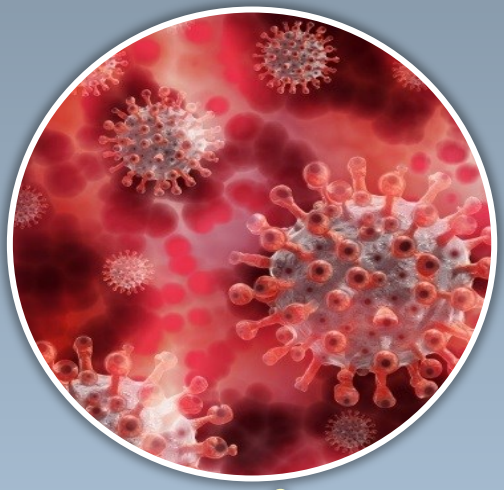
2020 THE YEAR IN REVIEW

MADISON COUNTY DEPARTMENT OF HEALTH



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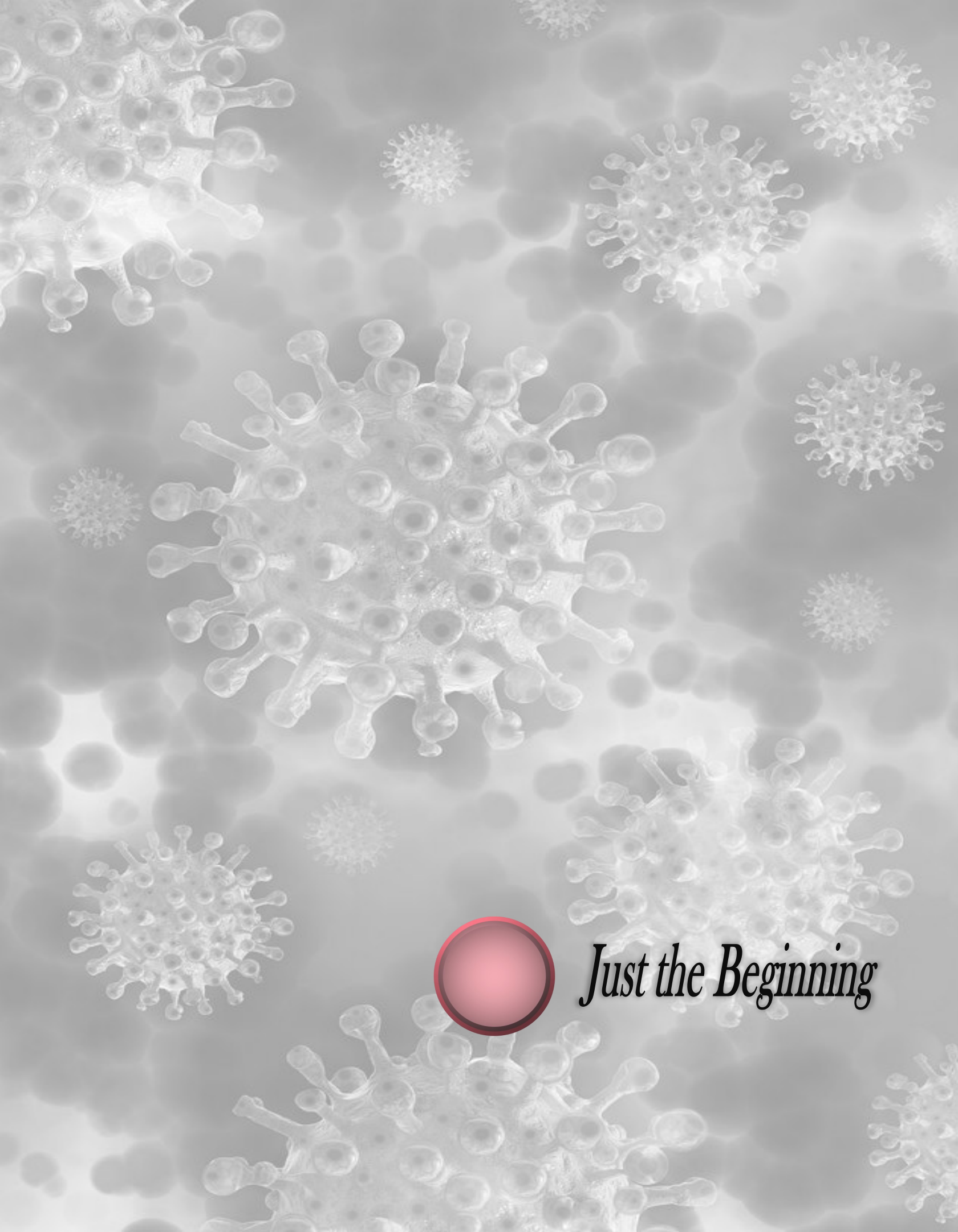
TIMELINE KEY:

World Health Organization

United States

New York State

Madison County


Just the Beginning

JUST THE BEGINNING

In the last few weeks of 2019, a quiet buzz was developing in the United States (US) regarding a new virus that was spreading quickly in a province in China. On December 31, 2019 a media report by the Wuhan Municipal Health Commission reported a cluster of cases of 'viral pneumonia of unknown cause' in the Wuhan Province of the People's Republic of China. In the next 10 days the Chinese authorities and World Health Organization (WHO) would determine that the outbreak was caused by a *novel coronavirus,* which in turn triggered a series of research, response, and guidance from numerous health groups and organizations around the world.

On January 21st the United States reported the first confirmed case of the novel coronavirus in the country: a 35 year old male who returned to Washington State from Wuhan, China on January 15th. In the days and weeks that followed, a flood of information came in from all across the globe, and shed some light on the broad reach of this novel virus. Each day more information was released, and words like 'quarantine' and 'contact tracing' became the norm in everyday conversations. On January 31, 2020, The World Health Organization (WHO) issued a Global Health Emergency as the worldwide death toll reached more than 200, global air travel restrictions were put into effect February 2nd, and on February 3rd the United States declared a public health emergency due to the coronavirus outbreak.

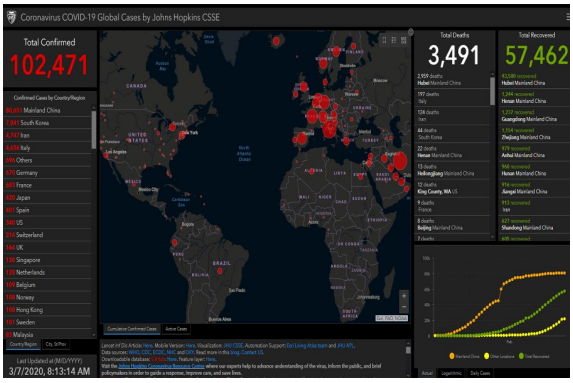
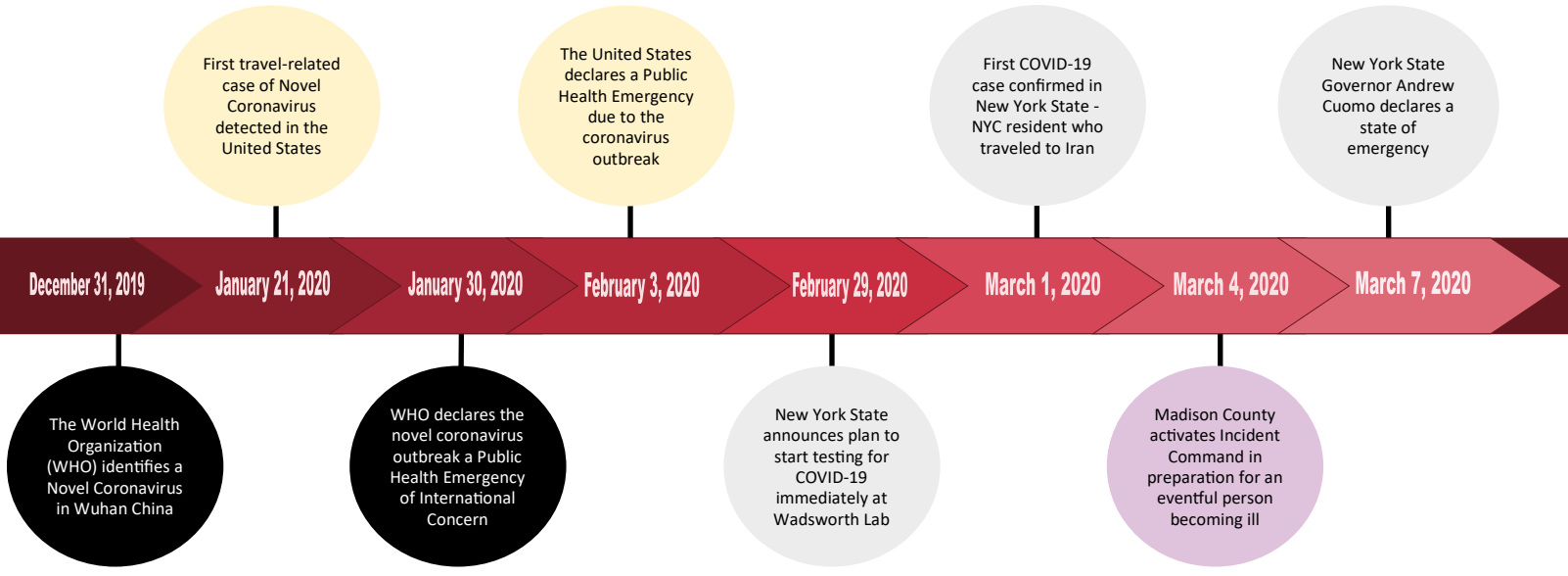


Figure 1: COVID-19 Global Cases by John's Hopkins CSSE. March 7, 2020

In Madison County, the first two months of 2020 were business as usual, with our attention to the developing disease outbreak overseas steadily increasing.

The first confirmed positive case of COVID-19 in New York State (NYS) was reported on March 1st. Madison County (MC) went into action and on March 2, 2020 the Madison County Health

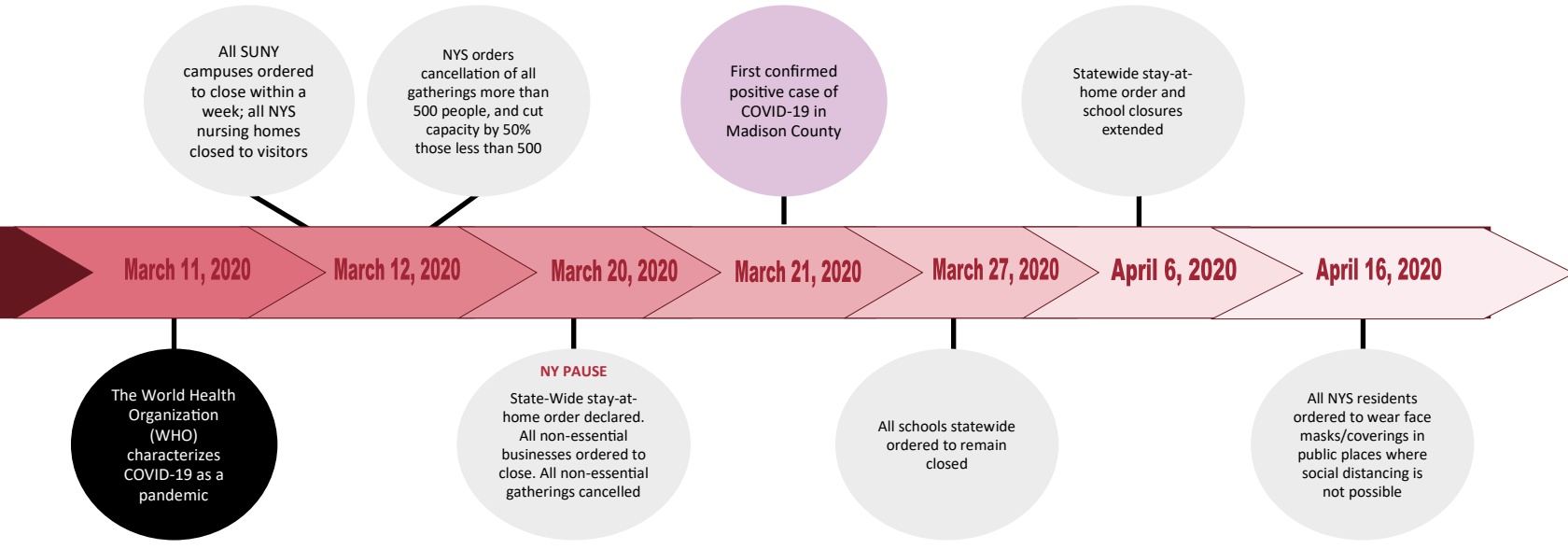


Department (MCDOH) and the Madison County Office of Emergency Management (OEM) jointly activated their Internal Incident Command System (ICS). Chairman John Becker declared a State of Emergency on March 15th; moving County offices to essential operations only, and closing all buildings to the public until further notice in accordance with the "NY Pause" order from Governor Cuomo. The first positive case was confirmed in Madison County on March 21st. So began the avalanche of change and a new way of life prompting everyone to social distance, mask up, and stay home whenever possible.

Madison County Incident Command - March 2020

Holidays, meetings, and events now occurred over video conference platforms or were missed altogether, and a tremendous number of the US population began to work from home; Madison County was no different. Non-essential County programs and services came to a halt. MCDOH along with OEM and the Public Information Officer became COVID-19 central, entering into 7 day a week emergency response entity; coordinating disease surveillance, complaint investigation, contact tracing, communications and technical assistance activities.

Work began on collective efforts with community partners, health care facilities, law enforcement and government leaders to create and communicate plans and procedures to deal with the pandemic, and to protect Madison County residents. A Joint Information Center (JIC) was established that enlisted County employees from other departments to answer calls from the public. To improve transparency and the communication of data, MCDOH bought a new software application, Tableau, to visualize data for the public. Case numbers, statistics, guidance, and other information were reported daily on the County webpage and shared weekly through live press conferences and published releases. Simultaneously, federal and state guidance was pouring in addressing every business, organization, and community event.



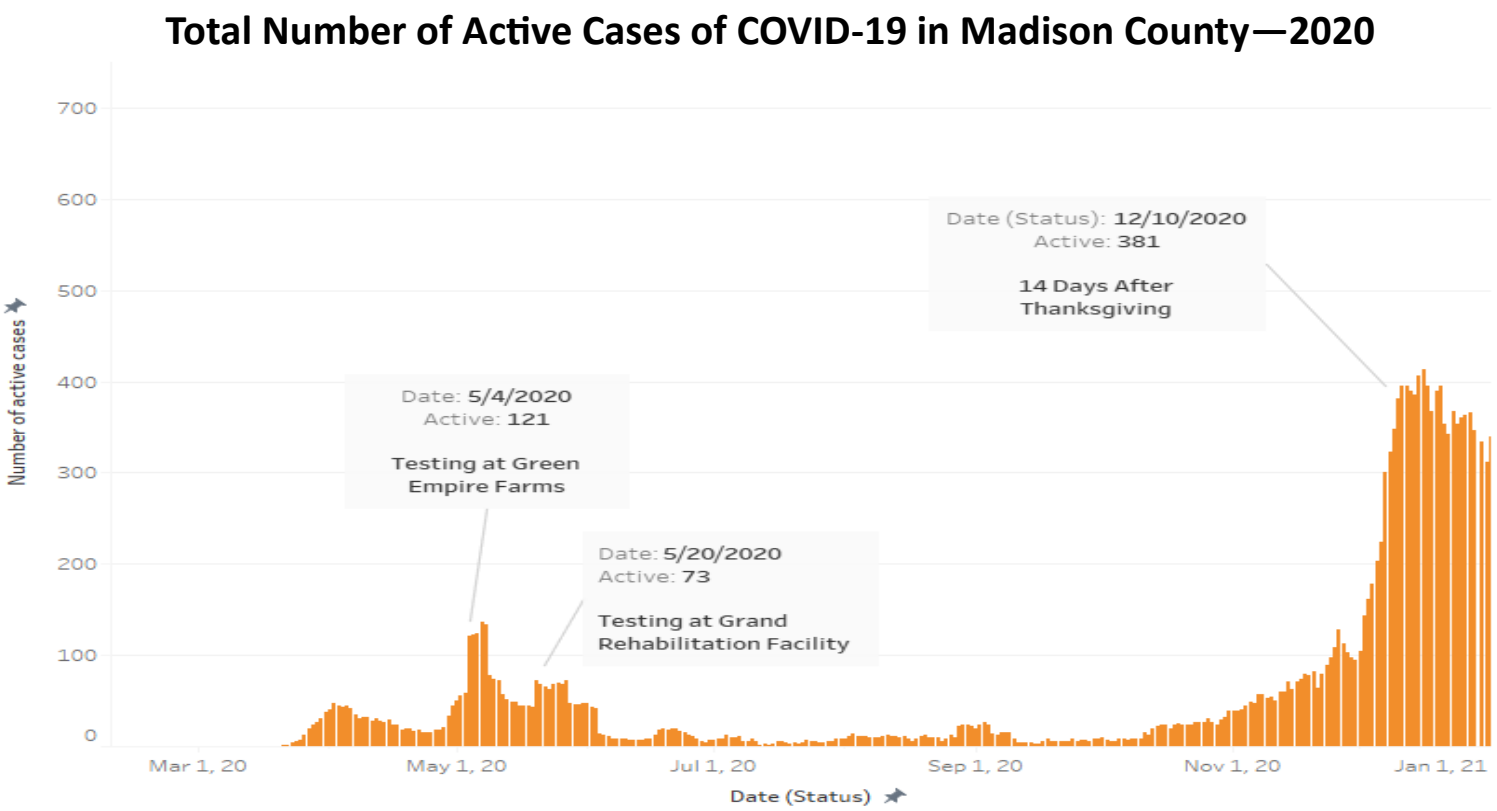
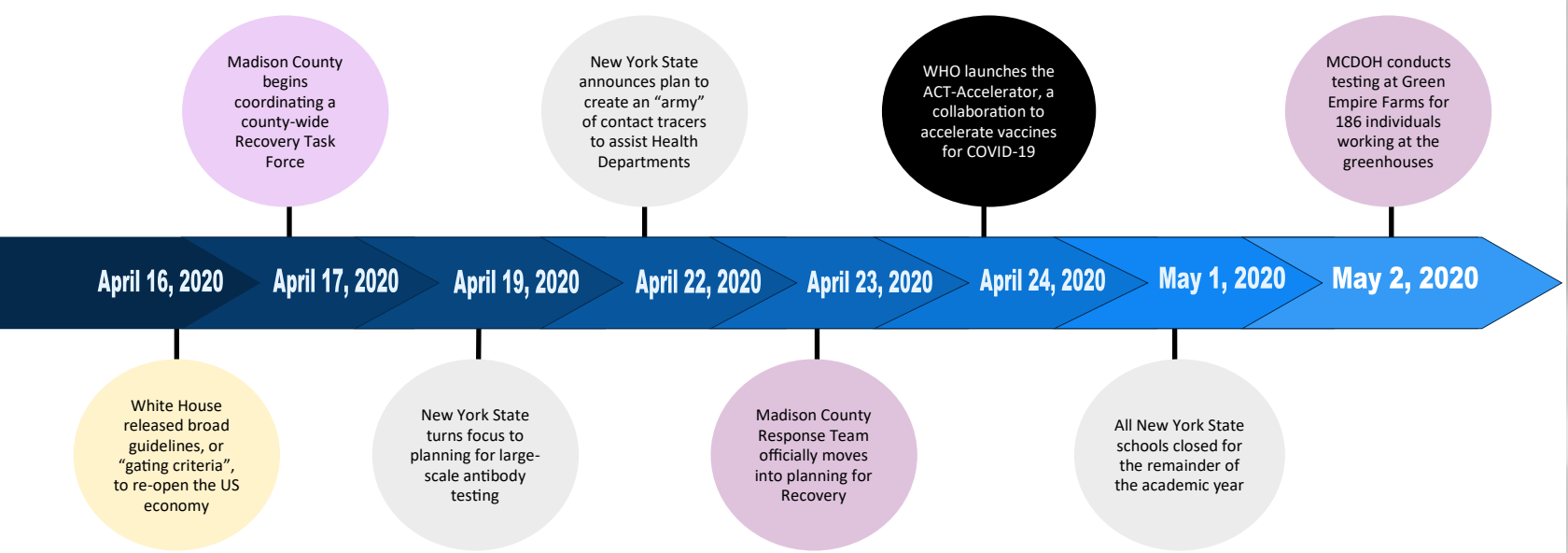


Figure 2: Chart demonstrating the rise and fall of active COVID-19 cases in Madison County during 2020.

County leadership and the MCDOH navigated a confusing and ever-changing situation with one goal in mind: to protect the health and safety of our community. A considerable amount of information, and misinformation flooded our office, coupled with an ever-growing demand for accurate and immediate information from our residents. MCDOH leadership was tasked with interpreting this information to develop plans with our resident's safety and well-being in mind.




A Pandemic Surges

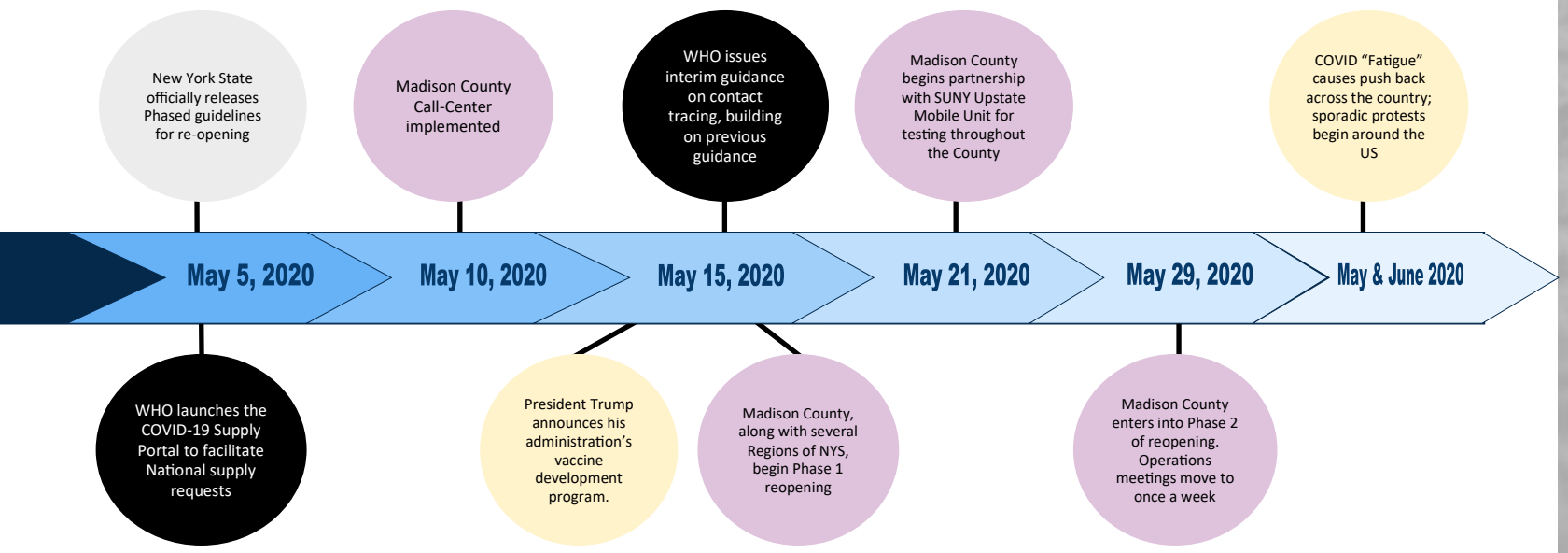
A PANDEMIC SURGES

By early-April, Madison County and the rest of the world were in the throes of responding to a worldwide pandemic. Case numbers increased in staggering amounts throughout the world, but particularly in New York State, which had the highest number of cases in the country. Madison County saw its highest number of positive cases in one day on May 3rd, with 63 new cases.

The May 3 spike in numbers resulted from a testing event conducted by New York State and MCDOH, for the contractual workers staying in local hotels and working at the Green Empire Farms facilities in Oneida. The surge in cases generated substantial media coverage, and gave MCDOH the opportunity to learn more about how the virus spreads in certain settings and conditions. Due to the number of cases, Madison County directed the employer, Green Empire Farms, to expedite the construction of housing for the contractual employees of the greenhouse. Onsite housing construction had slowed due to state closure mandates. A more detailed description of this event is highlighted on pages 12 & 13 of this report.

Healthcare facilities across the state were mandated to conduct testing several times weekly. MCDOH, along with OEM, supported our partners by providing testing kits, personal protective equipment (PPE) and other resources. As Memorial Day approached, the number of cases in Madison County began to slowly decrease and hope began to emerge. The County was able to focus on response efforts and partnered with SUNY Upstate Medical Hospital and Nascentia Health Nurses to provide testing to County residents utilizing SUNY's Mobile Testing van.

SUNY Upstate Mobile Testing Unit—Drive-thru clinic May 2020




Riding the Wave

RIDING THE WAVE

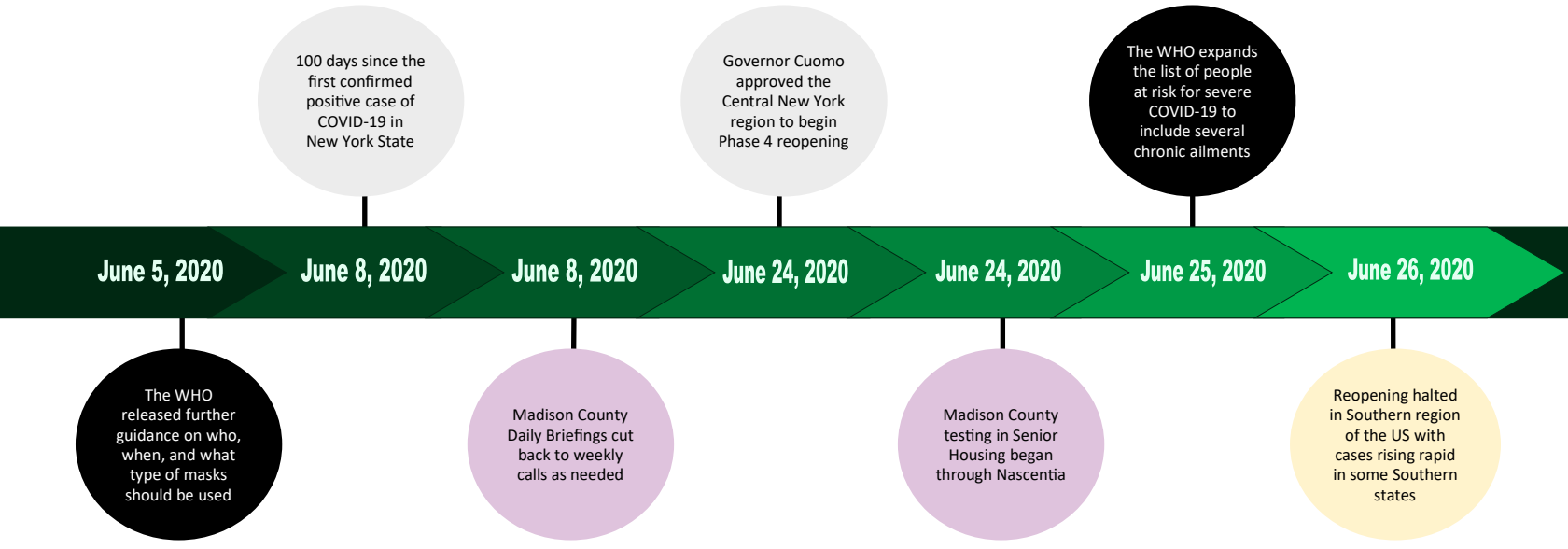
On May 21st the first public testing event occurred at the Madison County Offices, an important step in controlling the spread of this virus. In the coming months, Madison County and the Upstate Mobile Unit would ultimately conduct tests on thousands of individuals throughout Madison County. With testing opportunities now available to all of our community members, a sense of containment ensued that allowed for our community to take a much-needed collective breath. Though not a complete return to "normal", we enjoyed a slight reprieve from a pandemic that seemed would never give up its hold.

As mid to end of summer rolled around, hopes were high for our schools to possibly be back to in-person attendance in the fall, as New York City announced that City schools would open up in the fall. The possibility of "getting back to normal" and being able to spend holidays in the same space as our loved ones seemed in reach. At the same time, vaccination planning efforts were set in motion in anticipation of vaccines becoming available by the end of the year.

Unfortunately, the sense of conclusion and relief experienced through the summer of 2020 was short lived, and was soon met with a spike in case numbers by the early fall. A slow build of increased cases occurred in early September. By October 2020 case numbers continued to increase, reaching a weekly average of 5.14 new cases per day by month's end.

Despite the urging and recommendations to limit special events and household gatherings for the upcoming holidays, the number of cases climbed sharply. The first notable surge came the week of the Thanksgiving holiday when the weekly average topped off at 18.3 new positive cases per day, nearly doubling the average from the prior week and occurring roughly 3 weeks after the Halloween weekend. The weeks following Thanksgiving, likewise, saw a threefold increase in the number of active cases.

As anticipated, the weeks following Christmas and New Year's Eve/Day saw considerable spikes in cases that resulted in the largest wave of the pandemic to date (see chart on page 6). For the majority of cases, exposure to a personal contact from holiday gatherings, was identified as the main source of transmission.



Lessons from previous pandemics (e.g., the Spanish flu of 1918) indicate that fluctuations in the number of cases come in waves, with the second wave usually demonstrating the highest number of cases and subsequent deaths. It appeared that COVID was following a similar pattern.

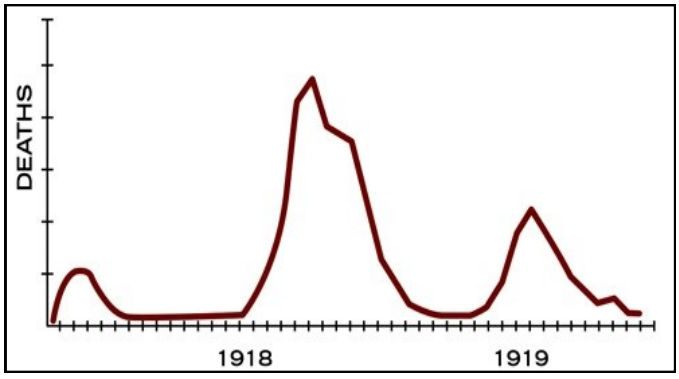
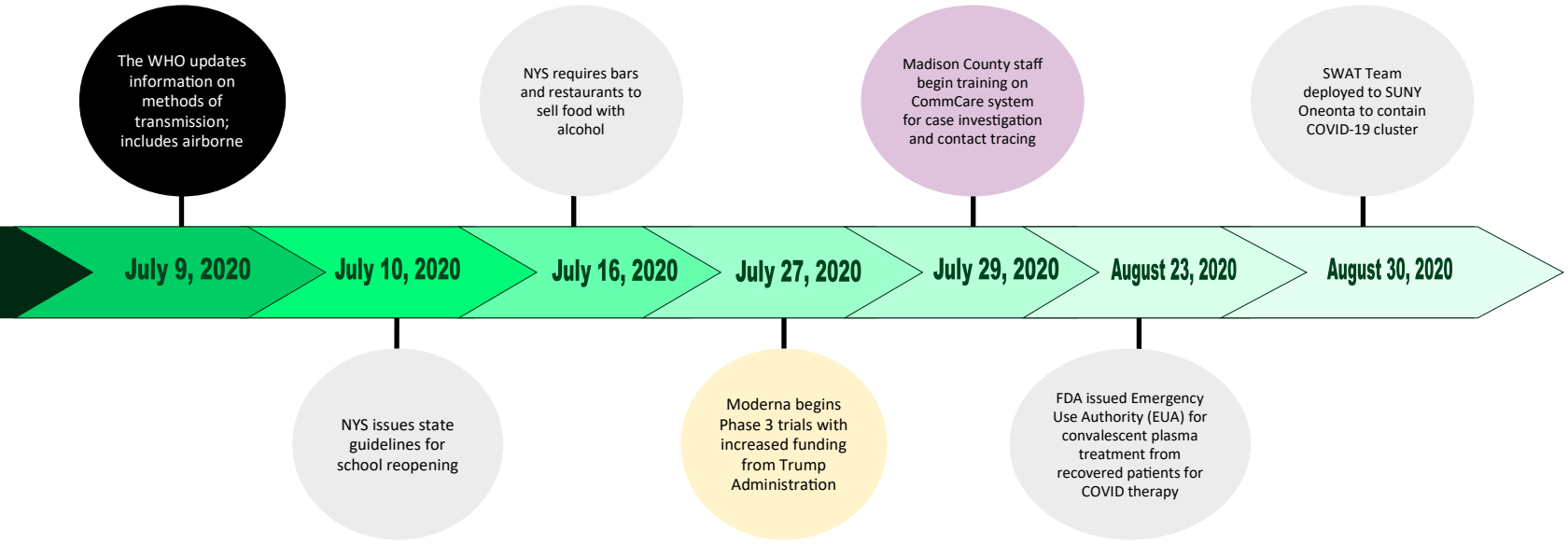
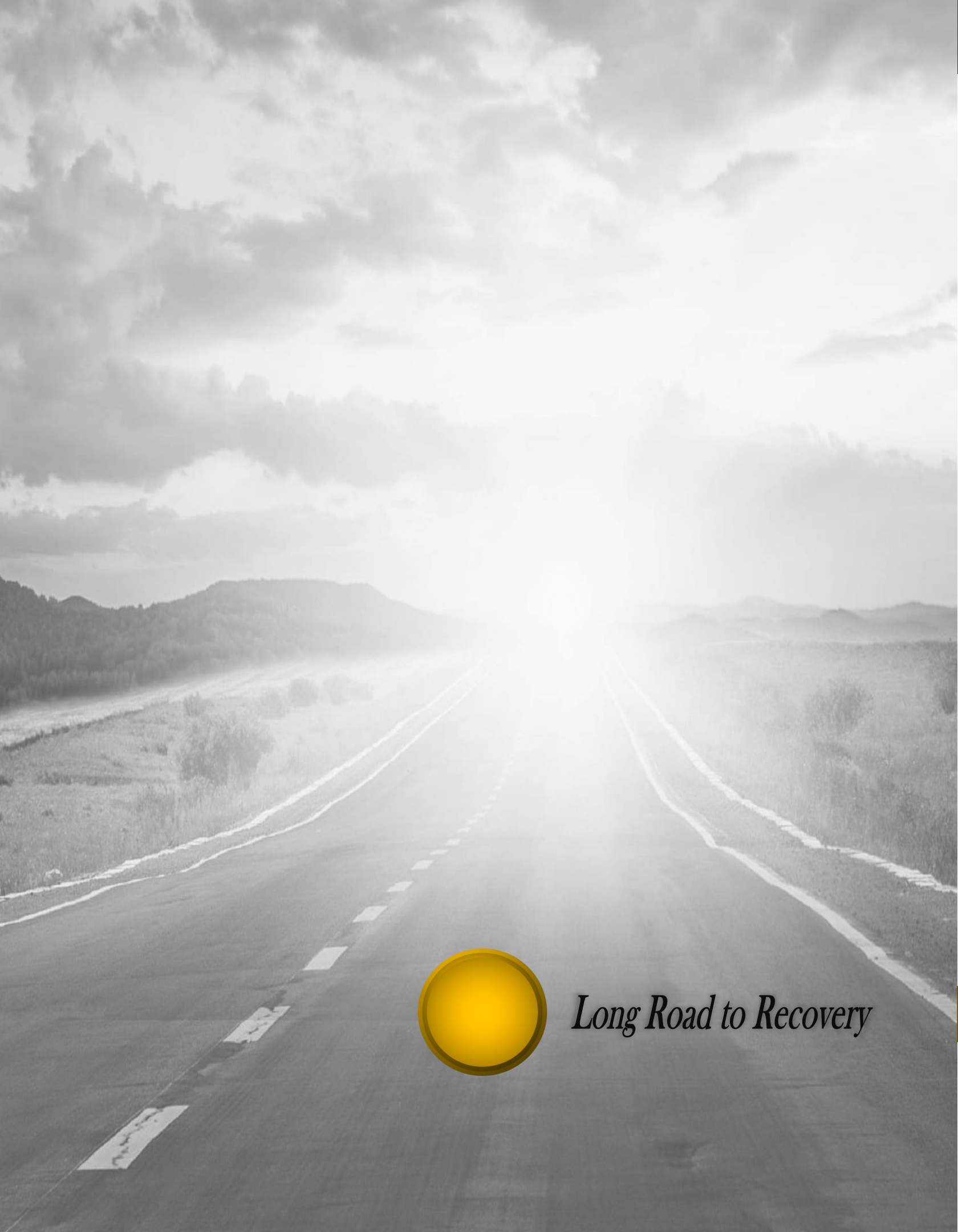


Figure 3: Depiction of 1918 Spanish Flu Rise/Fall

As the last months of the year came to a close, there was an increasing sense of hope, with a singular focus to introduce a vaccine before the end of the year. Three pharmaceutical companies emerged in the forefront for vaccines in the United States; Moderna, Pfizer, and Janssen Pharmaceuticals owned by Johnson & Johnson. Both Moderna and Pfizer vaccine were developed specifically for the COVID-19 virus and both use a technology know as mRNA or messenger RNA. According to the Centers for Disease Control and Prevention (CDC), this "new" technology of mRNA vaccines teach our cells how to make a protein—or even just a piece of a protein—that triggers an immune response inside our bodies. The Janssen vaccine, which is commonly referred to as Johnson & Johnson (J&J), uses a viral vector technology, which the CDC states uses a modified version of a different virus (the vector) to deliver important instructions to our cells.

With the hope of a vaccine coming soon, the Madison County Health Department ramped up efforts to provide vaccination clinics throughout the County, working closely with partners in Madison County Office of Emergency Management and local colleges and hospital facilities. A plan was devised to set up Point of Disbursement locations (PODs) first at the Madison County Office Building and eventually at sites in Chittenango, Oneida, and on the SUNY Morrisville campus. Once we were slated to receive vaccine, additional factors needed to be considered in our plans, most importantly the storage of the vaccine itself. The vaccines needed to be stored at subzero temperatures (-80°C and –20° C) to ensure the vaccine remained safe and effective.




Long Road to Recovery

LONG ROAD TO RECOVERY

While vaccination planning gained momentum, MCDOH reassigned staff to assist with case investigations and contact tracing activities using a process devised in-house during the beginning weeks of the pandemic. Our in-house process was eventually replaced with the CommCare system launched by New York State.

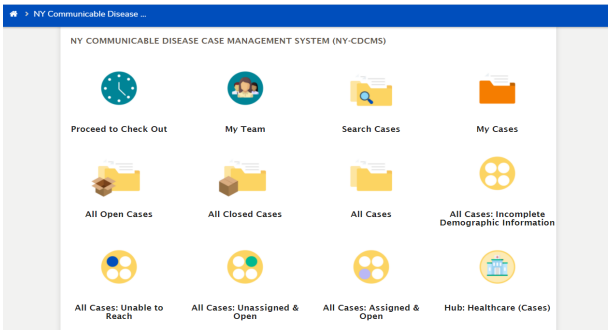
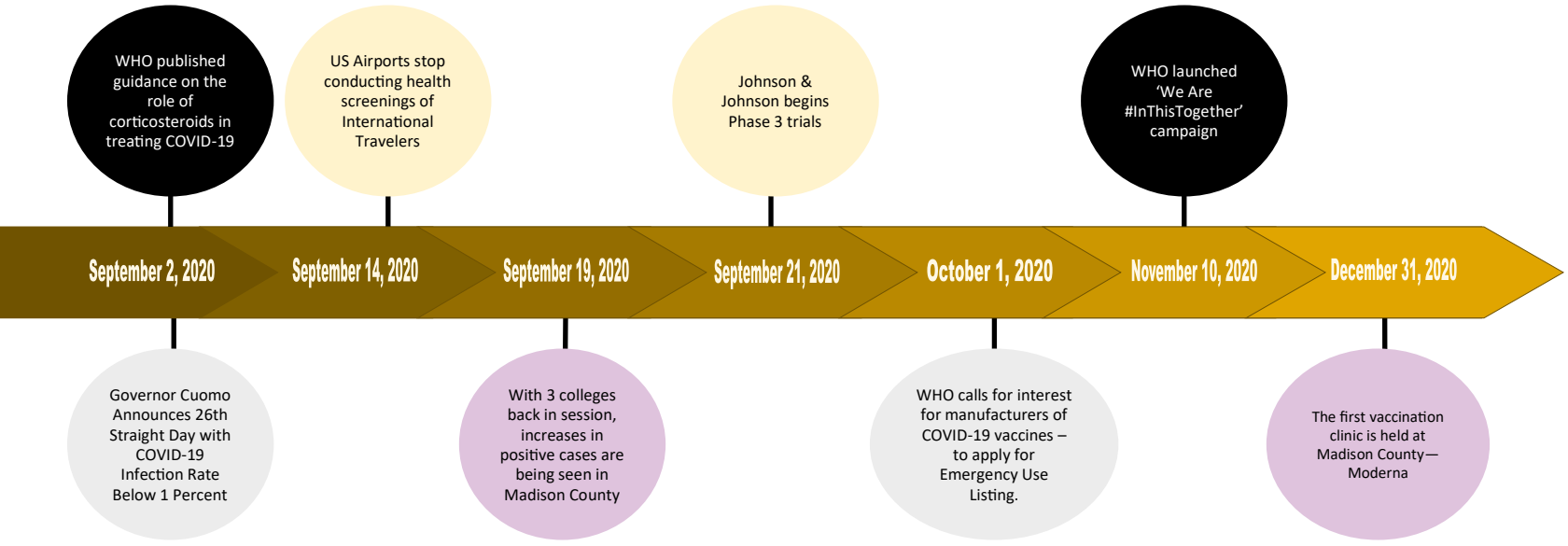


Figure 4: Screenshot of the CommCare database

CommCare provided the opportunity for the State's Volunteer Control Center or VCC to be incorporated into ongoing response efforts. This addition of support and assistance from NYS allowed Madison County staff a slight reprieve from the seemingly endless efforts that had been in place 7-days a week since March. Much needed breaks were possible for the first time in several months.

Certain divisions within the MCDOH's were able to resume regular program activities to some degree in August of the 2020. This time of year is normally a busy period for several MCDOH programs, including Rabies prevention , mosquito and tick surveillance, and inspecting and permitting regulated facilities. With the assistance of VCC, staff from the department were able to move away from COVID-19 response activities and return to our normal activities. Though not completely over, the COVID-19 pandemic was feeling less overwhelming and more under control.

In the remaining months of 2020, a considerable amount of planning occurred to line up contracts and services for the continued fight against COVID-19. Important partnerships with SUNY Upstate, Nascentia Homecare, and the Madison County Office of Emergency Management allowed us to plan, staff, supply, and coordinate testing sites, and subsequently vaccination PODS at the Madison County Office Building. On December 31, 2020 the first vaccination in Madison County was given at the County Office Building, and so began the start of a new phase on our road to recovery.



Response Challenges & Issues

CHALLENGES & ISSUES

In 2020, relatively little was understood about the virus and the COVID-19 disease that it caused. Across the country, states began issuing stay-at-home orders and shut down all non-essential businesses, gatherings, and travel.

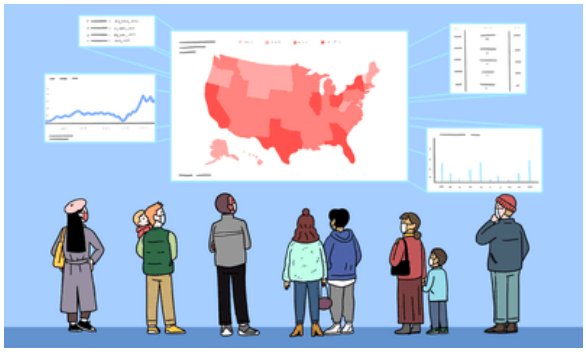
With the White House taking a hands-off approach and the CDC offering limited guidance, states were left to craft their pandemic responses largely on their own. New York State's early response was undermined by flawed guidance from the federal government, inadequate planning and stockpiling, limited consultation with experts, exaggerated projections and poor cooperation between federal, state and local officials, among other issues. The public health response effort was further weakened by the State's basic disregard of existing pandemic plans and planning efforts.

The following section highlights several of the key challenges and issues that the Madison County Department of Health (MCDOH) faced during their pandemic response. Although several of these issues are addressed in the main body of this report, we will use this section to provide a more detailed look at a select number of issues. In this section we will focus on four main issues: Information & Communication, Resources & Supplies, Implementing Non-Pharmaceutical Interventions (NPI), and Vaccine Planning & Administration.

INFORMATION AND COMMUNICATION

Of all the issues and challenges faced over the course of the pandemic, the amount of and demand for information, countering misinformation, and the communication of information, was overwhelming. During the initial weeks of the pandemic, a tremendous volume of information was shared. Multiple conference calls and online meetings were held simultaneously. The County assigned staff to participate in each meeting to keep up with the amount of information that was being communicated.

County Health Departments are dependent on state and federal information sources and expertise to guide local response efforts, including communications and messaging. Adding to the enormity of the information being communicated was the fact that information from the federal and state levels was often conflicting, and this in turn, left local health officials with the task of trying to interpret this information for the community. The inconsistent, and sometimes contradictory information resulted in an erosion of trust in government at all levels and the proliferation of misinformation.



Although the counties and state pandemic plans had been in place for years, the state basically ignored or disregarded provisions of the plans. The State chose to utilize the healthcare system, instead of the public health system, as the vehicle for their response efforts. As such, MCDOH, like the other local health departments (LHDs), was unsure about our response role and responsibilities. County health departments were effectively sidelined during the response efforts as existing plans were not followed. The State's efforts appeared contrived and did not conform to conventional response practice. Moreover, the State's response plan was not communicated to the counties.

The coordination of a consistent message across all levels of government is equally important to avoid confusion and instill confidence and trust. New York State health officials said they often found out about major changes in pandemic policy only after Governor Cuomo announced them at his news conferences — and then were asked to match their health guidance to the announcements. Subsequently, the guidance documents weren't provided until days, sometimes weeks later, and in several instances were inconsistent or conflicting with each other in their applications.

Over the course of the pandemic different guidance documents were released by different state agencies, leading to further confusion as to which guidance applied to which situation and under whose authority (see side bar). Because of the various agencies involved, it became difficult to locate and apply the appropriate guidance. These delays and inconsistencies left counties scrambling to figure out what needed to be done and how to respond to the community's demands for guidance.

Public discussion of false or misleading information about COVID-19 was a prominent feature of the pandemic. Although the spread of 'misinformation' on science topics - false, inaccurate or misleading information, with or without the intention to deceive - is not a new problem, it was of particular concern during the pandemic because of the urgency of the situation and the need to rely heavily on each other to behave responsibly. Some notable cases of misinformation that occurred during the early stages of the global pandemic ranged from the efficacy of masks, effects on fertility, the insertion of microchips into the vaccine, to the treatment of COVID patients with hydroxychloroquine; a drug used to treat or prevent malaria.

In the absence of reliable information, people sought information to determine their options and confirm or disconfirm their own beliefs. Couple this with the

Managing & Implementing State Directives

Since the start of the COVID-19 pandemic and the expansion of the Governor's emergency powers, managing the myriad and changing state orders and guidance posed additional challenges to local health department response. This document highlights the volume of official directives and communications for which local health departments were required to lead implementation, enforcement, and education to the regulated entities and citizens in their community.

Executive Orders

As of the last week of February 2021, Governor Cuomo issued 300 COVID-19 response-related Executive Orders.

NY Forward and non-health agency guidance

To date, 40+ Industry specific guidance documents related to the NY Forward phased reopening were issued, along with 110 guidance documents and 21 updates from other state and federal agencies.

Schools, Day Cares, Colleges

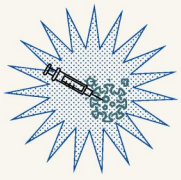
31 Guidance Documents and 19 updates have been issued by various state agencies governing childcare, K-12 and colleges/universities

Health Care Facilities/Workers

128 Guidance Related to Health Care Facilities and professionals were issued, along with 30 updates.

Guidance on Vaccine

To date, 46 guidance documents and 15 updates related to COVID-19 vaccination have been issued.



Figures are as of 2/22/21. NON-NYSDOH agency guidance includes the following New York state agencies: AGM, OMH,SLA, DOL, DCJS, OPWDD, OCFS, BSC, OTDA

unparalleled availability of information from numerous social media platforms, and addressing misinformation quickly became a significant component of our response effort.

The MCDOH, like its counterparts elsewhere, was under substantial pressure to provide the most current and accurate data on the pandemic, immediately. The onset of the pandemic necessitated rapid surveillance and an improved ability for surveillance systems to automatically exchange data and present that data such that it could be understood by the general public. However, the lack of interoperability between existing systems at the state and local levels, or the complete absence of such systems, became a barrier to the effective surveillance and reporting of COVID-19 cases.

At the beginning of the pandemic the county received COVID positive test information through the State's ECLRs lab reporting system. Simultaneously the county received positive test results directly from provider offices via facsimile, which were not accounted for in ECLRs. No state or county system existed that allowed us to collect and aggregate county specific data. The manual tabulation of data became necessary for this purpose. The MCDOH, similar to other counties, developed an Excel spreadsheet to capture local positive case data and to track contacts. As cases quickly rose, this manual system became unmanageable.

In April of 2020, the NYSDOH introduced a new system called CommCare, for the purpose of case investigation and contact tracing. However, not all counties initially switched to the new system when it was introduced. MCDOH waited until May of 2020 to use CommCare; mainly due to a number of early problems with the system. Since not all counties were using CommCare simultaneously, counties found it difficult to share information about cases or contacts, resulting in delayed case investigation activities.

To improve transparency and the collection and communication of data, the MCDOH bought a software application (Tableau) to assist in visualizing COVID data for the public. Case numbers, statistics, guidance, and other information were reported daily on the County webpage and shared weekly through live press conferences and published releases. All MCDOH press releases were published online.

Madison County Joint Information Center - April 2020

A Joint Information Center (JIC) was established from April 2 until May 29, 2020 that enlisted County employees from other departments to answer the numerous calls and requests for information from the general public. The Call Center answered questions about testing, masks, cleaning, disease transmission and symptoms, what to do if positive, isolation and quarantine, as well as questions about state guidance materials.

Residents were directed to call the Upstate Hospital Hotline for answers to more medical-based questions. The JIC answered more than 600 calls between April and May. Between June 2020 and November 2020, when case numbers and call volume were significantly lower, the JIC was demobilized and MCDOH staff answered questions from the general public.

On November 18, 2020 the Call Center was reopened and remained operational until May 27, 2021. During this period, the County Workforce Development personnel staffed the call center. They answered calls about travel, where to find testing/vaccinations, as well as assisted individuals with COVID-19 vaccine appointments. They kept track of the call list for those who needed appointments, helped people register for a vaccination, maintained a list for homebound residents, and for those in need of transportation assistance. During these seven months the JIC answered over 3,500 calls. These numbers do not include all of the cancelations and call backs that were performed by the staff.

At the activation of the call center in November 2020, the health department established a hotline that offered residents the option to speak directly to a MCDOH nurse. Medical questions were triaged and sent to the nurse, with the remaining non-medical questions fielded by the staff at the call center.

RESOURCES & SUPPLIES

The lack of personal protective equipment (PPE), such as masks, gloves, and gowns challenged the local response efforts to minimize risks to County staff, responders, healthcare providers, and the general public during the initial months of the pandemic. At a time when these resources were of the utmost importance to protect individuals and minimize the spread of disease, their availability was scare and difficult to obtain.

In February of 2020, the State issued guidance requiring LHD's to conduct home visits to check on residents who were placed into isolation or quarantine. This check-in requirement tasked our department to find volunteers to assist MCDOH staff in conducting the visits, and created an unanticipated need for additional personal protective equipment. Our sudden, heightened need for PPE further exacerbated the already scarce supplies. The MCDOH had a stockpile of masks following the 2009 pandemic; however all of those masks had expired. The County did receive a shipment of PPE from the State's Medical Emergency Response Cache in 2020; however those supplies had also expired.

Fortunately, the Centers for Disease Control and Prevention issued a list of masks that were still considered viable for use. This list included many of the masks that MCDOH had stockpiled along with the ones we received from the State. Subsequently, we were able to use a large portion of the expired, stockpiled masks to help fill the need for our staff and local first responders in the county.

MCDOH RN, Rebecca LaPorte preparing supplies for a home visit check-in of a COVID patient in isolation/quarantine

The staff changes to the County's Office of Emergency Management (OEM) along with the new fire and training center were key factors in the County's ability to procure, store, and distribute needed PPE and hand sanitizer, as well as provide planning and logistical assistance to the MCDOH for the pop-up mobile testing clinics.

Having adequate staff became a significant resource challenge during the pandemic. The amount of manpower hours that were needed to carry out pandemic-related activities was substantial and eventually involved all department staff, along with a large number of volunteers.

At the beginning of the pandemic, MCDOH maintained a staff of 33 full-time employees; comprised of 3 nurses, 1 disease specialist, 1 community health worker, 7 office assistants, 8

Table 1: Specific COVID Response Activity by Average Manpower Hours - 2020
[NOTE: The average full-time county employee is paid for 1,950 hours per year.]

Activity	Description	Number	Manpower Hours
Case Investigation	30 minutes per interview	2353 positive cases	1,177
Contact Tracing	30 minutes per interview	Ave. 10 contacts per positive case = 23,530 contacts	11,765
Vaccination POD[1]	One 7 hour event	15 staff	105
Testing – PCR[2]	Nineteen (19) 7 hour events	3 staff per event x 19 events	399

[1] December 31, 2020 vaccination POD only. Included 10 EMT staff.
[2] Madison County provided support staff for Upstate Medical and Nascentia Home Care's clinical staff.

management positions, 5 sanitarians, 3 EI Service Coordinators, 1 health statistician, 1 principle account clerk, 2 health educators, and 1 weights and measures staff. MCDOH was allowed to hire additional staff, on a per diem basis to augment existing staff levels. Consequently MCDOH increased overall staff capacity to 79 staff by hiring EMTs (37), RNs (4), and Community Health Workers (4).

Madison County recorded its first positive COVID case on March 21, 2020. Within six weeks after the first case in Madison County, the rate of new cases per day rose from 1 to 87. During 2020, Madison County averaged approximately 8 new cases per day with the number of new cases per day peaking at 125 cases per day on December 7, 2020.

Case investigation and contact tracing represent core NPI activities that help reduce the spread of disease. MCDOH staff contacted each positive case and exposed contacts to gather information about who they had come into contact with, places they visited, as well as to review the order requirements and identify any needs that the person may have while in isolation or quarantine. These interviews, on average, lasted approximately 30 minutes each.

MCDOH Time Activity reports for 2020 demarcate 22,107 manpower hours to COVID-related activities. Table 1 (below) provides a summary of key response activities and their associated manpower hours. As the table depicts, the majority of staff time was spent on CI/CT activities. The remaining manpower hours attributed to COVID activities includes; planning activities, outreach, education and promotion, data collection, analysis and reporting, responding to calls/ inquiries, reviewing guidance materials, hiring of EMTs, wastewater testing, onboarding volunteers, follow-up isolation and quarantine visits, office-related work, and meetings. This table does not include hours worked by volunteers.

For the first five months of the pandemic, MCDOH staff worked seven days a week, twelve hours a day, including holidays. Staffing resources were further impaired with two staff out on maternity leave, two staff out on extended family medical leave, and several staff placed in isolation and quarantine. Moreover, staff were still required to perform their normal state-mandated program activities.

Given the enormity of the workload, volunteers became a critical component of our response efforts. In 2020 we had a peak of 111 volunteers. MCDOH drew a wide range of volunteers including: other county employees, the medical reserve corps, retired nurses and doctors, college staff and students, hospital staff, community organizations (e.g., CAP, OFA, and the Rural Health Council), and community members.

Volunteers contributed in several ways to the overall response effort including: making cloth masks for staff and responders, providing food and refreshments for staff, contact tracing and case investigation, daily checkup calls for individuals in isolation and quarantine, calls to release individuals from isolation and quarantine, home visits to check on individuals in isolation and quarantine, assisting with registration, security, traffic control, administering vaccinations and COVID tests, serving as greeters at vaccination POD and testing events, distributing supplies (e.g., masks, hand sanitizers, test kits), and answering phones and staffing the call center.

Volunteers assisting with Empire Farms testing event in May 2020

The impact that volunteers had on our response efforts were significant. Through their efforts, volunteers helped; increase access to needed services and care (e.g., testing, vaccinations), build workforce resilience; allowed DOH staff to focus on critical activities; gave DOH staff the opportunity to take a day off; reduce the spread of disease; and save lives.

NON-PHARMACEUTICAL INTERVENTIONS

Non-pharmaceutical Interventions (NPIs) are actions, apart from getting vaccinated and taking medicine, that people and communities can take to help slow the spread of illnesses like pandemic influenza (flu). NPIs are also known as community mitigation strategies. Such strategies include: wearing face coverings or masks, social distancing, staying home when sick, washing your hands, placing individuals in isolation and quarantine, closing schools/business, travel restrictions, and enhanced cleaning practices.

NPIs, when done concurrently are meant to slow the spread of the virus and lower the number of patients coming to the hospitals, as well as reduce the risk to healthcare workers from contracting the virus. This in turn provides more time for the development and creation of new therapies, medications and a vaccine. This slowing of the spread of the virus became known as “flattening the curve.” Regrettably, NPIs impose restrictions on people’s lives, may adversely affect the economy, and are difficult to sustain for a long period of time.

The mandates and implementation of NPIs for COVID-19 protection measures at the State and national levels resulted in the rampant politicization of the pandemic response. The politicization coupled with the mixed messaging created considerable resistance by residents and businesses to comply with the interventions and mandates.

On April 12, 2020, the Governor mandated face coverings for public and private employees interacting with the public. The April 2020 mandate applied to only essential businesses. All other types of businesses and venues were closed at that time. The state charged counties with enforcement responsibilities. The state established a system that would allow individuals to anonymously submit complaints about businesses that were non-compliant. In addition, the State Liquor Authority agents conducted enforcement activities in parallel to county enforcement activities.

When the mask mandate was issued, Madison County had 31 active cases. At the time of the mandate, MCDOH had a considerable list of volunteers (over 100) that we could draw from to assist our staff in contact tracing and other response activities, or help free up staff to carry out response activities, such as enforcement. Environmental health

staff conducted enforcement activities for the 2020 mask mandate.

The state, however, provided limited guidance materials and did not clarify or define what enforcement is or how it should be carried out. As such, the county developed and implemented a 3 step process that involved an initial warning along with outreach and education, a subsequent visit/ inspection, and if the violation was observed during the visit - a fine. Several entities covered under this mandate were not under the MCDOH authority to regulate. For those entities in which we have authority to regulate (e.g., restaurants), failure to comply or pay the fine could result in cancelling their operating permit and closing them down. Two businesses (not regulated by MCDOH) refused to comply or pay the fine. Subsequently, no further enforcement action could be taken. Without clear guidance from the state, each county enacted enforcement differently, which in turn added to further confusion and resentment.

To add to this, on October 2, 2020, Governor Cuomo issued a press statement that Commissioner Zucker will be issuing Section 16 orders to local governments with COVID-19 hotspots which basically said, *"If local governments do not enforce these legally binding requirements, they will be in violation of the order and can be subject to fines."*

CONTACT TRACING AND CASE INVESTIGATION

Effective case investigation and contact tracing require a series of actions to be completed in a timely and comprehensive fashion by community members, health care providers and public health staff — from an initial case seeking testing, to their contacts being identified and quarantined.

Case investigation and contact tracing can only reduce COVID-19 transmission when timeliness and completeness criteria are met. COVID-19 moved very quickly from person to person; the average time from onset of symptoms in a case to the onset of symptoms in a contact is just five to six days. The speed of testing, case investigation and contact elicitation and tracing play a major role in the containment and control of the virus, specifically community-level transmission.

Table 2: COVID Compliance - 2020

406	86	9	7	2
Complaints Filed	Compliance Visits	Notice of Violations	Paid Fine	Unpaid

Contact tracing will only be effective if the time from case symptom onset to receiving test results is within three to five days, and the time from receiving test results to quarantine of contacts is less than one day. Delays in accessing testing and turnaround time for results were a major bottleneck in many settings. (See Figure 5) Initially in 2020, test results took on average 7 – 10 days to appear in the state's ECLRs system. In some instances results were received after an individual's isolation and quarantine period had expired (>14 days). In Madison County, only (24%) cases met the recommended timeframe for CT to have any effect.

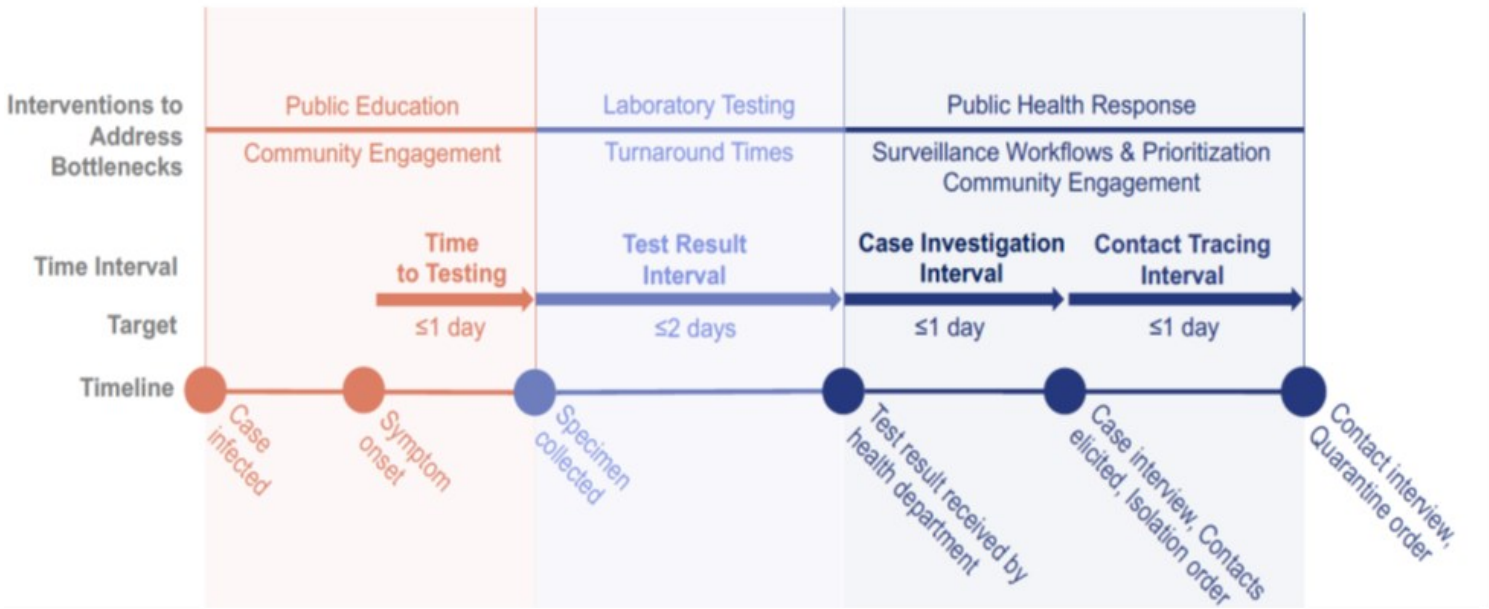
In retrospect, the SARS-CoV-2 virus had been in the US undetected for a couple of months before confirmed cases began to jump significantly during March of 2020. The state's initial outbreak likely began in early February but spread undetected for weeks because of the focus on people traveling from China, coupled with initial problems with the CDC-produced test kits that delayed our ability to test.

Madison County recorded its first case on March 22, 2020. In the ensuing weeks we observed that a number of our initial cases were from the Hamilton area. Upon investigation, several cases appeared to be associated with events and activities surrounding the March 12 Colgate University basketball game. This game and the related community activities occurred prior to the state's lockdown of such activities on March 13, 2020; suggesting that the virus was in Madison County in early March or possibly late February.

As cases surge, it became impractical to reach every case and trace every one of their contacts. During our initial surge in cases, MCDOH employed a First-In, First-Out (FIFO) method for completing case investigations, and subsequent contact tracing. However, in the Fall of 2020, when public schools re-opened, our CI/CT focus shifted to school-aged children.

During the initial months of the pandemic, MCDOH relied on a manual, Excel spreadsheet to record case investigation and contact tracing information. This system was eventually replaced by the State's CommCare system, but not without its share of problems. As noted previously, communication about cases between counties was difficult resulting in delayed case investigation activities.

Figure 5: Case Investigation & Contract Tracing Model



Source: Vital Strategies, April 2021

On March 25, 2020, the State required nursing homes to accept stable but COVID-positive patients discharged from the hospitals. This requirement appeared counterintuitive to what was known about the spread of COVID at the time and became controversial. At the local level, response functions had to be coordinated with the State DOH as they have jurisdiction over nursing home operations. The

Counties were asked to assist the state in case investigation and contact tracing activities, where the state conducted investigations on residents of the nursing homes, while county LHDs focused investigation activities on the employees of the nursing homes. Consequently, the effectiveness of the communication and sharing of information between the state, county and nursing homes, was not well coordinated and contributed to redundancies and delays in our response activities.

Colgate University, SUNY Morrisville, and Cazenovia College were key partners in contact tracing and case investigation efforts. In addition to coordinating the case investigations and contact tracing for their own respective campus personnel and students, college staff and students assisted the MCDOH in county's case investigation and contact tracing efforts.

ISOLATION AND QUARANTINE

For approximately the first 6-8 weeks of the pandemic, MCDOH staff and volunteers conducted home visits to those individuals that were placed into either isolation or quarantine to verify that they were in their home and to check on any needs that they may have.

However, once the number of cases increased, in-person isolation and quarantine checks were no longer manageable and daily checks were conducted via telephone or text messaging. Once home visits ceased, MCDOH relied solely on the resident's word that they were compliant with the isolation/quarantine order.

In instances when residents were unable to isolate or quarantine at home, the county was responsible for finding proper housing accommodations and related services (e.g. meals). MCDOH worked with the County's EMS office to identify and secure housing.

MCDOH Public Health Nurse II, Molly Limbert prepares for a home-visit to a COVID-19 patient in isolation in 2020.

Housing options in the county were limited to a few hotels/motels. In our initial contact with the hotels/motels, the hotels/motels were unwilling to provide assistance. Fortunately at that time, our positive and exposed residents were able to isolate or quarantine within their own homes. It wasn't until the outbreak of the greenhouse workers, who were staying at two of the hotels, that we were able to use the hotels to isolate and quarantine residents. The use of the hotels to isolate and quarantine these workers was fortuitous for the county, as it contributed to our ability to limit further spread of the virus in the community. (see page 30)

In one particular instance, a hotel room was not available to house a positive case. The positive case was an individual that, although worked locally, was homeless and living out of their vehicle. The Office of Emergency Management was able to procure an RV, which we located on the county's campus, that provided housing for the individual during the length of their isolation.

Following the outbreak among the guests at the hotels, the hotels were then willing to let the county use rooms for individuals who needed to isolate or quarantine. However, the use of the hotels for isolation and quarantine ended rather quickly when a few residents who were placed in isolation at the hotel damaged the room.

The three colleges in the County (Colgate University, SUNY Morrisville, and Cazenovia College) rearranged existing campus housing space to house positive and quarantined cases. Colgate actually purchased the Wendt Inn for this specific purpose.

TESTING

Testing represented a major response strategy to reduce the spread of COVID transmission. Unfortunately, the initial tests devised by the CDC turned out to be flawed and had to be scrapped, setting back the national testing effort by weeks. Fortunately for New Yorkers, the New York State Health Department's Wadsworth Laboratory devised an alternative test which received FDA approval on Feb. 29, 2020. In September of 2020, FDA approves emergency use authorization for diagnostic saliva COVID-19 test developed by SUNY Upstate Medical University and Quadrant Biosciences.

The initial federal and state guidance to test only a narrow set of people based on certain criteria (e.g., symptomatic, known exposure), along with delays in expanding testing to other labs, allowed the virus to spread undetected — and helped perpetuate a false sense of security. Almost as soon as testing capabilities came online, labs found cases of coronavirus.

Even when more testing became available, the demands placed on labs for test results caused delays in obtaining them, which in turn significantly reduced the efficacy of our case investigation and contact tracing activities.

Although MCDOH did not have the staff available for testing in 2020, the MCDOH partnered with Upstate Medical University and Nascentia Health Inc., a certified home health agency, to provide mobile testing clinics to our residents. Towards the end of 2020, MCDOH hired 37 per diem EMTs to assist with testing and vaccination activities following the issuance of Executive Order 202 that allowed for unlicensed professionals such as EMTs to administer tests and vaccinations.

Upstate Mobile Testing Unit, Nascentia Health and MCDOH staff gearing up for a COVID-19 testing site in 2020.

Residents seeking COVID tests were limited to provider -administered locations that offered PCR testing. Self-administered tests did not become available until the end of 2020, when home molecular tests were issued by FDA on November 17, and over the county (OTC) home antigen tests issued by FDA on December 15, 2020.

Pharmacies, Nursing Homes, and Hospitals were charged with finding and acquiring their own tests and laboratory services for COVID-19. Executive Order 202.24, issued on April 25, 2020, authorized licensed pharmacists to order and administer COVID-19 tests subject to completion of appropriate training developed by the Department of Health (NYSDOH). In addition, it permitted NYS licensed pharmacists to be designated as a qualified healthcare professional for the purpose of directing a limited service laboratory to test patients suspected of a COVID-19 infection or its antibodies, provided that such test is FDA-approved and waived for use in a limited service laboratory. Pharmacies were instructed to contract with a private laboratory who was a permitted laboratory qualified to perform COVID-19 testing in New York State.

BAIL REFORM

A resident was transported to a neighboring hospital ER for a non-COVID related health issue and subsequently tested positive for COVID upon entry into the ER. The hospital contacted the MCDOH to report the positive case and indicate that the case was being discharged and needed transportation. The case was without transportation and was homeless. County DOH staff transported the case to the Super 8 hotel, who had agreed to let this person isolate in one of the rooms. The positive case was noncompliant with the isolation order from the beginning. The individual would have friends over for parties and would leave the hotel and go into town visiting stores and public places, and intentionally cough on people. Although the positive case was reminded of the isolation order requirement, they continued to ignore the order. MCDOH requested that the Sheriff's Office apprehend the person should they observe the person in violation of the isolation order. The Officer did observe this person in violation of the order and detained this individual. The individual was brought before the County Judge to enforce the order. It was our hope that the individual would be detained and serve the remaining isolation time in the county jail. However, due to bail reform legislation passed in 2019 by the State, this individual was released without charges or a fine. This individual continued to violate the order knowing that no action would be taken against them, thereby posing a further risk to the public's health and sending a message to county residents that there would be no punishment or consequences should they ignore the orders.

In conversations with our local pharmacies, finding tests and/or labs was difficult. One pharmacy noted that "I think we were buying from resellers of the resellers honestly. Plenty of middlemen. We weren't in the business of medical supplies before COVID so we were not as familiar with these suppliers. Then as things settled down the typical supply channels that we use regularly for prescription medications started carrying them as well."

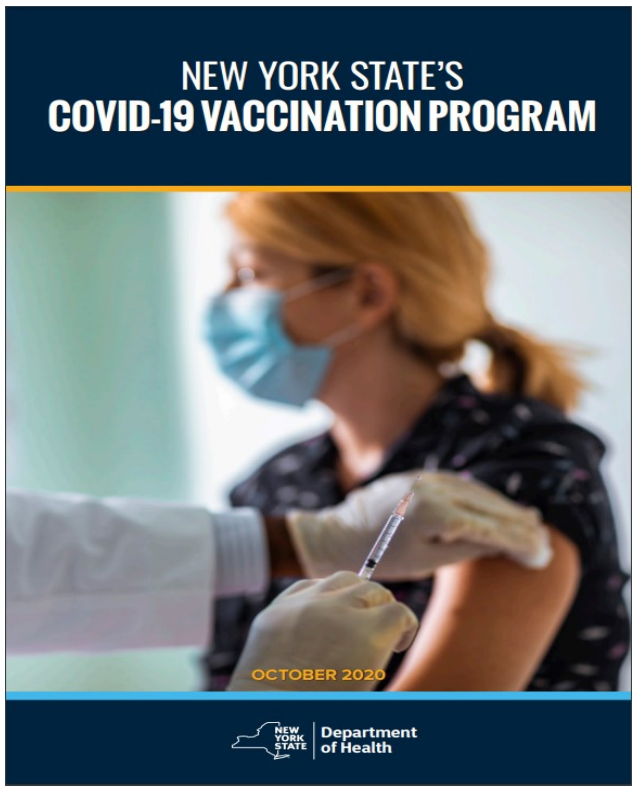
Executive Order 202.30 on May 10, required testing of all personnel of nursing homes and adult care facilities twice a week. The NYSDOH sent a list of labs that were to support nursing homes. Many labs were unable to meet the testing demand, leaving our local nursing homes to seek labs outside of NYS. The Crouse Community Center had to contract with a lab outside of NY and Fedex tests daily. In addition, Crouse Community Center had to pay for all testing, as the NYS "free" testing site was in Rome and staff could not drive there. Initially, NYS sent test supplies (swabs and media) to nursing homes. Nonetheless, ongoing supplies from the state were not dependable and nursing homes resorted to contracting with other providers (e.g., Veterans Administration Hospital) to obtain test supplies. In the Fall of 2020 nursing homes were able to obtain and administer rapid tests.

Hospitals, likewise, were challenged with obtaining and maintaining test supplies and equipment. Community Memorial Hospital noted that they "were using the swabs that came from LabCorp for rapid flu testing for the Covid testing and sending samples to Wadsworth for analysis. Then the supply chain dipped and we [CMH] received some from Madison County Office of emergency management to supplement what the lab could get us. In late September/October we [CMH] group purchased a rapid analyzer with Colgate University and I think at one point when they were virtual, they gave us some of their test cartridges when we ran short but we had to replenish those."

The State provided counties with PCR test kit supplies. The MCDOH assembled the kits and distributed to providers in need. MCDOH had transport medium and testing supply materials in limited supply which were distributed to hospitals and nursing homes.

The health centers for each of the three Colleges were able to obtain and conduct their own testing for students and staff. Colleges were also challenged in finding test supplies and laboratories for analyses.

A considerable number of testing terms emerged over the course of the pandemic that added to the overall confusion about testing. Terms such as PCR, antigen, molecular, antibody, pool, saliva tests, self -swab, and rapid tests raised questions about the difference between the tests, their efficacy, which test to use when, and where to get these tests. Some tests were more effective for clinical diagnosis (PCR), while others were better for screening (pool testing) and surveillance activities (rapid tests). Some were one time tests, while others needed a second follow up test. Towards the end of 2020 testing requirements varied depending on which "zone of risk" you were located in (green, yellow, orange, red), further adding to the overall perplexity of testing.



VACCINATION PLANNING & ADMINISTRATION

In October 2020, the State issued their COVID-19 VACCINATION PROGRAM plan. The plan described the steps and protocols for the distribution and administration of the vaccine. At the time the plan was issued, there remained numerous unknowns about the vaccine including: emergency use authorization, amount of vaccine to be distributed, number of doses to administer, who will receive the vaccination, storage requirements, or how the vaccine will be distributed. Simultaneous to the release of the plan, the State requested county LHD's to complete both state and federal forms indicating their readiness and capacity to vaccinate. MCDOH completed and submitted the forms indicating our ability to vaccinate as soon as the vaccine became available.

On December 18, 2020, the NYSDOH issued guidance that established Regional Vaccination Networks based on the 10 New York State Regional Economic Development Council (REDC) regions. Each of the 10 regional networks was led by an anchoring organization (i.e., hospitals), called a Hub, that were to coordinate the necessary planning activities and convene planning to ensure widespread vaccination coverage. The HUBs were responsible for operationalizing the administration of the vaccine in each region.

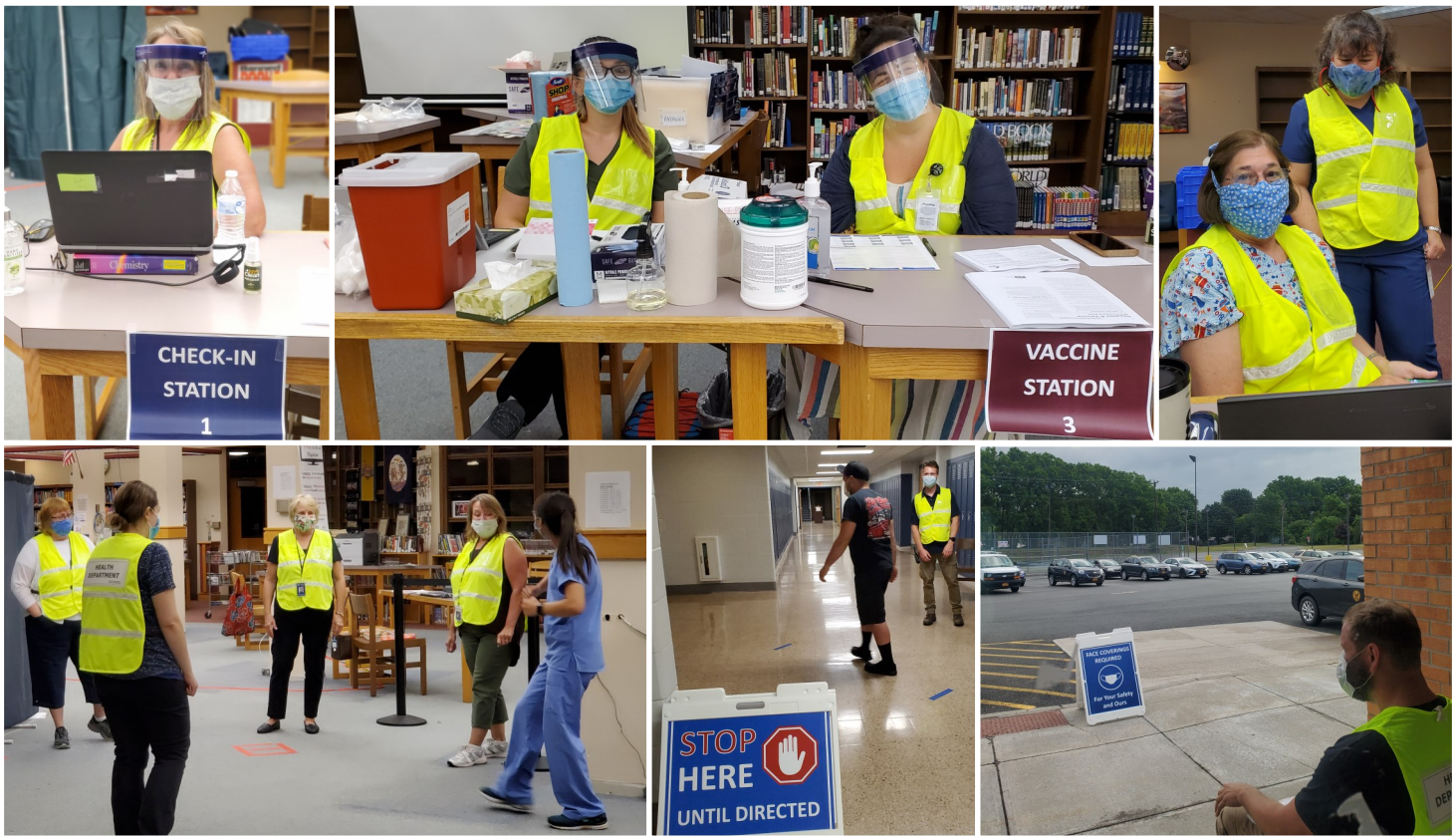
Unfortunately LHDs involvement with coordinating the distribution of vaccine in their respective counties was limited at best, which was in contradiction to existing pandemic plans and expectations. This new, alternative system added confusion and subsequent delays in distributing the vaccine. LHDs are the experts at administering community vaccination PODs and campaigns. As such, having LHDs removed from this role created uncertainty as to what role local health departments would have in providing

At 9:00 AM on December 31, 2020 MCDOH Public Health Nurse II, Molly Limbert administered the first shot of the Moderna vaccine for COVID-19 to Madison County healthcare worker Lori Garris. Ninety (90) doses of vaccine were administered over the course of that first day. Madison County was one of 17 counties (of 62 counties) that started vaccinating in 2020. Only those eligible, as determined by New York State, were vaccinated.

vaccines. County health directors/commissioners were furious and sent their criticisms to NYSDOH about being "sidelined" in the vaccination effort. The State issued a notice that vaccination of non-eligible individuals or wasting of vaccine could result in fines.

The amount and type of vaccine that the county received and administered were based primarily on two factors; a limited supply of vaccine and the number of doses per shipping container (Moderna = 100 doses in 10 dose vials; Pfizer = 975 doses in 5 dose vials). MCDOH utilized EMTs to and nursing volunteers through MRC to assist in administering the vaccine.

The pandemic underscored the importance of public health partnerships with critical infrastructure sectors, including local emergency management, schools, hospitals, nursing homes, colleges, and public sewer and water systems. Alignment with these sections supported surveillance, response and mitigation activities.



MCDOH Staff at the Hepatitis A POD – Oneida School District Library. July 2020

BONUS ISSUE: HEPATITIS A OUTBREAK DURING THE PANDEMIC

On July 7th, 2020 the MCDOH confirmed a positive Hepatitis A case among a food service worker at the Taco Bell in the City of Oneida. From June 23 to July 3rd hundreds of customers were potentially exposed from consuming food prepared by an infectious worker. The Hepatitis A vaccine is effective in preventing further infections when given within two weeks of exposure. The MCDOH notified New York State Department of Health (NYSDOH) and Madison County Office of Emergency Management (MCOEM) of its intent to hold emergency clinics to prevent a larger outbreak. The MCDOH request for vaccine and immunoglobulin (IG) from the state was approved on July 8th and a press release was issued that day to announce exposures and clinic dates. On July 9th, while pandemic-response activities remained ongoing, public health staff across all four of the MCDOH's divisions were diverted from COVID-19 response activities to conduct five days of targeted vaccine and immunoglobulin clinics to exposed individuals. Fortunately, public schools were closed at this time, allowing the clinics to be held at the Oneida High School on July 9-11th, and July 13-14th. The MCDOH quickly modified clinic plans to address recommended COVID-19 infection control and social distancing precautions. Across the five clinic dates, vaccine was provided to 351 adults and 60 minors. Immunoglobulin (IG) was provided to three immunocompromised individuals. Fortunately the first wave of COVID-19 cases had declined and Madison County had just entered the New York State Forward Phase 4 Reopening. These factors greatly aided in the Department's ability to shift staff and resources, rely on volunteers for contact tracing, and mobilize an emergency response within another, larger primary public health emergency response effort.

Case Studies

CASE STUDY

COVID-19 Cases and Transmission Among Hotel Guests

May 2020

On April 30, 2020, the Oneida Health Hospital alerted the Madison County Health Department (MCDOH) to a number of individuals reporting to their emergency room with COVID-like symptoms. The hospital noted that these individuals were staying at a local hotel and worked at the nearby Green Empire Farms (GEF) green house facilities. Of the ten (10) positive cases presenting at the emergency room, six (6) were workers from the GEF. Subsequently two (2) of the workers who tested positive for COVID-19 were hospitalized.

Upon further investigation the MCDOH determined that approximately 250 contractual workers from the GEF were staying in four local hotels (two located in Madison County and two located in neighboring Oneida County).

Concerns about the number of individuals staying at the hotels and the potential for disease spread prompted the MCDOH to hold two testing events for the contractual workers staying at the hotels, employees of Green Empire Farms, and the hotel employees. In collaboration with the NYSDOH regional office and Green Empire Farms, testing events were held on May 2 and May 5 at the Green Empire Farms facility. A conditional requirement for testing was that the individuals were asymptomatic and not exhibiting any symptoms of COVID-19. A total of 347 asymptomatic individuals were tested (337 GEF workers and 10 hotel employees). Of the GEF workers staying in the two Madison County Hotels (Super 8 and Days Inn), a total of 135 were tested. Of those tested, eighty-eight (88) tested positive (65%). Of those who were positive, fifty-eight (58) stayed at the Super 8 and thirty (30) at the Days Inn. For the ten (10) hotel employees tested, zero (0) tested positive.

MCDOH conducted extensive case investigation and contact tracing on the individuals who tested positive. Due to the large number of individuals staying at the hotels that were either a positive case or exposed to a positive person, the hotel rooms were used to isolate and quarantine workers. Individuals were reassigned rooms in the hotel based on the following categories: those who were positive cases; those who were exposed and quarantined; and, those workers who were neither positive nor exposed, but staying in the hotel.

Those placed in isolation and quarantine were contacted daily by MCDOH staff to monitor their health and identify any needs that they may have. This activity posed a challenge for MCDOH staff, as many of the workers did not speak English. The MCDOH utilized GEF staff along with translation/interpretation services for both Spanish and French Creole languages, to coordinate testing, isolation and quarantine, and to provide information to the workers.

The positive cases amongst individuals staying in two hotels in Madison County occurred early in the pandemic and during a rise in cases in the county and state as a whole. Prior to the May 2 testing event Madison County recorded 51 active cases, with another 49 tests waiting for results. Following the testing event, active cases in Madison County went from 51 to 136. Approximately two weeks (5/19/20) after the testing event, active cases returned to pre-testing levels (43). The number of cases identified during this testing event revealed a substantial presence of asymptomatic individuals that may not have been detected otherwise, unless tested.

Post analysis of the event suggests that the proactive testing and isolation and quarantine actions taken contained further disease spread beyond the workers staying in the two hotels and into the community.

Several factors contributed to limiting the spread including: limited exposure to individuals outside of the hotel/work site; prompt communication by Oneida Health Hospital (OHH) of individuals seeking emergency room assistance; proactive testing of asymptomatic individuals; ability to isolate and quarantine a large number of people in place at the hotel. As a result of this event, the MCDOH requested that GEF expedite the construction of their migrant housing facilities. Additionally, transportation, screening, distancing, and masking protocols were enhanced to prevent the spread of disease in the workplace.

Staff and Volunteers conducting testing at the Green Empire Farms greenhouses — May 2, 2020

CASE STUDY

The Grand Rehabilitation and Nursing at Chittenango: Outbreak among Staff & Residents

March—May 2020

On March 12, 2020, the Governor's Office passed an Executive Order mandating all nursing homes in New York State stop visitation with the exception of "medically necessary" visits; given that older adults were at higher risk for serious complications from COVID-19.

Despite the visitation policy, the Grand Rehabilitation and Nursing Facility in Chittenango had fifty-three (53) positive residents between April 20, 2020 and May 21, 2020. The age range of positive cases among the residents was 54 to 107 years old. During this timeframe, 1 staff member living in Madison County along with at least seven (7) out-of-county workers tested positive for COVID-19.

On April 20, 2020, a resident of the Grand was admitted to a Syracuse area hospital and tested positive for COVID-19. On the same day, another resident exhibiting symptoms was tested for COVID-19 and results came back positive on April 23, 2020. Subsequently, thirteen (13) additional residents and one (1) staff member living in Madison County tested positive for COVID-19 between April 21 and 26. Madison County was notified of five (5) out-of-county staff members who also tested positive in the same timeframe.

On April 29, 2020, MCDOH was informed that a resident from the Grand, who later tested positive for COVID-19, received medical care at Oneida Health Wound Care. The staff and known contacts were identified, quarantined, and subsequently tested for COVID-19. The individual attended the week leading up to their infectious period and may have been originally exposed to another positive case at that facility. Between April 29 and May 21, thirty-nine (39) more residents tested positive for COVID-19. Unfortunately, the majority of residents at this facility were considered high risk due to their age group and medical conditions. Of the positive cases, then (10) residents were hospitalized of which four (4) passed away. Another seven (7) residents passed away at the long term care facility, bringing the total number of deaths to eleven (11) residents. Among the individuals who passed away, the average patient age was 82 years old, ranging from 71 to 107 years. Madison County Department of Health (MCDOH) was notified of two (2) out-of-county staff members who tested positive for COVID-19 in the same time period.

Although long-term care facilities fall under the purview of the New York State Department of Health (NYSDOH), the Grand leadership maintained effective communication with MCDOH during this time. MCDOH received general status updates from the Grand including number of new cases, hospitalizations, and deaths. MCDOH staff were responsible for investigating any positive staff member living in Madison County and conducted contact tracing with the assistance of the Grand to determine other potential workplace exposures.

The MCDOH was able to offer support to the Grand by providing forty (40) test kits on April 24, 2020 and personal protective equipment (PPE) supplies on May 5, 2020 . Later in May, under a new administration, the Grand staff administered tests to the entire facility. Testing resulted in

Additional Info in 2020

2 residents tested positive in August * (one person tested positive for the second time)
2 residents tested positive in November (1 was hospitalized and passed away), 1 staff member

Between December 2, 2020 and December 30, 2020, 5 workers and 6 residents tested positive (none were hospitalized, 1 passed away)

2021

Between January 5 and 27, 2021, 2 residents (neither were hospitalized or deceased) and 11 workers tested positive for COVID-19

1 resident fully vaccinated, tested positive in February 2021

1 worker fully vaccinated, tested positive in March 2021

* Does not appear visitation policies changed; assumption that staff would have been the only possible exposure. No positive staff members living in Madison County were identified.

forty-six (46) active cases at the Grand facility on May 20, 2020. The State provided intervention during this time and the Grand implemented a cohort of residents to minimize spread. Two days later, there were forty-eight (48) active cases among residents, four (4) of which were hospitalized due to COVID-19 symptoms.

On May 10, 2020, Governor Andrew Cuomo signed Executive Order 202.30, which required twice weekly COVID-19 testing of all personnel in nursing homes. During this time, only one staff member living in Madison County was identified as a positive case (mentioned above). The individual tested positive on April 24, 2020 and the results were released to the New York State Electronic Clinical Laboratory Report System (ECLRS) on April 28, 2020. In total, MCDOH was made aware of seven (7) out-of-county residents that tested positive for COVID-19; however, we cannot ensure that there were not additional positive staff members who lived in a neighboring county. Later in the month, all nursing home residents in New York State were subject to mandatory testing by June 7th. Unfortunately, both testing mandates were implemented after the outbreak at the Grand Rehabilitation and Nursing Facility in Chittenango.

Crouse Community Center

December 2020—January 2021

Crouse Community Center (CCC) is a 120-person skilled nursing facility located in Morrisville, NY. CCC conducted twice weekly COVID-19 testing of all personnel in nursing homes as per State order. Through our surveillance of testing activity, MCDOH identified CCC as a cluster of COVID-19 in December 2020.

Between December 1 and 22, 2020, there were 98 residents who tested positive for COVID-19. During the same timeframe, 31 employees who live in Madison County tested positive for COVID-19. Subsequently, 8 household members of the positive staff members tested positive while under mandatory quarantine. In total, 137 people were considered part of this outbreak.

The positive cases among CCC residents ranged from 58 to 103 years old with an average of 84 years. Among them, 17 residents were hospitalized and treated for symptoms of COVID-19.

As of January 4, 2021, MCDOH was aware of 21 resident deaths among COVID-19 positive cases at CCC. Area hospitals had notified MCDOH of nine CCC residents who had been hospitalized due to COVID-19 symptoms and subsequently passed away. At that time, CCC had reported that 12 residents had passed away in December 2020.

On January 6, 2021, MCDOH received communication from Syracuse.com that the number of deaths from COVID-19 for Madison County reported by the NYSDOH and MCDOH differed by a significant number, 71 and 49 respectively.

On the same day, MCDOH reached out to the Executive Director of Crouse Community Center for a status update among residents that tested positive for COVID-19 in December 2020. The executive director sent an updated list of positive residents and their respective status. Through this line list, MCDOH verified that a total of 46 residents passed away from COVID-19, including individuals at the residential facility and hospital, accounting for the difference in death statistics. Long-term care facilities are only required to report deaths among residents to the NYSDOH. After this communication, MCDOH updated internal data and reported them on the Madison County public website the following day.

The vast majority (40) of those individuals who passed away from COVID-19 were above the age 75 years with six (6) between 58 and 72 years, and had known co-morbidities. As noted above, nine (9) individuals were hospitalized for symptoms of COVID-19 before passing away.

Long-term care facilities fall under the purview of the New York State Department of Health (NYSDOH). As such, case investigations were conducted for residents living at the facility by NYSDOH personnel. MCDOH staff received general status updates such as number of new cases, hospitalizations, and deaths when requested. MCDOH staff were responsible for investigating any staff member living in Madison County and conducted follow up with CCC to determine potential workplace exposures.

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