C.

Has Sarasota Memorial seen an increase in COVID-19 vaccine adverse events, including vaccine-related deaths, injuries or disease? Have you publicly reported them?

Sarasota Memorial has not seen an increase in COVID-19 vaccine related deaths, injuries or diseases. Side effects after getting a COVID-19 vaccine vary from person to person, but are typically mild with symptoms ranging from fever and chills to fatigue to muscle soreness. The symptoms are a normal sign that the vaccine is working to build your body's defense against the virus and generally subside in a few days.

Serious adverse effects are rare. Sarasota Memorial has not seen an increase in vaccine adverse events among its patients; nor has it received any reportable adverse reactions to the COVID vaccine among its staff, although it is possible some may have been reported to their private healthcare providers and therefore not captured.

During the review, the Panel became aware of three reports sent by Sarasota Memorial clinicians to the Vaccine Adverse Event Reporting System (VAERS), though none of the side effects reported rose to the level required for mandatory reporting. Although physicians found correlation between the hospital visits and timing of the vaccine, they did not find causation, meaning the conditions may not have been caused by the vaccine. Of the three patients who came to Sarasota Memorial's ER following COVID vaccination, one complained of severe headache, one complained of weakness, and one had a seriously low platelet count. All were treated, monitored for a short time and released.

Of roughly 7,500 Sarasota Memorial staff members who have been vaccinated, 11 reported side effects to the hospital's Employee Health Department. None were life threatening or rose to the level of mandatory VAERS reporting.

Sarasota Memorial has encouraged staff and community members to self-report adverse events through the VAERS system and V-Safe app, and provided a flyer with information and instructions to employees and community members vaccinated by the health system in late 2020 and 2021.

While CMS did not have ICD-10 codes specific to COVID-19 early in the pandemic, there is updated guidance to help providers document issues specific to COVID-19, including reactions to the COVID-19 vaccine. More information can be found in a FAQ published by the American Health Information Management Association: ahima.wpenginpowered.com/ahima-and-aha-faq-on-icd-10-cm-coding-for-covid-19

What safeguards does Sarasota Memorial have in place to allow doctors to freely share any concerns they have about the COVID vaccines without fear of retaliation? What safeguards does the health system have in place to allow doctors to treat suspected vaccine-injured patients and submit reports to VAERS without threat to their careers?

All employees, medical staff and volunteers are encouraged to share concerns related to safety or quality of care, and there are a number of internal and external channels and methods to report concerns, either in-person or anonymously. Sarasota Memorial prohibits retaliation against individuals who report concerns, with policies that outline the specific safeguards, processes and mechanisms to report concerns. Among the reporting channels is the Compliance Hotline, which is available for staff, volunteers or other individuals to report anything they believe is illegal, unethical or unsafe. Callers can remain anonymous or be notified confidentially of the investigation outcome.

In addition, Sarasota Memorial encourages staff to share any concerns they feel are not sufficiently addressed with external agencies that oversee our quality and safety, including Florida's Agency for Health Care Administration and the Joint Commission. Sarasota Memorial does not take disciplinary action against employees, medical staff members or volunteers who report safety or quality of care concerns to the health system or these external agencies.

Sarasota Memorial provides patients or their representatives with a Summary of Florida Patient's Bill of Rights and Responsibilities with instructions and contact information about how to file a grievance or lodge a complaint with state regulators.

Meanwhile, anyone can — and is encouraged — to submit a report to VAERS.

Does Sarasota Memorial have an effective mechanism in place for staff/health providers to anonymously share safety concerns directly to the Hospital Board?

Staff/providers who have observed something in the workplace that they believe is illegal, unethical or unsafe are encouraged to call the Compliance Hotline (941-917-CALL), and can remain anonymous or choose to be notified confidentially of the investigation outcome. In addition, individuals can – and do – send anonymous letters to the Hospital Board. Each board member can be reached via mail and email. Hospital Board contact information and the address for the Hospital Board Office is available on Sarasota Memorial’s website. Sarasota Memorial prohibits retaliation against individuals who report concerns.

Who can we talk to about additional vaccine research & safety concerns?

Some additional concerns about vaccine safety and research fall outside the jurisdiction and authority of the local Hospital Board. Individuals with questions about vaccine safety studies and policy decisions are encouraged to contact their Congressional representatives to determine how best to engage with the FDA, CDC and their respective advisory committees to get more information.

VISITATION & COMMUNICATION

Why did Sarasota Memorial prohibit visitors even though it had personal protective equipment (PPE) to ensure safety? Why did communications have to take place over the phone?

Like other hospitals across the state and nation, Sarasota Memorial restricted visitation shortly after the onset of the pandemic following much deliberation, consultation with infectious disease specialists and review of government-issued guidance. At the time, we did not have a complete understanding of the dynamics of viral transmission, nor how to prevent the spread of the virus throughout the hospital. Visitation policies were developed out of concern not only for the potential infection of visitors, but also other patients in the hospital at high risk of developing severe illness. We also needed to conserve personal protective equipment (PPE), which was in scarce supply at various times during the pandemic, to help ensure sufficient protection for our staff.

Recognizing that the separation of patients and family was a severe hardship for many, Sarasota Memorial strived to provide new ways to keep patients, families and physicians connected. In addition to arranging telephone calls, the hospital distributed iPads with FaceTime and similar apps to patients throughout its patient care units and expanded a family-to-clinician app to share regular updates. As our understanding of the virus evolved, we relaxed or tightened visitation policies at different times based on transmission rates and other disease indicators. Following each surge, our priority was to ease restrictions and bring patients and their loved ones together as soon as the positivity testing rate declined.

See the Visitation/Communication with Families section in the accompanying Community Report for more information.

FINANCIAL CONCERNS

Did Sarasota Memorial receive financial incentives for carrying out COVID-related services, including any of the following:

- *COVID-19 tests/diagnoses/admissions/treatment/length-of-stay*
- *Reporting on death certificates*
- *Use of Remdesivir or other COVID-19 treatments*
- *COVID-19 vaccines*

Sarasota Memorial does not receive reimbursement for reporting COVID-19 on death certificates. Physicians are responsible for filling out death certificates as a separate function of the self-governing Medical Staff. Like all hospitals that care for Medicare patients, Sarasota Memorial is reimbursed for the care it provides to COVID-19 patients, including testing and treatment. Payment for COVID care varies for each patient, and is determined by the patient's needs, federal law, Medicare/Medicaid rules and/or the terms of the patient's health plan if they have private insurance. Payment is based on diagnosis codes, not on length-of-stay. To be eligible to receive reimbursement, Sarasota Memorial must comply with stringent coding procedures and regulations established by the federal government.

Additional Claims Reimbursement – Medicare established a temporary 20% add-on payment for COVID Medicare inpatients to help hospitals offset the high cost and resources associated with COVID care. The increased payments are set to expire following the end of the federally-determined Public Health Emergency on May 11, 2023.

Remdesivir – Although hospitals may receive compensation for the work provided to set up and run an FDA-approved clinical trial, and for the care and monitoring of patients enrolled in studies, Sarasota Memorial received no compensation for its participation in the remdesivir study and early access program. The hospital participated in the program – without compensation – in order to provide early access for the treatment for severely ill COVID patients who met the study criteria. Medicare began reimbursing hospitals for use of the drug only after it received FDA emergency use authorization and became more widely available. The add-on payment is set to expire following the end of the federally-determined Public Health Emergency on May 11, 2023.

COVID Vaccines – While vaccines were provided to hospitals at no charge, and no charge was passed on to patients, Sarasota Memorial received reimbursement for the administration of COVID vaccines it received from the state in late 2020 and 2021 and distributed in accordance with state priorities.

See the Finance section in the accompanying Community Report for more information.

How much money did Sarasota Memorial, its research division or associates receive from Pfizer, Gilead, Merck, Regeneron in 2020-2022?

Sarasota Memorial participates in numerous clinical trials and studies to help evaluate the effectiveness of new and emerging treatments and provide early access to promising therapies for patients in our community. It is a mission-driven service, one that does not always generate revenue for the health system.

Early in the pandemic, Sarasota Memorial was among a limited number of hospitals that participated in an FDA-approved expanded access program for remdesivir (Gilead). Sarasota Memorial incurred more than \$50,000 in expenses and received no compensation for the work the research team and hospital staff contributed to the study. But participating in the program allowed COVID patients hospitalized at Sarasota Memorial to gain early access to the antiviral drug at a time when treatment options were extremely limited.

Similarly, Sarasota Memorial collaborated with the Mayo Clinic in a study that gave local patients early access to convalescent plasma, before it was granted emergency use authorization. Sarasota Memorial's research team coordinated the collection and administration of convalescent plasma through the FDA expanded access program, incurring more than \$120,000 in expenses to care for hundreds of patients enrolled in the program. At the conclusion of its program, the Mayo Clinic provided enrolling hospital sites \$200 per patient in funding to help cover the cost of research data collection.

Sarasota Memorial ran three separate, very large clinical trials of Regeneron's monoclonal antibody treatment in 2020, until study results prompted the FDA to grant emergency use authorization and made the treatments widely available. The health system received \$2.2 million from Regeneron to structure and oversee the studies and care of more than 124 study patients. While Sarasota Memorial does not track the many expenses incurred by other hospital divisions and departments, expenses documented by Sarasota Memorial's research division exceed \$1 million.

Sarasota Memorial did not participate in or receive funding for any COVID research studies with Pfizer or Merck in 2020-2022.

Were there government, organizational mandates or financial incentives that influenced the doctor-patient relationship and prevented doctors from using FDA drugs off-label?

No. *See the COVID Treatment section in the accompanying Community Report for more information.*

Why does Sarasota Memorial receive tax support?

The only public, community-owned hospital in the region, Sarasota Memorial is governed by nine unpaid, locally elected Hospital Board members who reside in Sarasota County and are accountable to the

citizens and community they serve. Other hospitals in Sarasota, Manatee and Charlotte counties are privately-owned and managed by distant corporate executives who are accountable to shareholders.

While overall tax revenue has increased due to new construction and increased property values, the Hospital Board has not raised the tax rate in more than a decade, and has twice reduced it, in 2016 and 2017. The Hospital Board sets a tax rate for Sarasota County property owners annually in a transparent process. Tax hearings are open to the public and advertised ahead of time, with the community invited to give input before the board votes to set the tax rate.

In its most recent audited financials (FY 2022), taxes made up 4.7% of the health system's operating revenue, which equates to about 19 days of the system's expenses. But the taxes provide far-reaching and vital support for high-quality care that meets the varied and evolving needs of the patients we serve. For instance, the \$69.4 million in tax revenue in fiscal 2022 helped offset a portion of the cost of providing safety net services to the community; in fiscal 2022, these costs totaled \$285 million.

Sarasota Memorial provides essential, high-cost programs that privately owned hospitals have never offered, or have eliminated or scaled back. For instance, Sarasota Memorial's two hospitals are the only hospitals in Sarasota County that provide birthing services, and the Sarasota hospital is the only one that provides pediatrics, newborn intensive care, trauma care, psychiatric care for patients of all ages, as well as a specialty clinic for underinsured and uninsured residents. Tax revenue is not earmarked for any one program or demographic. It also helps support the costs of expanding, maintaining and updating services to better serve our growing community, such as the expansion of the new SMH-Venice hospital to help meet south county's high demand for care, and construction of a new Behavioral Health Pavilion to replace an aged facility with a new facility designed to provide a healing environment for care.

What were some of the best practices other health care systems developed through the pandemic? Did Sarasota Memorial demonstrate any of them?

Sarasota Memorial and hospitals around the world prepared as best they could for the uncertainties of the COVID-19 pandemic, using established emergency planning and pandemic protocols, and adjusting and adapting their practices as new challenges emerged and evolved. Some of the best practices that Sarasota Memorial developed are detailed throughout this Community Report, and are recognized in emerging literature and reports, including:

- JAMA– Nine Lessons Learned From the COVID-19 Pandemic for Improving Hospital Care and Health Care Delivery: www.jamanetwork.com/journals/jamainternalmedicine/fullarticle/2782429
- Healthgrades celebrates 24 Leading Hospitals in Early COVID Care www.healthgrades.com/right-care/coronavirus/healthgrades-celebrates-leading-hospitals-in-early-covid-care

Appendix B

Premier Data/References

Florida Benchmark Hospitals

AdventHealth Altamonte	ALTAMONTE SPRINGS	FL
AdventHealth Apopka	APOPKA	FL
AdventHealth Carrollwood	Tampa	FL
AdventHealth Celebration	CELEBRATION	FL
AdventHealth Connerton	Land O Lakes	FL
AdventHealth Dade City	Dade City	FL
AdventHealth Daytona Beach	Daytona Beach	FL
AdventHealth DeLand	Deland	FL
AdventHealth East Orlando	Orlando	FL
AdventHealth Fish Memorial	ORANGE CITY	FL
AdventHealth for Children	Orlando	FL
AdventHealth Kissimmee	KISSIMMEE	FL
AdventHealth Lake Placid	LAKE PLACID	FL
AdventHealth New Smyrna Beach	New Smyrna Beach	FL
AdventHealth North Pinellas	Tarpon Springs	FL
AdventHealth Ocala	Ocala	FL
AdventHealth Orlando	Orlando	FL
AdventHealth Palm Coast	Palm Coast	FL
AdventHealth Sebring	SEBRING	FL
AdventHealth Tampa	Tampa	FL
AdventHealth Waterman	Tavares	FL
AdventHealth Wauchula	Wauchula	FL
AdventHealth Wesley Chapel	Wesley Chapel	FL
AdventHealth Winter Park	WINTER PARK	FL
AdventHealth Zephyrhills	Zephyrhills	FL

ASC05 Sacred Heart Pensacola	PENSACOLA	FL
ASC10 Ascension Sacred Heart Bay	Panama City	FL
ASC35 St. Vincent's Medical Ctr Riversid	Jacksonville	FL
ASC70 Sacred Heart Emerald Coast	MIRAMAR BEACH	FL
ASC74 St. Vincent's Medical Ctr Southsid	JACKSONVILLE	FL
ASC78 Sacred Heart Hospital Gulf	PORT ST. JOE	FL
ASC91 St. Vincent's Med Ctr-Clay County	Middleburg	FL
Baptist Hospital of Miami	MIAMI	FL
Bartow Regional Medical Center	Bartow	FL
Bayfront Health St. Petersburg	St. Petersburg	FL
Bethesda Hospital East	Boynton Beach	FL
Boca Raton Regional Hospital	Boca Raton	FL
Doctors Hospital	CORAL GABLES	FL
Fishermen's Hospital	Marathon	FL
Homestead Hospital	HOMESTEAD	FL
Lakewood Ranch Medical Center	Bradenton	FL
Manatee Memorial Hospital	Bradenton	FL
Mariners Hospital	TAVERNIER	FL
Mease Countryside Hospital	SAFETY HARBOR	FL
Mease Dunedin Hospital	DUNEDIN	FL
Memorial Hospital Miramar	MIRAMAR	FL
Memorial Hospital Pembroke	PEMBROKE PINES	FL
Memorial Hospital West	PEMBROKE PINES	FL
Memorial Regional Hospital	HOLLYWOOD	FL
Memorial Regional Hospital South	HOLLYWOOD	FL
Morton Plant Hospital	CLEARWATER	FL
Mount Sinai Medical Ctr	MIAMI BEACH	FL
North Bay Medical Center	NEW PORT RICHEY	FL
Orlando Health - Health Central Hospital	Ocoee	FL
Orlando Health Arnold Palmer Hospital fo	Orlando	FL
Orlando Health Cancer Institute	Orlando	FL

Orlando Health Dr. P. Phillips Hospital	Orlando	FL
Orlando Health Heart and Vascular Instit	Orlando	FL
Orlando Health Horizon West Hospital	Winter Garden	FL
Orlando Health Orlando Regional Medical	Orlando	FL
Orlando Health South Lake Hospital	Clermont	FL
Orlando Health South Seminole Hospital	Longwood	FL
Orlando Health St. Cloud Hospital	St. Cloud	FL
Orlando Health Winnie Palmer Hospital fo	Orlando	FL
Sarasota Memorial Hospital	Sarasota	FL
South Florida Baptist Hospital	PLANT CITY	FL
South Miami Hospital	SOUTH MIAMI	FL
St. Anthony's Hospital	ST. PETERSBURG	FL
St. Joseph's Hospital	TAMPA	FL
St. Joseph's Hospital-North	LUTZ	FL
St. Joseph's Hospital-South	Riverview	FL
St. Joseph's Women's Hospital	TAMPA	FL
Wellington Regional Medical Center	West Palm Beach	FL
West Kendall Baptist Hospital	Miami	FL
Winter Haven Hospital Inc.	Winter Haven	FL

Sarasota Memorial Peer Benchmark Hospitals

Akron City Hospital	AKRON	OH
ASC11 Ascension St. Vincent Hospital	INDIANAPOLIS	IN
Baton Rouge General Medical	BATON ROUGE	LA
Baystate Medical Center	SPRINGFIELD	MA
Einstein Medical Center Philadelphia	PHILADELPHIA	PA
Hartford Hospital	HARTFORD	CT
Henry Ford Hospital	DETROIT	MI
Manhasset Hospital	MANHASSET	NY

McLaren Greater Lansing	Lansing	MI
Memorial Hospital West	PEMBROKE PINES	FL
Mercy Health - St. Rita's Medical Center	Lima	OH
Methodist Dallas Medical Ctr	DALLAS	TX
Morton Plant Hospital	CLEARWATER	FL
Mount Sinai Medical Ctr	MIAMI BEACH	FL
NMMC - Tupelo	TUPELO	MS
North Colorado Medical Center	GREELEY	CO
OSF Saint Francis Medical Center	Peoria	IL
Regions Hospital	St. Paul	MN
South Shore University Hospital	BAYSHORE	NY
Springfield Memorial Hospital	Springfield	IL
St. Luke's Hospital - Bethlehem Campus	BETHLEHEM	PA
Staten Island Univ Hosp North	STATEN ISLAND	NY
The Hospital of Central Connecticut	New Britain	CT
The Queen's Medical Center	Honolulu	HI
Thomas Jefferson University Hospital	PHILADELPHIA	PA
UH Cleveland Medical Center	CLEVELAND	OH
University Medical Center	LUBBOCK	TX
University of Tennessee	KNOXVILLE	TN
UVA Medical Center	Charlottesville	VA
VCU Medical Center Main Hospital	Richmond	VA
Vidant Medical Center	Greenville	NC
Wake Forest Baptist Medical Center	Winston-Salem	NC
York Hospital	YORK	PA

South Atlantic U.S. Benchmark Hospitals

AdventHealth Altamonte	ALTAMONTE SPRINGS	FL
AdventHealth Apopka	APOPKA	FL
AdventHealth Carrollwood	Tampa	FL
AdventHealth Celebration	CELEBRATION	FL
AdventHealth Connerton	Land O Lakes	FL
AdventHealth Dade City	Dade City	FL
AdventHealth Daytona Beach	Daytona Beach	FL
AdventHealth DeLand	Deland	FL
AdventHealth East Orlando	Orlando	FL
AdventHealth Fish Memorial	ORANGE CITY	FL
AdventHealth for Children	Orlando	FL
AdventHealth Gordon	CALHOUN	GA
AdventHealth Heart of Florida	Davenport	FL
AdventHealth Hendersonville	Hendersonville	NC
AdventHealth Kissimmee	KISSIMMEE	FL
AdventHealth Lake Placid	LAKE PLACID	FL
AdventHealth Lake Wales	Lake Wales	FL
AdventHealth Murray	Chatsworth	GA
AdventHealth New Smyrna Beach	New Smyrna Beach	FL
AdventHealth North Pinellas	Tarpon Springs	FL
AdventHealth Ocala	Ocala	FL
AdventHealth Orlando	Orlando	FL
AdventHealth Palm Coast	Palm Coast	FL
AdventHealth Sebring	SEBRING	FL
AdventHealth Tampa	Tampa	FL
AdventHealth Waterman	Tavares	FL
AdventHealth Wauchula	Wauchula	FL
AdventHealth Wesley Chapel	Wesley Chapel	FL
AdventHealth Winter Park	WINTER PARK	FL

AdventHealth Zephyrhills	Zephyrhills	FL
Aiken Regional Medical Center	Aiken	SC
Alamance Regional Medical	BURLINGTON	NC
Anmed Health System	ANDERSON	SC
Annie Penn Hospital	Reidsvile	NC
ASC05 Sacred Heart Pensacola	PENSACOLA	FL
ASC10 Ascension Sacred Heart Bay	Panama City	FL
ASC14 St. Agnes Hospital	BALTIMORE	MD
ASC35 St. Vincent's Medical Ctr Riversid	Jacksonville	FL
ASC70 Sacred Heart Emerald Coast	MIRAMAR BEACH	FL
ASC74 St. Vincent's Medical Ctr Southsid	JACKSONVILLE	FL
ASC78 Sacred Heart Hospital Gulf	PORT ST. JOE	FL
ASC91 St. Vincent's Med Ctr-Clay County	Middleburg	FL
Atlantic General Hospital	Berlin	MD
Atrium Health Behavioral Health	Charlotte	NC
Atrium Health Cabarrus	CONCORD	NC
Atrium Health Cleveland	SHELBY	NC
Atrium Health Kings Mountain	KINGS MOUNTAIN	NC
Atrium Health Lincoln	LINCOLNTON	NC
Atrium Health Mercy	CHARLOTTE	NC
Atrium Health Pineville	CHARLOTTE	NC
Atrium Health Stanly	ALBEMARLE	NC
Atrium Health Union	Monroe	NC
Atrium Health University City	CHARLOTTE	NC
Atrium Health's Carolinas Medical Center	CHARLOTTE	NC
Baptist Hospital of Miami	MIAMI	FL
Bartow Regional Medical Center	Bartow	FL
Bayfront Health St. Petersburg	St. Petersburg	FL
Beebe Healthcare	Lewes	DE
Behavioral Health Center	Greensboro	NC
Berkeley Medical Center	MARTINSBURG	WV

Bethesda Hospital East	Boynton Beach	FL
Boca Raton Regional Hospital	Boca Raton	FL
Bon Secours Southampton Medical Center	Franklin	VA
Braxton County Memorial Hospital	Gassaway	WV
Camden-Clark Memorial Hospital	PARKERSBURG	WV
Candler Hospital	SAVANNAH	GA
Cannon Memorial Hospital	Pickens	SC
Carroll Hospital Center	Westminster	MD
Catawba Valley Medical Center	HICKORY	NC
Charleston Area Medical Center	CHARLESTON	WV
Chesapeake Regional Medical Center	CHESAPEAKE	VA
Christiana Care, Union Hospital	Elkton	MD
Coffee Regional Medical Center	Douglas	GA
Conway Hospital Inc.	CONWAY	SC
Davie Medical Center - Bermuda Run	Bermuda Run	NC
DePaul Medical Center (VA)	NORFOLK	VA
Dickenson Community Hospital	Clintwood	VA
Doctors Hospital	CORAL GABLES	FL
Fannin - Blue Ridge, GA	Blue Ridge	GA
FirstHealth Moore Regional	PINEHURST	NC
FirstHealth Moore Regional Hospital - Ho	Raeford	NC
Fishermen's Hospital	Marathon	FL
Frederick Health Hospital	FREDERICK	MD
George Washington University Hospital	Washington	DC
Hampshire Memorial Hospital	ROMNEY	WV
High Point Medical Center	HIGH POINT	NC
Homestead Hospital	HOMESTEAD	FL
Iredell Memorial Hospital	Statesville	NC
Jackson General Hospital	Ripley	WV
Jefferson Medical Center	RANSON	WV
Johnston Memorial Hospital	ABINGDON	VA

Lakewood Ranch Medical Center	Bradenton	FL
Lee County Community Hospital	Pennington Gap	VA
Lexington Medical Center	Lexington	NC
Lonesome Pine Hospital	Big Stone Gap	VA
Manatee Memorial Hospital	Bradenton	FL
Mariners Hospital	TAVERNIER	FL
Martin - Williamston, NC	Williamston	NC
Mary Immaculate Hospital (VA)	NEWPORT NEWS	VA
Maryview Medical Center (VA)	PORTSMOUTH	VA
McLeod Health Cheraw	Cheraw	SC
McLeod Health Clarendon	Manning	SC
McLeod Loris Seacoast Hospital	LORIS	SC
McLeod Medical Center - Dillon	Dillon	SC
McLeod Regional Medical Center	FLORENCE	SC
Mease Countryside Hospital	SAFETY HARBOR	FL
Mease Dunedin Hospital	DUNEDIN	FL
Medical Center Navicent Health	Macon	GA
Medical Center of Peach County	Byron	GA
Memorial Hospital Miramar	MIRAMAR	FL
Memorial Hospital Pembroke	PEMBROKE PINES	FL
Memorial Hospital West	PEMBROKE PINES	FL
Memorial Regional Hospital	HOLLYWOOD	FL
Memorial Regional Hospital South	HOLLYWOOD	FL
Memorial Regional Medical Center (VA)	MECHANICSVILLE	VA
Mon Health Marion Hospital	Morgantown	WV
Monongalia Health System Inc.	MORGANTOWN	WV
Montgomery Memorial Hospital	Troy	NC
Morton Plant Hospital	CLEARWATER	FL
Moses H. Cone Memorial Hospital	Greensboro	NC
Mount Sinai Medical Ctr	MIAMI BEACH	FL
Navicent Health Baldwin	Milledgeville	GA

North Bay Medical Center	NEW PORT RICHEY	FL
Northeast GA Med Ctr - Lumpkin	Dahlonega	GA
Northeast GA Med Ctr- Barrow	Winder	GA
Northeast GA Med Ctr- Gainesville	GAINESVILLE	GA
Northeast GA Med Ctr-Braselton	Hoschion	GA
Northwest Hospital Center	RANDALLSTOWN	MD
Norton Community Hospital	NORTON	VA
Orlando Health - Health Central Hospital	Ocoee	FL
Orlando Health Arnold Palmer Hospital fo	Orlando	FL
Orlando Health Cancer Institute	Orlando	FL
Orlando Health Dr. P. Phillips Hospital	Orlando	FL
Orlando Health Heart and Vascular Instit	Orlando	FL
Orlando Health Horizon West Hospital	Winter Garden	FL
Orlando Health Orlando Regional Medical	Orlando	FL
Orlando Health South Lake Hospital	Clermont	FL
Orlando Health South Seminole Hospital	Longwood	FL
Orlando Health St. Cloud Hospital	St. Cloud	FL
Orlando Health Winnie Palmer Hospital fo	Orlando	FL
Page Memorial Hospital Inc.	Luray	VA
Potomac Valley Hospital	Keyser	WV
Princeton Community Hospital	Princeton	WV
Randolph Hospital	ASHEBORO	NC
Rappahannock General Hospital (VA)	Kilmarnock	VA
Reynolds Memorial Hospital	Glen Dale	WV
Richmond Community Hospital (VA)	RICHMOND	VA
Richmond Memorial Hospital	ROCKINGHAM	NC
Riverside Doctors Hospital of Williamsbu	Williamsburg	VA
Riverside Regional Medical Ctr	NEWPORT NEWS	VA
Riverside Shore Memorial Hospital	Onancock	VA
Riverside Walter Reed Hospital	GLOUCESTER	VA

RSFH Berkeley Hospital	Summerville	SC
RSFH Bon Secours St. Francis Hospital	CHARLESTON	SC
RSFH Mount Pleasant Hospital	MOUNT PLEASANT	SC
RSFH Roper Hospital	CHARLESTON	SC
Russell County Hospital	LEBANON	VA
Sarasota Memorial Hospital	Sarasota	FL
Scotland Memorial Hospital	Laurinburg	NC
Shenandoah Memorial Hospital	WOODSTOCK	VA
Sinai Hospital of Baltimore	BALTIMORE	MD
Smyth County Community	MARION	VA
South Florida Baptist Hospital	PLANT CITY	FL
South Miami Hospital	SOUTH MIAMI	FL
Southeastern Health	LUMBERTON	NC
Southern Virginia Regional Medical Center	Emporia	VA
Southside Regional Medical Center	Petersburg	VA
St. Anthony's Hospital	ST. PETERSBURG	FL
St. Francis - Downtown (SC)	GREENVILLE	SC
St. Francis - Eastside (SC)	GREENVILLE	SC
St. Francis Hospital	CHARLESTON	WV
St. Francis Medical Center (VA)	MIDLOTHIAN	VA
St. Joseph's Hospital	TAMPA	FL
St. Joseph's Hospital - Buckhannon	BUCKHANNON	WV
St. Joseph's Hospital Inc.	SAVANNAH	GA
St. Joseph's Hospital-North	LUTZ	FL
St. Joseph's Hospital-South	Riverview	FL
St. Joseph's Women's Hospital	TAMPA	FL
St. Mary's Hospital (WV)	HUNTINGTON	WV
St. Mary's Hospital of Richmond (VA)	RICHMOND	VA
Summersville Regional Medical Center	Summersville	WV
The Outer Banks Hospital	Nags Head	NC
Thomas Memorial Hospital	SOUTH CHARLESTON	WV

TidalHealth Nanticoke	Seaford	DE
TidalHealth Peninsula Regional	Salisbury	MD
United Hospital Center Inc.	Bridgeport	WV
UPMC Western Maryland	CUMBERLAND	MD
UVA Medical Center	Charlottesville	VA
VCU Community Memorial	SOUTH HILL	VA
VCU Health Tappahannock Hospital	TAPPAHANNOCK	VA
VCU Medical Center Main Hospital	Richmond	VA
VHC Health	Arlington	VA
Vidant Beaufort Hospital	Washington	NC
Vidant Bertie Hospital	Windsor	NC
Vidant Chowan Hospital	Edenton	NC
Vidant Duplin Hospital	KENANSVILLE	NC
Vidant Edgecombe Hospital	Tarboro	NC
Vidant Medical Center	Greenville	NC
Vidant Roanoke-Chowan Hospital	Ahoskie	NC
Wake Forest Baptist Medical Center	Winston-Salem	NC
WakeMed Apex Healthplex	Apex	NC
WakeMed Brier Creek Healthplex	Raleigh	NC
WakeMed Cary Hospital	Cary	NC
WakeMed Garner Healthplex	Garner	NC
WakeMed North Hospital	Raleigh	NC
WakeMed Raleigh Campus	Raleigh	NC
WakeMed Rehabilitation Hospital	Raleigh	NC
War Memorial Hospital, Inc.	BERKELEY SPRING	WV
Warren Memorial Hospital	FRONT ROYAL	VA
Watauga Medical Center Inc.	BOONE	NC
Weirton Medical Center Inc.	WEIRTON	WV
Wellington Regional Medical Center	West Palm Beach	FL
Wesley Long Community Hospital	Greensboro	NC
West Kendall Baptist Hospital	Miami	FL

West Virginia University	MORGANTOWN	WV
Wetzel County Hospital	New Martinsville	WV
Wilkes Regional Medical Center	NORTH WILKESBORO	NC
Winchester Medical Center	WINCHESTER	VA
Winter Haven Hospital Inc.	Winter Haven	FL

Premier collects data on 45% of U.S. discharges annually. For information about the 1,300 hospitals in its national database, visit: premierinc.com

Potential Inpatient Complications

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101 Sepsis
102 Sepsis with Septic Shock
104 Methicillin-Resistant Staphylococcus Aureus (MRSA)
105 Enteritis
106 C. Diff. Enteritis
109 Other Infections
301 Hemorrhage/Hematoma Complicating a Procedure
401 Other Hypoglycemia
402 Iatrogenic Pituitary Disorder/Diabetes Insipidus
403 Volume Depletion/Dehydration
404 Acid-Base Disturbance
405 Fluid Overload
406 Transfusion Reaction (non-ABO)
601 Transient Cerebral Ischemia
602 Encephalopathy
603 Anoxic Brain Damage
604 Dural Tear
605 Complication CNS
901 Acute Myocardial Infarction
902 Complications of Acute myocardial infarction (AMI)
903 Pulmonary Embolism, non-CMS HAC
904 Cardiac Arrest
905 Ventricular Fibrillation
906 Intracranial Hemorrhage
907 Subdural / Extradural Hemorrhage
908 Cerebral Infarction
910 Embolism/Thrombus (non-pulmonary), non-CMS HAC
911 Septic arterial embolism
912 Deep Vein Thrombosis, non-CMS HAC
914 Iatrogenic Hypotension
915 Surgical Complication-Heart
916 Iatrogenic Cerebrovascular Infarction
1001 Pneumonia
1002 Aspiration Pneumonia
1003 Acute Pulmonary Edema
1004 Status Asthmaticus
1005 Tracheostomy Complication
1006 Iatrogenic Pneumothorax, non-CMS HAC
1007 Post-Surgical Respiratory Failure
1008 Ventilator Associated Pneumonia
1009 Other Respiratory Complications
1010 Acute Respiratory Failure
1101 Gastrointestinal (GI) Ulceration & Hemorrhage
1102 Intestinal Perforation
1103 Acute Necrosis of the Liver

1104 Acute Necrosis of the Liver with Coma
1105 Acute Pancreatitis
1106 Surgical Complication-Digestive System
1108 Complication or infection of colostomy/enterostomy
1109 Infection following GI procedure
1201 Cellulitis/Skin Infection
1301 Complications due to orthopedic prosthesis or device
1401 Acute Renal Failure
1402 Pyelonephritis
1403 Other Urinary Tract Infection
1404 Complications of Cystostomy
1405 Surgical Complication-Urinary Tract
1501 Maternal Hypotension
1502 Fetal-Maternal Hemorrhage
1503 Obstetric Shock
1504 Delivery with 3rd or 4th degree laceration
1506 Uterine Rupture
1507 Maternal Distress
1508 Complications of OB surgery
1509 Other Complications of delivery
1510 Obstetrical Air Embolism
1511 Obstetrical Amniotic Fluid Embolism
1512 Obstetrical Thromboembolism
1513 Obstetrical Deep Vein Thrombosis
1514 Other Obstetrical Embolism
1515 Acute Renal Failure with delivery
1601 maternal condition affecting newborn
1602 Birth Trauma or Injury
1603 Respiratory Complication of Newborn
1801 Coma
1802 Cardiogenic Shock
1803 Other Shock
1901 Injury to Nerve
1902 Adverse Drug Event (ADE)
1903 Complications of Anesthesia
1904 Anaphylactic Reaction/Serum Reaction
1905 Fat Embolism
1906 Infection due to Infusion
1907 Perioperative Shock
1908 Complication of Surgical Wound or Wound Healing, incl. Hematoma
1909 Perioperative Infection, Non-CMS HAC
1910 Accidental Laceration or Puncture
1911 Surgical Complication-Peripheral Vascular System
1912 Complications of cardiac device/graft
1913 Complication of Vascular device
1914 Mechanical complication of Genitourinary (GU) device or graft
1915 Vascular Complications
1916 Infection due to Device / Graft, non-CMS HAC

- 1917 Complication of Nervous System device
- 1918 Complication of Other Unspecified device
- 1919 Complications of Transplanted Organ
- 1920 Amputation stump complications
- 1921 Other Complications of Medical / Surgical care
- 1922 Complications due to peritoneal dialysis catheter
- 2001 Performance of Inappropriate Operation

Appendix C

Research Studies & References

Living Guidelines for the Management of COVID-19 Infections

NIH:

COVID-19 Treatment Guidelines Panel. Coronavirus Disease 2019 (COVID-19) Treatment Guidelines. National Institutes of Health. Available at:

<https://www.covid19treatmentguidelines.nih.gov/>

IDSA:

Bhimraj A, Morgan RL, Shumaker AH, Baden L, Cheng VC, Edwards KM, Gallagher JC, Gandhi RT, Muller WJ, Nakamura MM, O'Horo JC, Shafer RW, Shoham S, Murad MH, Mustafa RA, Sultan S, Falck-Ytter Y. Infectious Diseases Society of America Guidelines on the Treatment and Management of Patients with COVID-19. Infectious Diseases Society of America **2022**; Version 10.1.1. Available at <https://www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management/>

WHO:

Therapeutics and COVID-19: living guideline

<https://www.who.int/publications/i/item/WHO-2019-nCoV-therapeutics-2023.1>

Current Treatment Recommendations for the Management of Inpatients with COVID-19

Dexamethasone:

RECOVERY Collaborative Group, 2021. Dexamethasone in hospitalized patients with Covid-19. *New England Journal of Medicine*, 384(8), pp.693-704.

Remdesivir:

Beigel, J.H., Tomashek, K.M., Dodd, L.E., Mehta, A.K., Zingman, B.S., Kalil, A.C., Hohmann, E., Chu, H.Y., Luetkemeyer, A., Kline, S. and Lopez de Castilla, D., 2020. Remdesivir for the treatment of Covid-19. *New England Journal of Medicine*, 383(19), pp.1813-1826.

Gottlieb et al. (2022). Early Remdesivir to Prevent Progression to Severe Covid-19 in Outpatients. *NEJM*. 386:4;305-315

Grein J., Ohmagari N., Shin D. Compassionate use of remdesivir for patients with severe Covid-19. *NEJM* 2020 doi: 10.1056/NEJMoa2007016. NAGM Advanced Online Publication 2020

Cochrane Haematology Group, Ansems, K., Grundeis, F., Dahms, K., Mikolajewska, A., Thieme, V., Piechotta, V., Metzendorf, M.I., Stegemann, M., Benstoem, C. and Fichtner, F., 1996. Remdesivir for the treatment of COVID-19. *Cochrane Database of Systematic Reviews*, 2021(8)

Grundeis F, Ansems K, Dahms K, Thieme V, Metzendorf M-I, Skoetz N, Benstoem C, Mikolajewska A, Griesel M, Fichtner F, Stegemann M. Remdesivir for the treatment of COVID-19. *Cochrane Database of Systematic Reviews* 2023, Issue 1. Art. No.: CD014962. DOI: 10.1002/14651858.CD014962.pub2.

Williams, S., Walo r., Lattanzio, N., Dawkins, K., Abdelal, Q., Hamad, K., Wiese-Rometsch W., 2022. Remdesivir plus dexamethasone vs tocilizumab or baricitinib supplementation initiated inside 48 hours of index covid-19 hospitalization in icu patients. *Chest*, 162(4), p.a896.

Baricitinib /Tocilizumab

Abani, O., Abbas, A., Abbas, F., Abbas, M., Abbasi, S., Abbass, H., Abbott, A., Abdallah, N., Abdelaziz, A., Abdelfattah, M. and Abdelqader, B., 2021. Tocilizumab in patients admitted to hospital with COVID-19 (**RECOVERY**): a randomised, controlled, open-label, platform trial. *The Lancet*, 397(10285), pp.1637-1645.

Kalil, A.C., Patterson, T.F., Mehta, A.K., Tomashek, K.M., Wolfe, C.R., Ghazaryan, V., Marconi, V.C., Ruiz-Palacios, G.M., Hsieh, L., Kline, S. and Tapson, V., 2021. Baricitinib plus remdesivir for hospitalized adults with Covid-19. *New England Journal of Medicine*, 384(9), pp.795-807.

Dougan, M., Nirula, A., Azizad, M., Mocherla, B., Gottlieb, R.L., Chen, P., Hebert, C., Perry, R., Boscia, J., Heller, B. and Morris, J., 2021. Bamlanivimab plus etesevimab in mild or moderate Covid-19. *NEJM*, 385(15), pp.1382-1392 (BLAZE 1).

Remap-Cap Investigators, 2021. Interleukin-6 receptor antagonists in critically ill patients with Covid-19. *NEJM*, 384(16), pp.1491-1502.

Alternative Therapies

Hydrochloroquine:

Marra AR, Matos LL, Serpa Neto A, Rizzo LV, Cendoroglo Neto M, Lenza M. Hydroxychloroquine for treatment of COVID-19 patients: a systematic review and meta-analysis of randomized controlled trials. *Einstein (Sao Paulo)*. 2022 Dec 2;20:eRW0045. doi: 10.31744/einstein_journal/2022RW0045. PMID: 36477526.

Elavarasi A, Prasad M, Seth T, et al. Chloroquine and Hydroxychloroquine for the Treatment of COVID-19: a Systematic Review and Meta-analysis. *J Gen Intern Med*. 2020 Nov;35(11):3308-3314.

Self WH, Semler MW, Leither LM, et al; Effect of Hydroxychloroquine on Clinical Status at 14 Days in Hospitalized Patients With COVID-19: A Randomized Clinical Trial. *JAMA*. 2020 Dec 1;324(21):2165-2176.

RECOVERY Collaborative Group, Horby P, Mafham M, et al. Effect of Hydroxychloroquine in Hospitalized Patients with Covid-19. *NEJM* 2020; 383(21): 2030-40.

WHO Solidarity Trial Consortium, Pan H, Peto R, et al. Repurposed Antiviral Drugs for Covid-19 - Interim WHO Solidarity Trial Results. *NEJM* 2021; 384: 497-511. 4.

Cavalcanti AB, Zampieri FG, Rosa RG, et al. Hydroxychloroquine with or without Azithromycin in Mild-to-Moderate Covid-19. *NEJM* 2020; 383: 2041-52. 3.

Ulrich RJ, Troxel AB, Carmody E, et al. Treating COVID-19 With Hydroxychloroquine (TEACH): A Multicenter, Double-Blind Randomized Controlled Trial in Hospitalized Patients. *Open Forum Infect Dis* 2020; 7(10): ofaa446.

Boulware DR, Pullen MF, Bangdiwala AS, et al. A Randomized Trial of Hydroxychloroquine as Post-Exposure Prophylaxis for COVID-19. *NEJM* 2020;383(6):517-25

Ivermectin:

Barac A, Bartoletti M, Azap O, Bussini L, et al. Inappropriate use of ivermectin during the COVID-19 pandemic: primum non nocere! *Clin Microbiol Infect*. 2022

Naggie S, Boulware DR, Lindsell CJ, et al. Effect of Ivermectin vs Placebo on Time to Sustained Recovery in Outpatients With Mild to Moderate COVID-19: A Randomized Clinical Trial. *JAMA*. 2022;328(16):1595–1603. doi:10.1001/jama.2022.18590

Hill A, Garratt A, Levi J, Falconer J, Ellis L, et al. Retraction to: Meta-analysis of Randomized Trials of Ivermectin to Treat SARS-CoV-2 Infection. *Open Forum Infect Dis*. 2022 Feb 5; 9(3):ofac056.

Vitamin C and Others:

Rawat D, Roy A, Maitra S, Gulati A, et al. Vitamin C and COVID-19 treatment: A systematic review and meta-analysis of randomized controlled trials. *Diabetes Metab Syndr*. 2021 Nov-Dec;15(6):102324. Epub 2021 Oct 28.

Lamontagne F, Masse MH, Menard J, Guyatt GH, et al, LOVIT Investigators and the Canadian Critical Care Trials Group. Intravenous Vitamin C in Adults with Sepsis in the Intensive Care Unit. *N Engl J Med*. 2022 Jun 23;386(25):2387-2398.

Bassatne A, Basbous M, Chakhtoura M, El Zein O, et al. The link between COVID-19 and Vitamin D (VIVID): A systematic review and meta-analysis. *Metabolism*. 2021 Jun;119:154753. doi: 10.1016/j.metabol.2021.154753. Epub 2021 Mar 24. PMID: 33774074; PMCID: PMC7989070.

Francis Z, Book G, Litvin C, Kalivas B. The COVID-19 Pandemic and Zinc-Induced Copper Deficiency: An Important Link. *Am J Med*. 2022 Aug;135(8):e290-e291. doi: 10.1016/j.amjmed.2022.03.008. Epub 2022 Apr 1.

[Vaccine Safety/Pregnancy/Children](#)

Flaxman S, Whittaker C, Semenova E, et al. Assessment of COVID-19 as the Underlying Cause of Death Among Children and Young People Aged 0 to 19 Years in the US. *JAMA Netw Open*. 2023;6(1):e2253590. doi:10.1001/jamanetworkopen.2022.53590

Appendix D

Unconventional COVID-19 Treatment Guidelines/ Shared Decision-Making Waiver

Unconventional Patient/Family-Requested COVID-19 Treatments and Recommended Disposition for Requests

Medications listed below have been mentioned and popularized for off-label use in various on-line COVID-19 “treatment protocols.” Although some are already included in our standard treatment protocols, many have not been subjected to the normal research, review, and approval processes required for acceptable use for medical treatment, and are not routinely part of our standard of care or currently endorsed by the NIH or IDSA COVID-19 Treatment guidelines. Some of the commonly listed “treatments” have sufficient investigation and sufficiently minimal possibility of harm that, with the proper shared decision-making process, they may be utilized when more proven/standard treatments have not resulted in improvement for hospitalized COVID-19 patients. Others are either not sufficiently investigated, present an unacceptable risk to patients regardless of any shared decision-making, or both.

Below is a guide to commonly requested treatments, including off-label uses, and recommended disposition of requests.

Medications mentioned on various “Protocols” already included in our standard of care for other indications

- Methylprednisolone
 - o Dexamethasone 6 mg daily x 10 days is the SOC for patients with severe COVID
 - This is equivalent to 32 mg/day of methylprednisolone
 - o Trials are ongoing looking at high vs low dose corticosteroids
 - o However, giving higher doses of corticosteroids, particularly in patients who have received tocilizumab or Baricitinib, may increase the risk of adverse effects, including immune suppression and bacterial/fungal superinfection, without any known clinical benefit
- Heparin - Enoxaparin is typically used for prophylaxis or treatment of VTE
- Famotidine (patients may selectively be on Pantoprazole for stress ulcer prophylaxis)
- Melatonin
 - o There are no well-designed, clinical trials to date evaluating the clinical benefit of melatonin specifically for the treatment of COVID-19

- However, it is included in our current “ICU Analgosedation” protocol at 6 mg PO at bedtime

Medications that may be utilized (as unlikely to cause minimal to no harm if added to standard of care) and may be used in conjunction with the Unconventional COVID-19 Treatment Shared Decision-Making and Waiver Form

- Ascorbic acid 1000 mg PO every 6 hours
- Thiamine 200 mg IV or PO twice daily
- Zinc 50 to 100 mg tablets PO once daily
- Ivermectin 0.2 mg/kg PO q2 x 2 doses
 - This is a standard FDA-approved dose, used for the treatment of parasitic infection. It is also used at this dose, in select COVID-19 patients, who are at increased risk of Strongyloides hyperinfection due to concomitant immune suppression.

Medications that are not currently supported as they may increase the risk of side effects when given in combination with standard of care. It is not recommended that these be used except in extraordinary circumstances as determined solely by the physician care team, and then only in conjunction with the Unconventional COVID-19 Treatment Shared Decision-Making and Waiver Form

- Ivermectin 0.4 - 0.5 mg/kg/dose daily x 5 days
 - Dosing of ivermectin remains controversial as the regimens used to date range from flat dosing of 12 mg to weight-based dosing (0.1 mg/kg/day to 0.4 mg/kg/day) and duration ranges from a single dose to 7 days
 - The regimen listed above is mentioned by the FLCCC group. However, most studies to date, including the majority of studies listed in their own materials, used lower amounts of ivermectin. In the two studies that used this dose, one was retracted due to possible fraud by the investigators and the other showed numerically higher rates of mechanical ventilation and death.
 - It is not known whether doses this high and this long will have any increased risk of adverse effects or drug interactions in severe or critically ill patients
 - Ivermectin is generally well tolerated. Adverse effects may include dizziness, pruritis, nausea, or diarrhea.
- Ascorbic Acid IV Dosing
 - Studies in severe sepsis have not shown any significant clinical benefit of high dose IV vitamin C. There is also potential interaction with glucometers, which may lead to inaccurate blood glucose readings

- The IV vials are limited in availability and the cost is approximately \$230/ multi-dose vial

Medications NOT recommended for COVID-19 Based on Lack of Clinical Evidence or Concern for Safety

- Fluvoxamine 50 mg PO BID x 10-14 days
 - This is NOT currently recommended in patients admitted with COVID-19
 - Although initial studies (ALL conducted in outpatients with COVID-19) look promising. Data from adequately powered, well-designed, and well-conducted clinical trials are needed to provide more specific, evidence-based guidance on the role of fluvoxamine for the treatment of patients admitted with COVID-19.
 - Fluvoxamine is a cytochrome P450 CYP2D6 substrate and a potent inhibitor of CYP1A2 and 2C19 and a moderate inhibitor of CYP2C9, 2D6, and 3A4.5 Fluvoxamine may enhance the anticoagulant effects of antiplatelets and anticoagulants.
 - In addition, it can enhance the serotonergic effects of other SSRIs or monoamine oxidase inhibitors (MAOIs) resulting in serotonin syndrome. Fluvoxamine should not be used within 2 weeks of receipt of other SSRIs or MAOIs and should be used with caution with other QT-interval prolonging medications.
- Budesonide
 - Inhaled and oral budesonide are NOT currently recommended in patients admitted with COVID-19
 - Inhaled Budesonide has been studied in outpatients with COVID, but not in patients admitted with more severe disease. It “may” have some impact locally in the lungs, in outpatients who are early in the disease process, but more data is needed to confirm these findings.
 - Oral Budesonide should NOT be considered, particularly as an alternative to IV or oral dexamethasone. It has very low oral bioavailability (10-20%) compared to other steroids and would not have comparable systemic levels to dexamethasone. This drug is typically used for Crohn’s disease because it has good levels in the GI tract and does not have high systemic levels.
- Hydroxychloroquine
 - Hydroxychloroquine and Chloroquine are NOT recommended in patients admitted with COVID-19
 - Multiple, large, RCT in both inpatient and outpatients have shown no clinical benefit, and in some cases harm, with use of hydroxychloroquine
 - The NIH COVID-19 Treatment Guidelines Panel recommends against the use of hydroxychloroquine and/or azithromycin for the treatment of COVID-19 in hospitalized patients (AI)

- Interferon
 - This is NOT recommended in patients admitted with COVID-19
 - The COVID-19 Treatment Guidelines Panel recommends against the use of interferons for the treatment of patients with severe or critical COVID-19, except in a clinical trial
 - Studies have shown no benefit of interferons in patients with other coronavirus infections (i.e., Middle East respiratory syndrome [MERS], severe acute respiratory syndrome [SARS]) who have severe or critical disease. In addition, interferons have significant toxicities that outweigh the potential for benefit, particularly in patients with severe or critical disease.

- Cyproheptadine
 - This is NOT recommended in patients admitted with COVID-19
 - There are no well-designed, clinical trials to date evaluating the clinical benefit or safety of Cyproheptadine for the treatment of COVID-19.
 - Several studies are ongoing, but until the safety and efficacy of using this agent are determined in patients with moderate to severe COVID, it is not recommended at this time.

- Anti-Androgen Therapy
 - This is NOT recommended in patients admitted with COVID-19
 - There are no well-designed, clinical trials to date evaluating the clinical benefit or safety of Anti-Androgen therapy for the treatment of male patients with COVID-19.

- Statins
 - Patients on statins for a compelling indication (history of MI) can be continued on therapy if there are no contraindications
 - The NIH Guideline Panel recommends against the use of statins specifically for the treatment of COVID-19, except in a clinical trial

Sarasota Memorial Health Care System Unconventional COVID-19 Treatment Shared Decision-Making and Waiver Form

Sarasota Memorial Health Care System, including Sarasota Memorial Hospital-Sarasota (SMH), has been in the forefront of developing and innovating treatments for COVID-19. As the COVID-19 virus has evolved, SMH's treatment protocols have evolved with it, bringing the latest proven care and treatment protocols to our patients.

We recognize that the pace of clinical research, even with expedited review and approval, the fast evolution of COVID-19, and the severity of the impact of the virus on hospitalized patients, has left many patients and families searching for treatment options outside of those that are proven and approved.

While committed to the rigors of clinical research and review to establish the safety and efficacy of treatments, SMH is also sensitive to patients' wishes to try treatments that have not yet been fully reviewed. In an effort to find a balance between that commitment and those wishes, SMH has identified some treatments that have been subjected to some level of review and sufficiently minimal possibility of harm to allow us to provide them to patients who have been made aware of the limitations of the study of the treatment, as well as the potential risks and alternatives.

You (either on your own behalf, or on behalf of a patient whose health care decisions are in your hands) have requested such a treatment. Please sign below only if the following statements are true (Note: I, me, my means the patient. If the patient is not able to consent to treatment, it refers to the patient's surrogate or proxy speaking on the patient's behalf):

PHYSICIAN COUNSELING:

I have discussed this treatment with my physicians and understand the potential risks and benefits of this treatment. I understand that this treatment is not approved by the FDA and has not been subjected to the normal safety and efficacy studies for medical treatments. I further understand that it may not help improve my condition and may actually harm me.

FDA APPROVAL STATUS:

I understand that the treatment I will be receiving has not been approved by the FDA to treat my condition.

OFF-LABEL AND NO-LABEL USE:

I understand that the prescribing of this medication and my use of it is an off-label (non-FDA approved) use of this medication. Off-label use of this medication means that the FDA has not approved the use of this medication for the purposes for which I am requesting the doctor has prescribed it to me.

FINANCIAL RESPONSIBILITY:

I understand that I am responsible for all charges for the medication prescribed to me and that the medication will not be provided to me until payment has been made. I am aware that this is the case not only for the initial prescription but also for any refills the physician may have prescribed. I understand that I may be contacted by an agent from my physician's office or a qualified third party to facilitate payment.

GENERAL PROVISIONS:

I acknowledge that the prescribing physician may use and disclose my information as necessary for the purposes of treatment, payment, and healthcare operations. This shall be done in a manner consistent with state and federal laws, rules, and regulations governing the use and disclosure of protected health information.

I intend this consent to be continuing in nature and that it will remain in full force until revoked in writing.

A photocopy of this consent shall be considered as valid as the original.

I have read or have had read to me all of the above statements and understand them. I have had the opportunity to ask any questions I might have about the medication and the treatment being prescribed, any potential risks, and the alternatives prior to my informed consent. I give consent for this medication/treatment to be prescribed to me and for my use of it as directed by my physician.

Patient Signature

Date

Parent of Patient or Legally Authorized Representative

Date

Appendix E

Florida Department of Health COVID-19 Vaccination Exemption Form



RELIGIOUS EXEMPTION FROM COVID-19 VACCINATION

Employee Name	Date of Birth	Phone Number
Employer Name		Date of Request

Exemption Statement	
Pursuant to section 381.00317, Florida Statutes: I hereby declare that I decline the COVID-19 vaccination because of a sincerely held religious belief, which may include a sincerely held moral or ethical belief.	
Employee Signature	Date
Employee Name (print)	

NOTE: An employer shall not inquire into the veracity of the employee’s religious beliefs. Pursuant to section 381.00317(2), Florida Statutes, this completed exemption statement requires the employer to allow the employee to opt-out of the employer’s COVID-19 vaccination mandate.

DH8017-DCHP-11/2021
Emergency Rule 64DER21-17

Appendix F

Florida Reopening Plan

Download at:

www.flgov.com/wp-content/uploads/covid19/Taskforce%20Report.pdf



Safe. Smart. Step-by-Step.

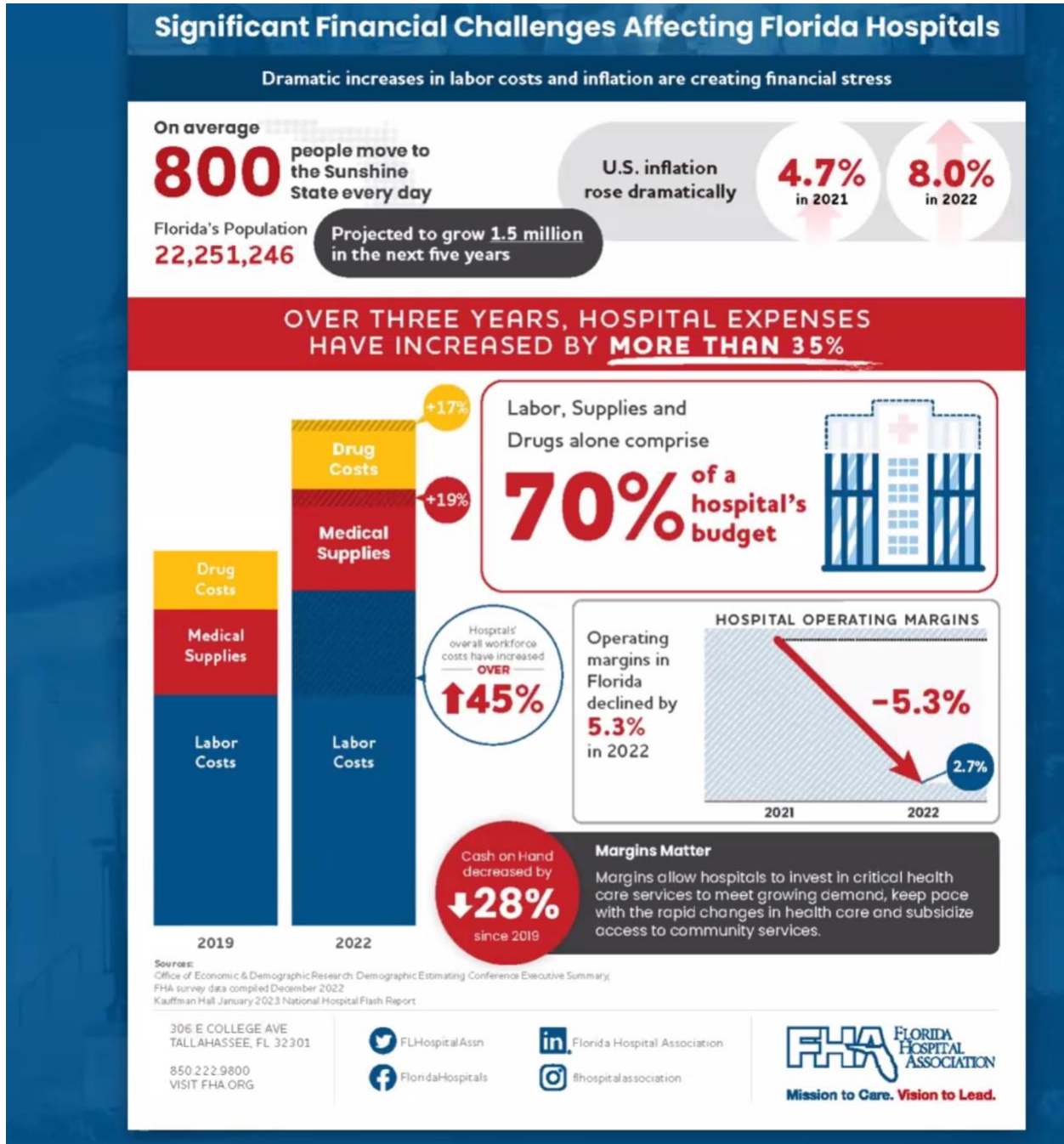
PLAN FOR FLORIDA'S RECOVERY



Report to Governor DeSantis from the Re-Open Florida Task Force

Appendix G

FHA: Financial Challenges Affecting Florida Hospitals



OVER THREE YEARS, HOSPITAL EXPENSES HAVE INCREASED BY MORE THAN 35%

Category	2019	2022	% Change
Labor Costs	Low	High	+45%
Medical Supplies	Low	High	+19%
Drug Costs	Low	High	+17%
Total	Low	High	+35%+

Labor, Supplies and Drugs alone comprise **70%** of a hospital's budget

Hospitals' overall workforce costs have increased **OVER 145%**

Operating margins in Florida declined by **5.3%** in 2022

Year	Margin
2021	8.0%
2022	2.7%

-5.3%

Cash on Hand decreased by 28% since 2019

Margins Matter
Margins allow hospitals to invest in critical health care services to meet growing demand, keep pace with the rapid changes in health care and subsidize access to community services.

Sources: Office of Economic & Demographic Research; Demographic Estimating Conference Executive Summary; FHA survey data compiled December 2022; Kauffman Hall January 2023 National Hospital Flash Report.

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