

COVID-19

Impact Summary **Missouri Department of** **Health and Senior Services**

The Missouri Department of Health and Senior Services has leveraged a strong response to COVID-19 in Missouri. This report details this response, which is broken down in the four Show Me Strong Recovery pillars: testing, PPE, hospitals, and data. There were also many additional efforts that impacted the pandemic response.



DHSS has leveraged a strong response to COVID-19 in Missouri. This report details this response.

On January 21, 2020, the first COVID-19 diagnosis in the United States was announced. Five days later, on January 26, 2020, DHSS launched an incident command team and initiated response efforts by engaging other state agencies, local public health agencies, and the health care delivery system. On February 28, 2020, the State Public Health Laboratory implemented the first COVID-19 test for the state. These early foundations set the stage for what would become Missouri's whole government strategic approach to addressing COVID-19.

Note: All data included in this report are totals as of the end of the day on December 31, 2020, unless otherwise indicated.

TESTING

Missouri State Public Health Laboratory (MSPHL)

The MSPHL was a central part of the testing pillar in response to the COVID-19 pandemic. Work included testing of specimens, but also supporting external lab partners, assisting new testing providers, and coordinating work on distribution of testing and other response supplies.

During 2020, the MSPHL tested and reported 35,441 COVID-19 samples. MSPHL testing and support operations for COVID-19 were modified to operate 7 days a week, instead of 5 days a week.

The MSPHL has supported Missouri's laboratory system throughout the pandemic. This outreach expanded from the existing (circa 2002) Missouri Laboratory Response Network (MOLRN) of mostly hospital laboratories to include multiple commercial laboratories that conduct COVID-19 testing for Missourians. These laboratories are supported by:

- Dissemination of information through MSPHL Laboratory Preparedness, Education and Safety Unit and Missouri's Health Notification System (MO-HNS)
- Provide sample collection supplies to laboratories.
 - Available through an electronic ordering system.
- Provide supply shortage requests from private laboratories to HHS.
- Assist with private laboratory method development
 - Share data or expertise
 - Provide materials
- Connect for multi-laboratory collaboration
- Operate as SME for COVID-19 testing for DHSS, state agencies and Missouri's COVID-19 Fusion Cell.
- Operate as SME for Missouri's testing lines of effort (Community testing, sentinel testing, state workforce testing) and created and maintain an internal statewide COVID-19 dashboard.
- Provide COVID-19 laboratory enhancement grants to expand testing in private and academic laboratories servicing Missouri.
- Provide a statewide contract for multiple private laboratories to support Missouri COVID-19 testing.
- Provide laboratory training through the MSPHL Laboratory Preparedness, Education and Safety Unit.
- Assist with laboratory compliance concerns within Missouri's laboratory system.
- Provide available testing redundancies for other state public health laboratories when necessary.
- Collect, track, organize and report COVID-19 testing information from Missouri's COVID-19 testing laboratory system.



- Distribute COVID-19 testing instrumentation to Missouri’s COVID-19 testing laboratory system.
- Facilitate low complexity antigen COVID-19 testing in Missouri schools, FQHCs, EMS, Hospitals, MVC, DYS, DMH.
- Function as CLIA Director or coordinator where applicable to admit testing.
 - Document locations
 - Evaluate training
 - Review plans
 - Track attestations
 - Approve distribution
- Develop electronic ordering system

Additionally, the MSPHL Laboratory Director serves as Association of Public Health Laboratories (APHL) President to lead national public health laboratory COVID-19 response.

Throughout the pandemic, the MSPHL distributed a number of testing materials.

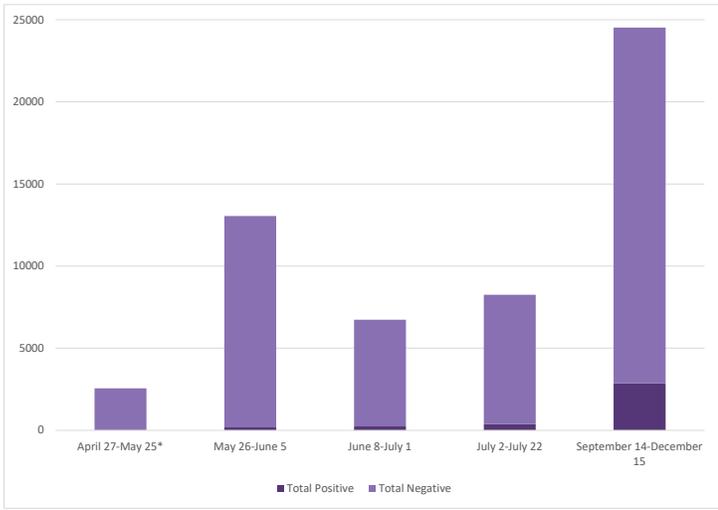
- Collection materials distributed by the MSPHL
 - Viral Transport Media made at the MSPHL and distributed – 11,695
 - Viral Transport Media supplied by FEMA/HHS and distributed – 371,359
 - Saline Transport supplied by FEMA/HHS and distributed – 166,647
 - Collection swabs supplied by FEMA/HHS and distributed – 474,587
- MSPHL packages containing COVID-19 test kits distributed – 7,722
- Remdesivir treatment vials distributed via the MSPHL- 10,221

Community Testing

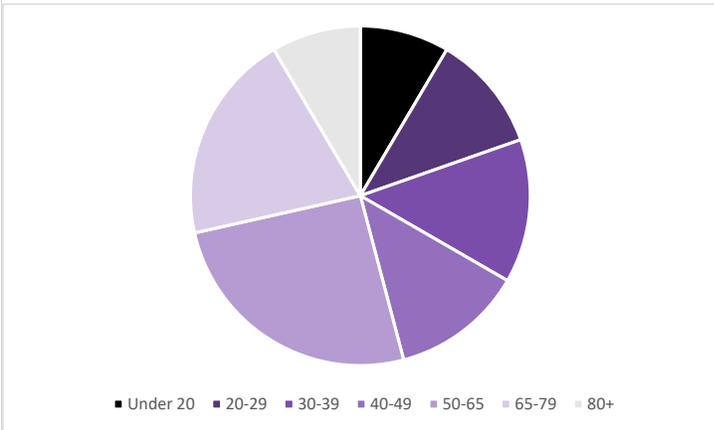
From April 2020 through December of 2020, DHSS collaborated with the Missouri National Guard to host free COVID-19 Testing events around the State of Missouri. Contributing to the success of these efforts was the support from Local Public Health Departments. The events were funded through CARES Act funds.

- April 27 – December 15, 2020
- 166 Testing Events in 86 Counties
- 37 Counties hosted more than one event
- Tests were conducted on residents from all 114 counties, and the City of St. Louis.
- 55,112 tests conducted, with an overall positivity rate of ~6.5%

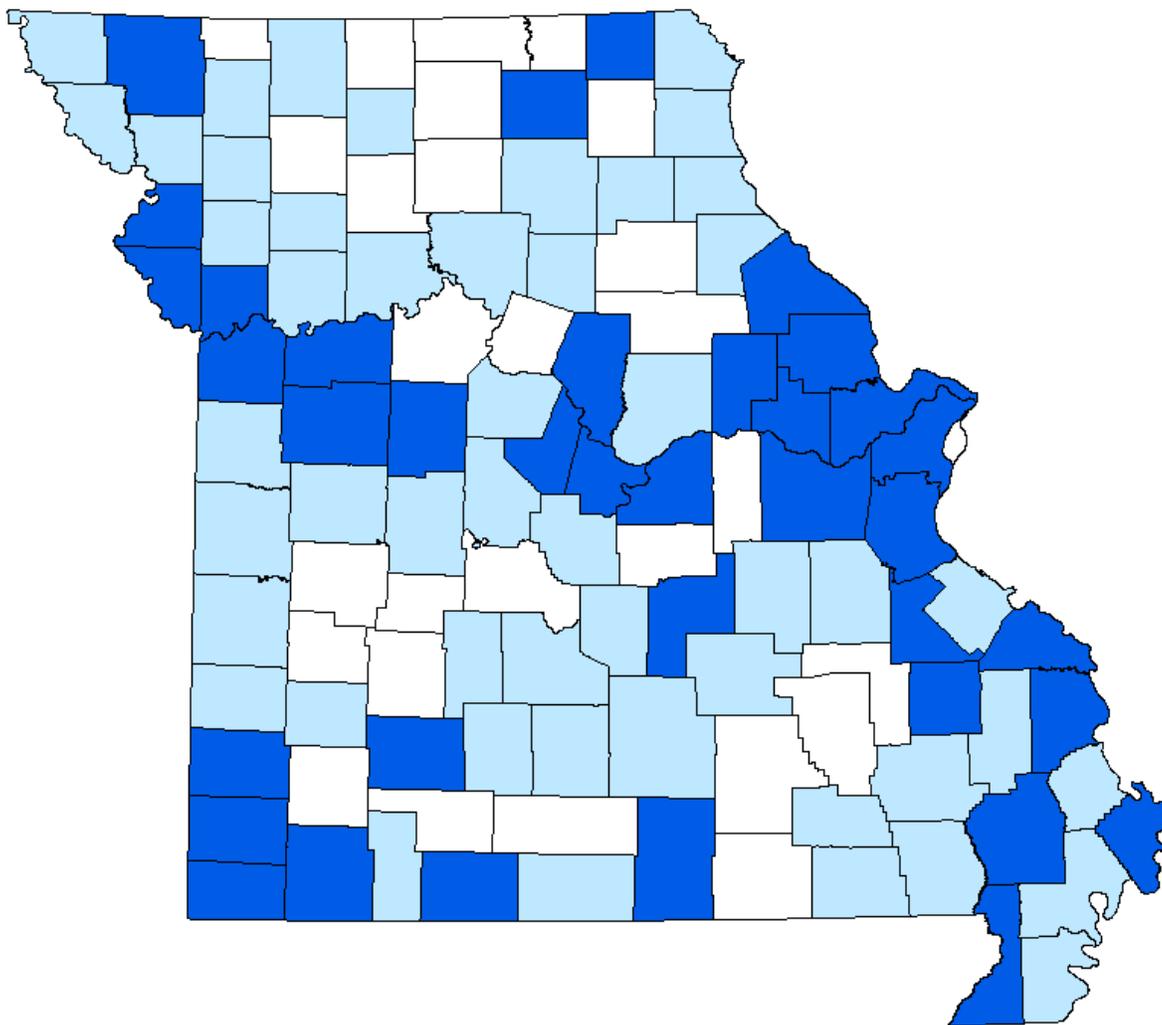
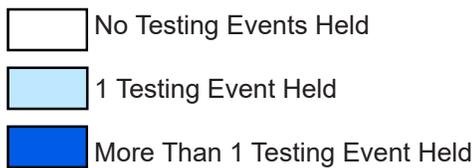
Positivity Rate by Date Groups



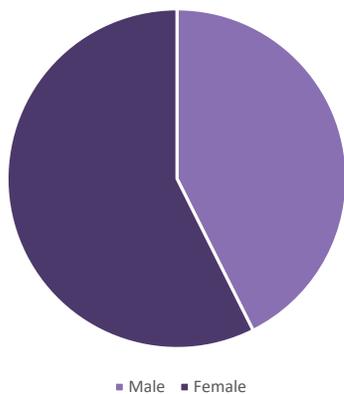
Participant Age Demographics



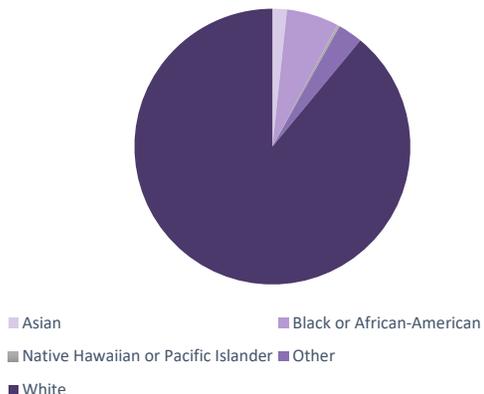
*Percent positive of 0.36 too small to be seen in overall total



Participants by Gender



Participants by Race





Surge Testing - Partnership with HHS

In addition to Community Testing events with the National Guard that rotated locations, DHSS worked in collaboration with HHS to offer additional testing events, which was an effort called Surge Testing. These events were held in the same locations, times and day of the week each week for approximately seven weeks. In that time, 10,781 tests were completed amongst the five testing sites.

| SITE | TOTAL TESTING EVENTS | TOTAL # TESTED |
|----------------|-----------------------------|-----------------------|
| Columbia | 8 | 1094 |
| Branson | 6 | 1267 |
| Cape Girardeau | 6 | 2295 |
| Lees Summit | 12 | 3162 |
| St. Louis City | 13 | 2963 |

Rapid Testing

Another testing method was rapid testing, or antigen testing. Throughout 2020, different vendors developed and sold testing machines to federal agencies, who in turn sent supplies to states. DHSS then distributed the supplies to various partners around the state, including:

- Schools (K-12, private and public),
- Higher education institutions,
- Long term care facilities,
- Mental health facilities,
- Missouri Veteran's Commission,
- Hospitals,
- Local Public Health Agencies (LPHAs),
- Federally Qualified Health Centers (FQHCs),
- EMS, and
- Home health/hospice.

Distribution totals:

- BinaxNOW tests
 - Shipped/received to State supply: 1,605,320
 - Distributed to Missouri users: 680,760
- Abbott ID Now tests
 - Abbott machines: 27
 - Abbott Kits: 63,704
 - Abbott controls: 4,089
- Quidel Sofia 2 and BD Veritor Plus testing systems
 - Quidel Sofia 2 instruments distributed: 46
 - BD Veritor Plus instruments distributed: 475



Wastewater Testing

Since May 2020, the Missouri Department of Health and Senior Services (DHSS), Department of Natural Resources (DNR) and researchers at the University of Missouri – Columbia have been collaborating on a statewide project to test wastewater for genetic markers of SARS-CoV-2, the virus that causes COVID-19. The project recently received new funding through a grant from National Institutes of Health (NIH) to expand wastewater testing to additional congregate living facilities. Public health experts have identified wastewater testing as a useful tool for early detection of outbreaks, even as vaccination efforts progress and clinical testing improves.

While the virus that causes COVID-19 is novel, using wastewater to track disease is not new. Wastewater testing has been used to track outbreaks of polio and norovirus and is now becoming an increasingly useful tool for SARS-CoV-2 surveillance. SARS-CoV-2 virus particles are shed in the feces of infected individuals, both symptomatic and asymptomatic, and detected in wastewater. Studies from across the United States and worldwide have found a direct correlation between the amount of SARS-CoV-2 genetic material in sewage and the number of reported cases within a given “sewershed,” or the area that drains into a community’s wastewater collection system. Wastewater testing can provide an early indication of outbreaks in communities or congregate living facilities and is a complementary strategy to monitor population-level trends in the prevalence of infection. The utility of wastewater testing for predictive models is limited, in part, because infected individuals may continue to shed viral particles up to 33 days after they are no longer contagious.

Missouri’s COVID-19 sewershed surveillance project has grown from testing at 9 wastewater treatment facilities to testing over 100 locations each week. Current testing locations include 60 community wastewater treatment facilities, 21 Department of Corrections facilities, 7 Department of Mental Health facilities, 3 veterans homes, and 4 universities. To date, we have analyzed over 2,300 wastewater samples.

For more information about the project and the data it has generated, we encourage you to view the Sewershed Surveillance Project - COVID-19 Tracking Tool, which describes how the project works and features an interactive map with community sewershed test results.

Box In Testing - Long Term Care Facilities

As more information was learned about COVID-19, and the populations most at risk for severe complications from contracting the virus, DHSS worked to develop a testing strategy to assist long-term care facilities around the state to minimize spread within a facility. This strategy was called “box in testing”, which meant that a facility would conduct testing on all residents and staff whenever a single positive case was found.

- In 2020 there were 531,803 tests completed as part of this strategy.



Testing Totals

Currently, there are three primary types of tests used to detect or diagnosis COVID-19.

- A PCR, or Polymerase Chain Reaction Test, looks for the viral genetic material (RNA) in the nose, throat, or other areas in the respiratory tract to determine if there is an active infection with COVID-19 (SARS-CoV-2). A positive COVID-19 PCR test means that the person has an active COVID-19 infection.
- An Antigen test, which is not the same as an antibody test, is for rapid detection of the virus that causes COVID-19. The test determines if a sample contains proteins found on the surface of the coronavirus, which allows for much faster results. Antigen tests are very specific for the virus, but are not as sensitive as PCR tests, therefore negative test results may need to be confirmed with a PCR test prior to making treatment decisions if the patient has concerning symptoms or potential exposures to COVID-19.
- A Serology test, or antibody test, looks for antibodies against SARS-CoV-2 in the patients blood to determine if there has been a COVID-19 infection in the past. Antibodies are formed by the body to fight off infections. A positive antibody test means that the person was infected with COVID-19 in the past or recently and that their immune system developed antibodies to try to fight it off.

| | Result | | | All |
|-----------|---------------|-----------|----------|-----------|
| | Indeterminate | Negative | Positive | |
| Test Type | | | | |
| PCR | 7,579 | 3,301,980 | 450,483 | 3,760,042 |
| Antigen | 362 | 362,477 | 48,100 | 410,939 |
| Serology | 216 | 100,770 | 14,059 | 115,045 |
| All | 8,157 | 3,765,227 | 512,642 | 4,286,026 |

Data Entry - Update to EpiTrax, New Case Management System

While testing can provide disease surveillance through diagnostic and prevalence tools, integrated contact tracing systems and strategies are necessary for the mitigation and arrest of the virus.

Missouri has invested more than \$8 million in the modernization of our disease surveillance and contact tracing platforms. DHSS has implemented EpiTrax for COVID response to modernize existing systems in order to provide real-time case and laboratory reporting that enhances analytic capabilities to drive epidemiological decisions.

As part of the switch to EpiTrax, DHSS was able to switch to ingestion of lab results instead of relying solely on manual entry. As of December 31, 2020, the data team at DHSS had assisted 69 labs in setting up correct processes and documentation to have lab results ingested, decreasing the time to enter the results and allowing the local health departments quicker access to the results to complete follow-up public health measures.

DHSS has launched the Missouri Advanced Contact Tracing System (MoACTS) to modernize existing systems that varied widely across Missouri’s local public health jurisdictions. Rather than relying on pencils and paper for initial contact reports, this information can now be seamlessly integrated with the EpiTrax case reporting system to allow for enhanced investigatory tools and tactics on demand.



To support local health department users, a technical assistance team for users of EpiTrax (contact tracing) and the Missouri Advanced Contact Tracing System (MOACTS) was created as the new resources went live. Some examples of the assistance provided to users includes account approvals and creation, password reset, technical assistance, direction to resources, and forwarding issues to other DHSS COVID-19 focused teams (data entry, laboratory ingestion, outbreak identification, etc.) The leadership team worked to create and maintain a home-grown help desk ticketing system in RedCAP, and continues to serve as liaisons to other necessary technological infrastructure, share information with help desk personnel, schedule personnel for help desk shifts, and provide overall support and guidance for the larger team. Frequent communication with ITSD on issues submitted through the ticketing system allowed more rapid identification of system malfunctions resulting in speedier fixes and increased usability.

In September, help desk personnel were asked to commit to at least three shifts per week (15 hours) in order to meet staffing needs. However, many members exceeded this expectation.

In addition, stakeholder engagement was reviewed regularly, and led to the creation and maintenance of instructor- and self-led system trainings/system simulations, as well as a series of publications that includes user guides, weekly updates, weekly seminars and system release notes.

PPE (Personal Protective Equipment)

State Supplies

Very early in the pandemic, it became apparent that proper PPE was essential for protecting health care workers, both in the hospital as well as long-term care facilities and other health facilities. In response to this need, Missouri created a warehouse for various PPE and other medical supplies needed to best respond to the pandemic and related issues.

For information on what types of PPE and medical supplies were ordered and distributed, you can review the table on the next page.

Missouri has distributed PPE materials to a number of partner organizations, and different organizations have had varying levels of need, as displayed in the number of requests received by each type of organization. Information on types of organizations placing requests, as well as the number of requests in each type of organization can be seen in the table to the right.

| Organization Type | Total Requests |
|--------------------------|-----------------------|
| Clinic | 55 |
| Community | 17 |
| Dentist | 106 |
| DHSS | 19 |
| Doctor | 15 |
| EMS | 39 |
| Higher Education | 3 |
| Home Health | 132 |
| Hospice | 21 |
| Hospital | 98 |
| Long-Term Care | 1,360 |
| LPHA | 24 |
| Mental Health | 35 |
| Rehab | 2 |
| School Nurse | 27 |
| Other | 72 |

Data is as of
1/11/2021.



| PPE Type | Received | Distributed |
|-----------------------------|------------|-------------|
| Alcohol Swabs | 1,282,500 | 1,282,500 |
| Alcohol Prep PADS | 10,449,500 | 8,196,500 |
| Biohazard Bags | 1,776,100 | 1,471,600 |
| Cloth Mask (Adult) | 4,811,853 | 4,551,000 |
| Cloth Mask (Child) | 2,111,000 | 1,188,000 |
| Disinfecting Wipes | 25,508,769 | 15,666,463 |
| Face Shields | 1,745,192 | 1,681,392 |
| GLOVES SMALL (EACH) | 6,398,550 | 6,247,350 |
| Gloves M (each) | 21,357,700 | 20,105,100 |
| Gloves L (each) | 11,518,000 | 9,682,000 |
| Gloves XL (each) | 7,433,600 | 5,106,700 |
| GOGGLES | 3,383,204 | 2,229,421 |
| Gowns - All Types Small | 300,600 | 278,400 |
| Gowns - All Types Medium | 798,990 | 746,190 |
| Gowns - All Types Large | 4,214,833 | 2,836,666 |
| Gowns - All Types XL | 3,707,290 | 2,073,438 |
| Gowns - All Types XXL | 3,103,240 | 986,140 |
| Gowns - All Types XXXL | 996,296 | 597,722 |
| HAND SANITIZER (GALLON) | 15,744 | 15,744 |
| HAND SANITIZER PUMP | 12,500 | 12,500 |
| Hand Sanitizer, 10oz | 17,118 | 17,118 |
| Hand Sanitizer, 2oz | 1,412,448 | 1,019,035 |
| Hand Sanitizer, 4oz | 250,415 | 223,364 |
| N95 | 10,796,940 | 6,075,457 |
| Particulate Filter | 21,900 | 7,050 |
| Shoe Covers--medical | 3,717,000 | 3,400,500 |
| Surgical/ Procedure Masks | 42,089,214 | 25,952,059 |
| Temperol Thermometers Adult | 13,480 | 10,794 |
| Tyvek Suits | 18,008 | 17,333 |

Data is as of 1/13/2021.

In late April 2020, Department of Economic Development, in partnership with DHSS, announced the launch of the PPE Marketplace, a first-of-its-kind online tool using Google technology. The Marketplace directly connects Missouri health care providers and manufacturers/suppliers of PPE with one another. DED gathered interest from hundreds of manufacturers and suppliers of PPE and invited all of these companies to register in the system. By late May, more than 100 hospitals had registered to use the Marketplace, in addition to 1,495 health care providers and other businesses. A survey of 1,100 people using the Marketplace indicated that for those who have ordered PPE, 90% were satisfied with their purchase. In addition, 95% of those who placed an order said the received goods accurately reflected their order. Missouri has received national recognition for the use of this innovative tool.

Another priority for Missouri when purchasing supplies was ensuring business went to Missouri vendors, and minority or women owned businesses. As part of that priority, over \$6.5 million worth of PPE was purchased from vendors in those categories.



Missouri accepted and used a Battelle Critical Decontamination System in late April, and the device was operational within the state from May 1 through September 8, 2020. During that time, a total of 26,393 masks were decontaminated and returned to the original provider. The device was a FEMA paid placement, so there were no costs to the state or the providers for use of this service.

PPE Protocol Support

Some types of PPE require a good fit in order to be effective, and many times the proper fit is a workforce requirement. Staff at DHSS have worked throughout the pandemic to assist external organizations in meeting fit requirements, as well as working with internal staff whose work was modified in a way that required the usage of proper PPE.

Fit testing is a procedure required by OSHA for anyone wearing a tight-fitting respirator, including an N95 respirator. It determines how well the respirator forms a seal on the face and prevents inward leakage of contaminated air as the individual wears the respirator. An individual must obtain a passing fit test before initial use of the respirator, whenever they change manufacturer, model, or size of respirator, and annually thereafter.

In early May, DHSS was informed that over 200 staff in the Section for Long Term Care Regulation (SLCR) were going to need to use N95 respirators so they could resume inspections in facilities occupied by patients who tested positive for the Covid virus. In response, the Respiratory Protection Program Administrator trained five individuals from DHSS and two individuals from DNR to conduct OSHA-approved qualitative fit testing. Due to the respirator shortage, qualitative testing was chosen over quantitative testing to conserve respirators since a respirator must be discarded after a quantitative fit test. DHSS then requested the assistance of several individuals from LPHAs who had been previously trained to conduct fit testing by DHSS to assist. During the week of June 22-26, 2020, two fit testers went to each of the seven DHSS-SLCR regions to conduct fit testing. A total of 153 fit tests were conducted at this event. Fit testing has been ongoing for this section and as of December 31, 2020, a total of 248 fit tests have been conducted for SCLR.

The second fit testing event was held for employees who were unable to get fit tested at the first event, new employees, or people who had to switch to a new respirator. DHSS conducted a total of 50 fit tests in July.

Fit testing has been ongoing since then with various numbers of fit tests being conducted each month after each individual receives medical clearance. DHSS conducted 1 fit test in August, 14 in September, 20 in October, 2 in November, and 9 in December.

An additional 13 fit tests were conducted for individuals from Bureau for Health Standards and Licensure in December. Five individuals from existing emergency responder groups who use other respirators requested fit testing in N95 respirators between May and December. A total of 262 fit tests for Covid-related respirator use have been conducted on DHSS employees in 2020.

The State Public Health Lab contacted the Respiratory Protection Program Administrator in November of 2020 regarding fit testing for individuals who are not already required to wear a respirator for their job duties. This event is scheduled for 2021. The Missouri Veteran's Commission has also requested fit-test training for several staff so they can fit test their own employees. This training is scheduled for 2021.



Hospitals

Throughout the COVID pandemic response, the DHSS DCPH Office of Emergency Coordination has monitored the medical surge impact at Missouri’s hospitals including shortages of personal protective equipment (PPE), staffing, space, and other resources. In cooperation with the Missouri Hospital Association, the Missouri State Emergency Management Agency (SEMA), and regional healthcare coalitions (HCCs), DHSS has gathered and shared key data elements to maintain a common operating picture and allow coordinated sharing of resources.

DHSS also recognized a need for a state ventilator cache and purchased 500 new units along with circuits and other supporting supplies to be made available to hospitals on a temporary basis through a request system monitored by the DHSS Emergency Response Center (ERC). During 2020, DHSS was able to provide 39 ventilators to hospitals experiencing a surge in COVID patients.

In order to address staffing shortages at hospitals experiencing extreme patient surge late in 2020, DHSS entered into a contract with Vizient, a contract labor management company, to provide temporary clinical staff to Missouri hospitals. A total of 298 staff were provided through this program.

DHSS has also promoted COVID testing at hospitals and provided BinaxNOW test kits to healthcare facilities. In addition, distribution of COVID pharmaceuticals such as remdesivir and monoclonal antibody therapeutics to hospitals have been coordinated through DHSS.

Long Term Care Facility Bed Capacity Dashboard

In response to hospital capacity needs, DHSS worked to create a dashboard of long term care facilities with available bed capacity. This dashboard allowed hospitals to find long term care facilities, by location or nearness to the hospital, that had open beds that could care for qualifying patients. This would allow for easier transfers of patients to long term care facilities and open more bed space in hospitals for patients requiring higher levels of care.

Missouri Disaster Medical Assistance Team (DMAT)

In response to staffing and other skilled employee needs at health care providers of all types around the state, the DMAT team was activated. In 2020 this team completed missions related to patient care, as well as missions related to testing and logistics.

As of December 31, 2020, the Missouri Disaster Medical Assistance Team had completed 222 medical missions and 242 logistical missions during the state’s COVID-19 response. There were 163 MO DMAT-1 members on the team prior to the pandemic. As of December 31, 282 new members had been hired as part of Governor Parson’s recruitment effort to ramp up Missouri’s healthcare response.

| MO DMAT-1 Breakdown | | | |
|-----------------------------------|--------------|------------------|---------------|
| New Hired Staff (January 5, 2021) | | Total Hired: 282 | |
| Admin: 12 | AP: 41 | CNA: 3 | Chaplain: 3 |
| Comm: 4 | Death Inv: 1 | EMT: 41 | LPN: 11 |
| Logs: 22 | Medic: 24 | NP: 28 | Pharmacist: 3 |
| Physician: 14 | PA: 5 | Planning: 7 | RN: 57 |
| Safety: 5 | Screener: 1 | | |



Office of Rural Health and Primary Care

The Office of Rural Health and Primary Care, at DHSS, utilized HRSA grant funds, totaling over \$3.8 million, to issue funding to Small Rural Hospitals. The Office has contracts with 46 of 48 eligible hospitals to utilize this funding to support hospitals to prevent, prepare for and respond to coronavirus. Purchases and activities included the increased need for testing, clinical services, equipment to meet the needs of the community, as well as to address financial and workforce challenges related to the impact of the COVID-19 pandemic.

Data

DHSS staff have led the COVID-19 data and analytics efforts since our first case was discovered in March of 2020. DHSS works with our partners at local public health agencies (LPHAs), health care providers, and clinical laboratories to collect data on every COVID-19 test and case in the state. Hundreds of staff members from program areas throughout the department have been mobilized and temporarily reassigned at points throughout the pandemic to assist in the data entry efforts. Over 4.5 million lab results have been processed to date in less than one calendar year. Results are pushed to our LPHA partners within 24 hours of receipt so that cases can be investigated and control measures implemented in a timely manner.

DHSS staff in the Bureau of Communicable Disease Control and Prevention prepare daily situational reports for department and state leadership. The reports track day-to-day changes in COVID-19 cases, deaths, test positivity rates and other important metrics. Case and testing data is also used to generate jurisdictional maps to identify “hotspots” for virus transmission. Identification of areas with high transmission was especially important early in the pandemic as determinations were made on where to allocate limited testing and PPE resources within the state.

Another key tenet of the DHSS response has been information transparency. DHSS has been involved in providing COVID-19 data updates to the general public via the DHSS website and later the public Tableau dashboard on the Show Me Strong site. A number of respected outside entities have commended both the former ARC GIS site and the current Tableau site for transparency of information, ease of access and quality. This data is available to leaders at all levels of government as well as business owners and private citizens as they navigate pandemic control measures and weigh decisions on how best to proceed. DHSS staff also fields questions from citizens regarding COVID-19 data daily and interfaces with the media on a regular basis to explain and communicate important developments.

Data and Analytics Microcell

The Data and Analytics Microcell began in late March 2020, bringing together data analysts from DHSS, DSS, MHA, WashU, and facilitated by leadership from the Governor’s Office. For the first few months, it met twice a week, and has been meeting weekly since late summer 2020. In the first few months, the goal was to share any and all insights that could be generated from any and all available data, both to avoid duplication and also to get valuable feedback to improve the level of “actionability” of the data insights. It was a very collaborative environment characterized by a willingness to share data, willingness to partner across completely different organizations, and a sense of urgency that seldom comes to the field of data analytics and modeling. Roles have included continual and ongoing exploration of DHSS case data, using Tableau and merging county- and zip-level data with various other demographic information from the Census to help explain what was being seen in nearly real time.

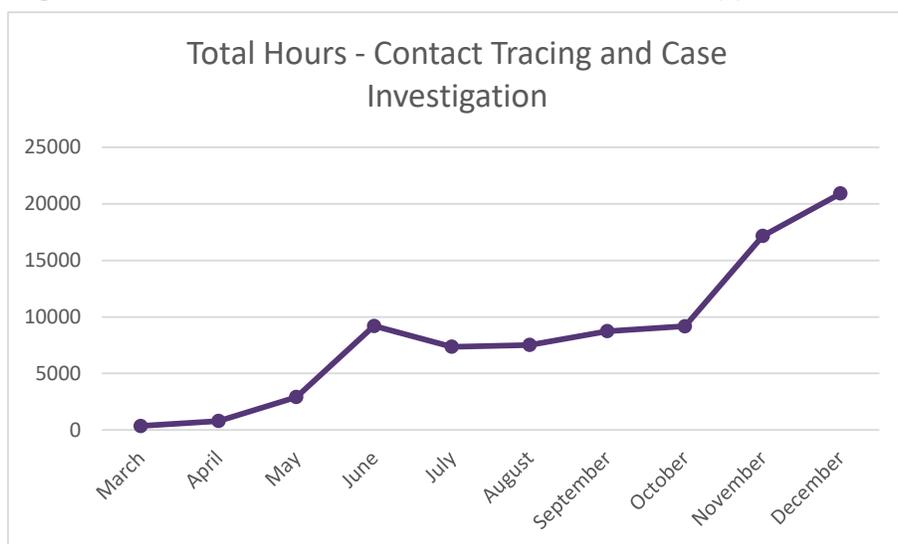


This was helpful in directing public health messaging, thinking about testing strategy, and guiding scarce PPE shipments. Other roles included implementing and curating the set of regional-level models of hospitalized cases that MHA and the state have been publishing weekly since the start of June. The models provide estimates of the reproductive rate of the virus in each region and use this to project hospitalizations for a period of 2 weeks into the future. These projections contributed to a better understanding and anticipation of potential strains to hospital capacity at a regional level, as this is a more salient level of analysis than statewide estimates. COVID-19 has impacted different regions of the state differently over time, and these models have provided a standardized way to compare these impacts in a way that has helped decision makers think about how to allocate resources.

Additional Impacts

Contact Tracing

DHSS staff were trained in Contact Tracing and Case Investigation, then paired with local health departments to assist in work on those efforts. Throughout 2020, DHSS staff time spent on these efforts grew as more time was needed each week to support the local health departments.



COVID-19 Hotline

The COVID-19 Hotline went live on March 11, 2020, initially as a clinical line. Then on March 19, a general line on the same number went live. Prior to the second line going live, a work space within the DHSS Jefferson City office buildings was requested, and that space was set up in two days by General Services from DHSS and OA's ITSD and Unified Communications teams.

Since the Hotline went live, over 150 DHSS team members have worked to answer the questions Missourians have about COVID-19.

From March 19 through December 31, 2020, the Hotline answered over 154,000 calls, with an abandonment rate of only 2.4%.



Funding

DHSS has been tasked with the responsibility of overseeing nearly \$648 million in federal funds across 14 grants for COVID response efforts.

- \$135 million of these funds, obtained through the Epidemiology and Laboratory Capacity Enhanced Detection (ELC-ED) opportunity are being utilized to finance Missouri's testing, contact tracing, laboratory expansion, technology, and other state response initiatives through November 2022.
- In January 2021, the CDC awarded an additional \$353 million (ELC-ED) to continue these efforts and build capacities for future communicable disease response efforts. January also marked the release of \$55 million specifically for vaccination planning and implementation.
- To date, \$8.78 million has been directly allocated to local public health authorities, with an additional planned \$6.2 million to be directly allocated to local public health authorities over the next 24 months.
- \$32 million of the more than \$500 million appropriated to County Commissions has been directed to LPHAs for the public health response.

Statewide Coordinated Response

The whole government strategic approach integrated Cabinet leaders along with subject matter experts inside and outside of Missouri government to establish a framework to identify, prevent, and contain disease transmission. The integrated expertise aimed to bring the whole of COVID response into focus across differing sectors to fuse varying expertise and experience into a single source for strategic development and decision-making.

Epidemiologists

The Bureau of Communicable Disease Control and Prevention (BCDCP) continues to complete critical tasks throughout the duration of the COVID-19 pandemic response. BCDCP Epidemiologists work with federal partners at CDC's Division of Global Migration and Quarantine to coordinate the distribution of information for individuals potentially exposed during travel and coordinated surveillance activities with other states. Early in the pandemic, testing for SARS-CoV-2 was only available with a very limited capacity through the Missouri State Public Health Laboratory. With limited supply and high demand for testing prior approval was required. BCDCP Epidemiologists responded to hundreds of requests from medical providers, conducted risk-assessments, and provided approvals for those who met the criteria for testing. Throughout the duration of the outbreak, BCDCP has responded to thousands of questions and concerns from LPHAs, hospitals and healthcare partners, businesses, and the community with 24/7 coverage and response. BCDCP Epidemiologists have provided technical assistance and guidance on topics including, but not limited to, surveillance, case and outbreak investigations, contact tracing, specimen collection and testing, and the implementation of control measures. BCDCP staff have continually maintained awareness and knowledge of changes to national guidance to ensure the recommendations provided are based on the most updated resources available.

Statutory and Regulatory Waivers

Throughout 2020, DHSS issued over 200 statutory and regulatory waivers, with approximately 199 remaining in effect through December 31, 2020. In general, waivers issued by DHSS impacted Missouri's hospitals and physicians to allow additional treatment and safety precautions to be implemented due to the nature of the pandemic. In addition, many other state departments issued waivers to decrease the regulatory burden on Missourians during the pandemic. Information on waivers issued for all state departments can be found on the Secretary of State's website.



Expansion of Summer Food Service Program to Feed Children

Summer Food Service Program (SFSP) Expansion – Due to increased program flexibilities authorized by the grantor, including authorizing the program to operate during non-summer months, Missouri’s SFSP expanded from \$15.4 million in 2019 to \$99.8 million in 2020.

| Months | 2019 Meals Served | 2020 Meals Served |
|--------------|-------------------|-------------------|
| March | 0 | 1,542,289 |
| April | 0 | 6,452,713 |
| May | 261,916 | 5,590,477 |
| June | 3,187,033 | 4,711,893 |
| July | 1,100,941 | 4,030,241 |
| August | 205,883 | 2,855,897 |
| September | 0 | 5,226,246 |
| October | 0 | 5,783,832* |
| November | 0 | 6,438,871* |
| December | 0 | 4,146,344* |
| TOTAL | 4,755,773 | 46,778,803 |

*Data is not final as claim deadlines have not passed.

Education and Outreach

Public Guidance and Recommendation Documents

Throughout Missouri’s response to COVID-19, DHSS has consistently provided guidance and expertise to a myriad of interested citizens and partners. In addition to on-going hygiene public messaging campaigns, DHSS has partnered with state agencies, public health agencies, health care providers, private organizations, educational institutions, counties, and others to inform best practices surrounding COVID response.

To provide formalized guidance, DHSS has established numerous channels for assisting the public, including the agency website, social media, educational calls and guidance documents. DHSS has participated in Show-Me ECHO (Extension for Community Healthcare Outcomes) videoconferencing calls, connecting interdisciplinary teams of experts with providers. And DHSS has provided updated guidance documents in the following demonstrative examples:

- Facility guidance for long-term care, hospitals, prisons, mental health facilities, veteran’s homes, and other congregate care settings.
- State Fair guidance to the Department of Agriculture.
- Re-opening guidance for Missouri elementary and secondary education institutions.
- State agency guidance for appropriate screening and return to work policies.
- Numerous Health Advisory Notices (HANs) for medical providers and local public health agencies.

Public Meetings and Press Briefings

Throughout 2020, various meetings and briefings were held to keep Missourians up to date as the pandemic entered the state and progressed throughout the year. Many different groups have held regular meetings, from school nurses to working with DESE and DHEWD to communicate with school administrators, to regular calls with local health departments to assist and brief them.



In 2020, various meetings with medical providers were held, including weekly medical expert calls (30 calls in 2020), regular calls with the Missouri Hospital Association (22 calls), the Missouri Medical Association (37 calls), and other regional calls (22 calls between two primary regions).

And another major part of this was the regular press briefings held by the Governor's Office. Dr. Randall Williams attended 91 of these briefings throughout 2020 to provide updates and address questions from reporters and their constituents.

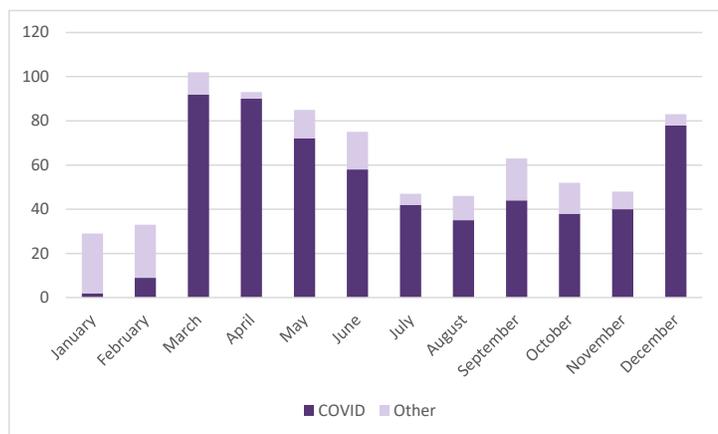
Press Releases

Throughout 2020, DHSS issued 89 press releases. Of those 89 total releases, 58 addressed COVID or coronavirus questions. The first release on novel coronavirus was sent out on January 22, 2020, to assure the public that DHSS was closely monitoring the situation, and that initial guidance had been released to health care providers. From there, topics addressed overall updates, the announcement of the first confirmed case, minimizing exposure, testing availability, and vaccine updates.

Media Inquiries

Throughout 2020, the Office of Public Information received 756 media inquiries using the online submission form. It is estimated that the total number of media inquiries during 2020 is at least double that total however, as many reporters in Missouri reached out directly to the Communications Director. When reviewing the topic of the inquiries in the forms, you can track how the volume changed each month based on the specific events during that time, and how numbers of inquiries varied by month based on the events as well. Each month also had a slightly different theme in terms the types of questions asked, from PPE and hospital capacity in March and April, to summer camp outbreaks in July and August, and vaccines in late November through December. Additionally, Dr. Williams did 95 media interviews in 2020 around various COVID-19 topics.

Total Media Inquiries by Month and By Topic



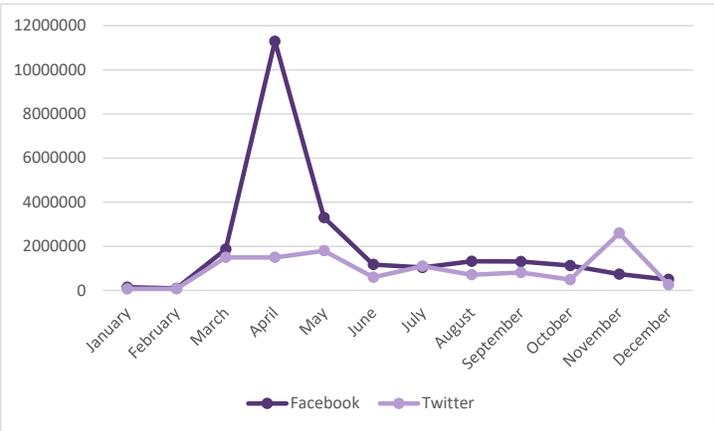
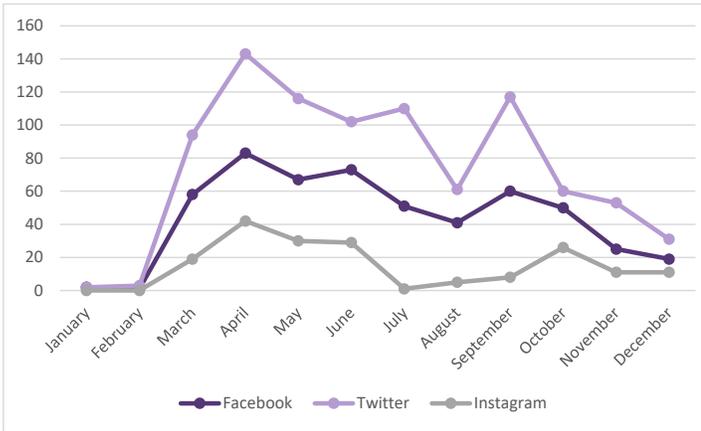
Social Media

Insights on DHSS social media platforms show a significant increase in likes, follows, post views and post reach starting in March of 2020 and continuing through the remainder of the year. For example, total post reach on Facebook for January and February combined was 242,391, while March saw the post reach climbing over 1.8 million. On Twitter, the increase was even more significant. The combined post reach for January and February was 148.5 thousand, while March saw a total post reach of 1.5 million. Additionally, DHSS had done initial account set up for a department Instagram account prior to the pandemic, and with no external promotions of the account, it now has over 1,100 followers.

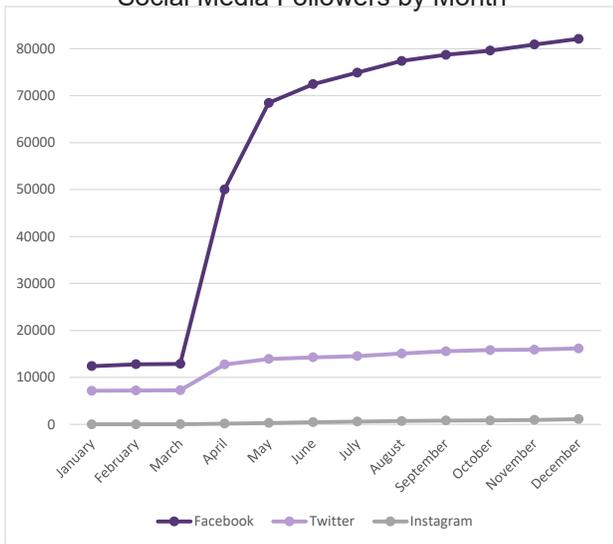


Totals of COVID-19 Related Posts on Social Media

Social Media Post Reach by Month



Social Media Followers by Month



Vaccinations

The development of the COVID-19 vaccination is the most important focal point for mitigating the impacts of COVID-19 across all of Missouri’s communities. The federal vaccination project, Operation Warp Speed, exists to expedite the creation, testing, verification, efficacy, and acceptance of national vaccination efforts.

- Missouri submitted the engagement plan for the development and implementation of COVID-19 vaccination efforts to the CDC on October 16, 2020.
- First Missourian received vaccine on December 14, 2020, under implementation of Phase 1A.
- Phase 1B, Tier 1 was released for eligibility on January 14, 2021, and Tier 2 was released on January 18, 2021.



From late August into early September, DHSS convened a group of stakeholders to begin work on a COVID-19 Vaccine Distribution plan, in advance of the official announcement from the CDC of the grant specifics. The full group met once a week, bringing together subject matter experts, to think through distribution processes and write a full plan and proposal for distributing vaccinations in Missouri. This group was assisted by the Missouri National Guard in the information gathering and writing of the plan, and some of those same team members continue to work with DHSS on distribution into 2021. The original plan created by this group was submitted to the CDC in mid-October, and was recognized as one of the first plans submitted from a state, and as an example of positive collaborative work between all invested partners.

After submitting the Distribution Plan to the CDC in October, DHSS planned and hosted a tabletop exercise with health care partners to walk through the distribution steps and identify any potential needs or gaps/problem areas in the plan. This exercise included long term care facilities, hospitals, and FQHCs/RHCs.

From that point, many teams in DHSS and partner organizations began preparing for the approval of vaccinations, and the rapid turn-around from approval to shipping in the state. These teams continue work, into 2021, to ensure equitable distribution throughout Missouri.

As vaccination initiatives unroll, Missouri will release more tiers for priorities, and the vaccination dashboard will continue to provide updates on the doses received and administered.

MoStopsCovid.com has been and will remain a constantly evolving and updated page with resources for all types of requests. In early 2021, the page included information for the general public and vaccinators, as well as definitions of priority phases, frequently asked questions and rumor control, the vaccination dashboard, and a vaccinator map.