



MID-RESPONSE ASSESSMENT  
**MISSOURI HOSPITALS' RESPONSE  
TO THE COVID-19 PANDEMIC**

SEPTEMBER 2020

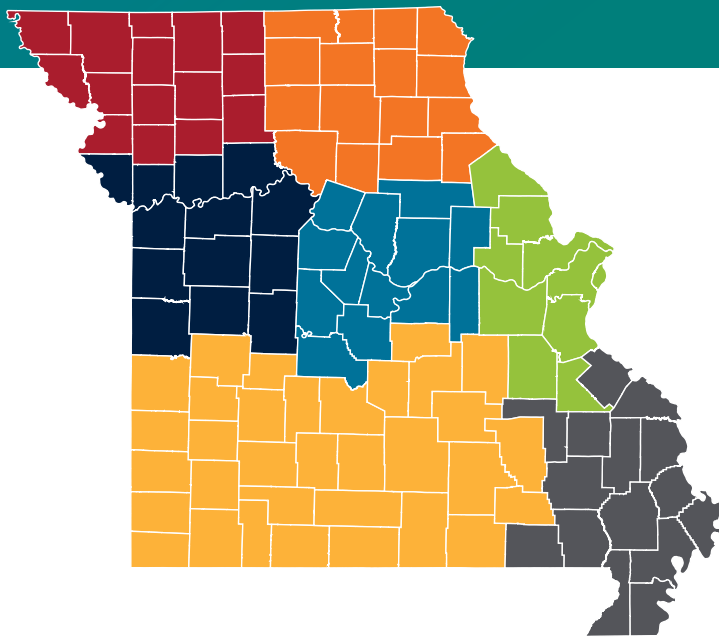
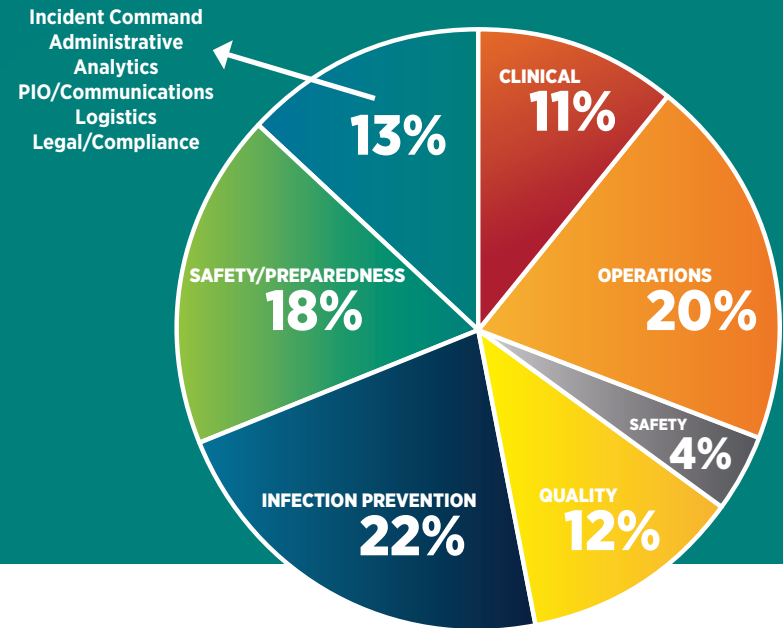
# INTRODUCTION

Since January 2020, Missouri hospitals have expended tremendous resources and effort to prepare for and respond to COVID-19, the disease caused by SARS-CoV-2. Through early recognition and plan activation, the study of disease transmission to properly protect patients and staff, and preparing for an influx of patients who are seeking treatment, Missouri health care leaders faced challenges, identified solutions and established best practices to manage clinical cases and hospital operations.

To collect these lessons learned, and develop technical assistance and education to support the ongoing response to COVID-19, the Missouri Hospital Association conducted a member survey in July 2020. Hospitals were encouraged to submit multiple responses in an effort to gain perspective from a variety of disciplines responsible for both clinical and operational procedures. Because every question could not be completed by all survey participants, individuals were encouraged to skip questions that did not pertain to their area of expertise.

The following table and graph provide insight into survey respondents by response region and COVID-19 role.

## COVID-19 ROLE



Region	Hospitals by Region	Percent of Responding Hospitals (compared to number of hospitals in region)	Respondents by Region	Percent of Respondents by Region (compared to all respondents)
Kansas City Region	22	73%	67	22%
St. Louis Region	32	80%	64	21%
Northeast Region	8	100%	22	7%
Northwest Region	9	90%	22	7%
Central Region	12	85%	36	12%
Southeast Region	10	100%	37	12%
Southwest Region	24	86%	56	18%
Total	117		304	

# EARLY WARNING

Early in 2020, as the novel coronavirus spread throughout the Wuhan, China, province, Missouri hospitals proactively engaged in efforts to respond to a potential global outbreak. As surveillance and mitigation strategies were implemented nationwide, Missouri hospitals reviewed their emergency management plans, learned how the disease spread to acquire appropriate personal protective equipment, and engaged in regional and statewide calls to remain informed.

Did an internal team formally review the hospital's existing emergency preparedness plan at the early onset of COVID-19?

Answer Choices	Responses	
Yes	93.13%	244
No	4.96%	13
Unknown	1.91%	5
	<b>Answered</b>	<b>262</b>

If "Yes," how confident was your hospital team that the emergency preparedness plan would provide sufficient guidance for the hospital's COVID-19 response?

Answer Choices	Responses	
Very confident	26.61%	66
Somewhat confident	42.74%	106
Somewhat concerned (minor gaps identified)	23.39%	58
Very concerned (significant gaps identified)	7.26%	18
	<b>Answered</b>	<b>248</b>

Did your hospital have a section of the emergency preparedness plan that addressed a pandemic response?

Answer Choices	Responses	
Yes	77.82%	200
No	14.01%	36
Unknown	8.17%	21
	<b>Answered</b>	<b>257</b>

Currently, at this stage of the pandemic response, has the hospital emergency preparedness plan provided sufficient guidance for response?

Answer Choices	Responses	
Very helpful in framing response	52.96%	134
Somewhat helpful in framing response	42.69%	108
The pandemic plan provided no guidance for response	3.16%	8
	<b>Answered</b>	<b>250</b>

World Health Organization first reports a viral pneumonia of unknown etiology outbreak in Wuhan, China, later termed novel coronavirus

12/31/2019

[First coronavirus death reported \(China\)](#)

1/11/2020

The Centers for Disease Control and Prevention announces three airports will begin screening for coronavirus<sup>i</sup>

1/20/2020

First coronavirus case identified in the U.S.<sup>ii</sup>

Human-to-human coronavirus transmission confirmed<sup>i</sup>

1/21/2020

# Key Takeaways

Hospitals that have reviewed and modified their emergency management plans or have activated their emergency operations plan should document these revisions concisely in advance of their next state or accreditation survey.



Key elements identified, in order, to enhance hospital pandemic plans include:

- Alternate care units
- Staffing
- Visitors
- Screening
- Supply chain
- Masking

Which data sources were used as primary sources of truth to guide hospital operations and response?  
(select up to three)

Answer Choices	Responses	
Community-level case counts	76.05%	181
Hospitalizations	65.97%	157
Hospital bed availability (including ICU beds)	66.81%	159
Hospital ventilator availability	48.74%	116
Community-level test positivity rates	60.50%	144
Other	15.13%	36
	Answered	238

Which data aggregators or modelers were used as primary sources of truth to guide hospital operations and response? (select up to three)

Answer Choices	Responses	
Centers for Disease Control and Prevention	85.11%	200
Johns Hopkins Coronavirus Resource Center	30.21%	71
University of Washington Institute for Health Metrics and Evaluation	11.06%	26
Missouri Department of Health and Senior Services	65.53%	154
Missouri Hospital Association	70.21%	165
Local public health agency	42.13%	99
Hospital data	39.15%	92
Other	10.64%	25
	Answered	235

Missouri Department of Health and Senior Services implements [Incident Response Team](#)

1/27/2020

WHO issues Public Health Emergency of International Concern declaration<sup>ii</sup>

MHA and DHSS host health care partner briefing call

1/30/2020

[U.S. institutes travel ban with China](#)<sup>iii</sup>

1/31/2020



# WORKER AND WORKPLACE PROTECTIONS

Select all measures taken to ensure supply of PPE during the pandemic response.

Answer Choices	Responses	
Reuse disposable PPE	77.68%	181
Disinfect disposable PPE in house	58.37%	136
Use of Battelle CCDS Critical Care Decontamination System to disinfect N95 masks	26.18%	61
Use of Google app (PPE Marketplace) to secure additional suppliers	17.60%	41
Limit N95 mask use to aerosolizing procedures or known positive patient care	79.83%	186
	Answered	233

Identify the engineering controls implemented.

Answer Choices	Responses	
Physical modification to place a barrier (such as isolation rooms)	81.67%	196
Ventilation systems enhancements	63.75%	153
Glass/plastic panels at registration	71.67%	172
Limitation of access and entry points	98.75%	237
	Answered	240

Identify the administrative controls implemented.

Answer Choices	Responses	
PPE	99.17%	240
Screening of staff	94.63%	229
Screening of visitors	97.11%	235
Visitor restrictions	99.59%	241
Remote work	82.64%	200
Enhanced sanitation	88.43%	214
Cancellation of elective procedures	83.47%	202
Implementation of return to work criteria from CDC	86.78%	210
Testing of staff	49.17%	119
Isolation of patients with COVID-19 symptoms	97.52%	236
Alternate care locations for testing	67.36%	163
ED arrival/screening changes	82.23%	199
Reassignment of high-risk staff	46.69%	113
Use of telemedicine	85.12%	206
Patient cohorting or specialty care teams to care for infectious patients	50.83%	123
Use of masks brought from home for staff to use	57.44%	139
Require masks for patients	79.34%	192
Require masks for visitors	94.63%	229
Other	9.50%	23
	Answered	242

U.S. declares a Public Health Emergency<sup>i</sup>

MHA releases first EMResource situational awareness dashboard

2/3/2020

Disease renamed COVID-19<sup>ii</sup>

2/11/2020

[Coronavirus surges in Italy](#)<sup>iii</sup>

2/23/2020



### Has COVID-19 changed the hospital's stockage philosophy for PPE?

Answer Choices	Responses	
Yes	97.90%	233
No	2.10%	5
Answered		238

### Is your hospital (or system) able to get adequate supplies of PPE (gowns, gloves, N95 masks)?

Answer Choices	Responses	
Yes	74.79%	181
No	25.21%	61
Answered		242

### How closely did your hospital follow CDC guidelines for workforce exposure and return to work recommendations?

Answer Choices	Responses	
Very strict adherence	57.08%	137
Closely followed	39.58%	95
Used for general guidance	2.92%	7
Did not use	0.42%	1
Answered		240

MHA activates eICS/EMResource status

2/27/2020

First COVID-19 death in the U.S. reported (Washington State)<sup>iii</sup>

2/29/2020

[Strategic National Stockpile activated](#)

3/6/2020

# Alternate Testing Sites

To further protect the environment of care, Missouri hospitals established alternate testing sites to prevent surges of patients presenting to the emergency department requesting COVID-19 testing.

In mid-March, an EMResource query was expanded to capture the number of hospitals adding an alternate COVID-19 testing site to collect specimens.

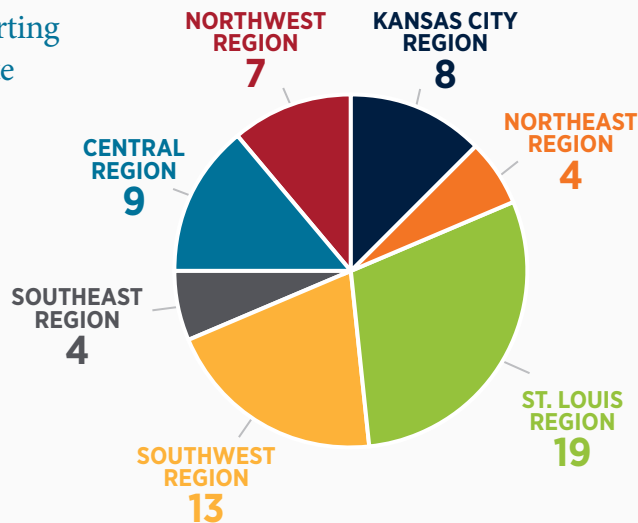
**March 16:** 8 hospitals reported alternate COVID-19 testing sites

**March 20:** 26 hospitals reported alternate COVID-19 testing sites

**March 31:** 54 hospitals reported alternate COVID-19 testing sites

**April 9:** 64 hospitals reported alternate COVID-19 testing sites

The 64 hospitals reporting an alternate testing site on April 9 were in the following regions.



## Resources for Consideration

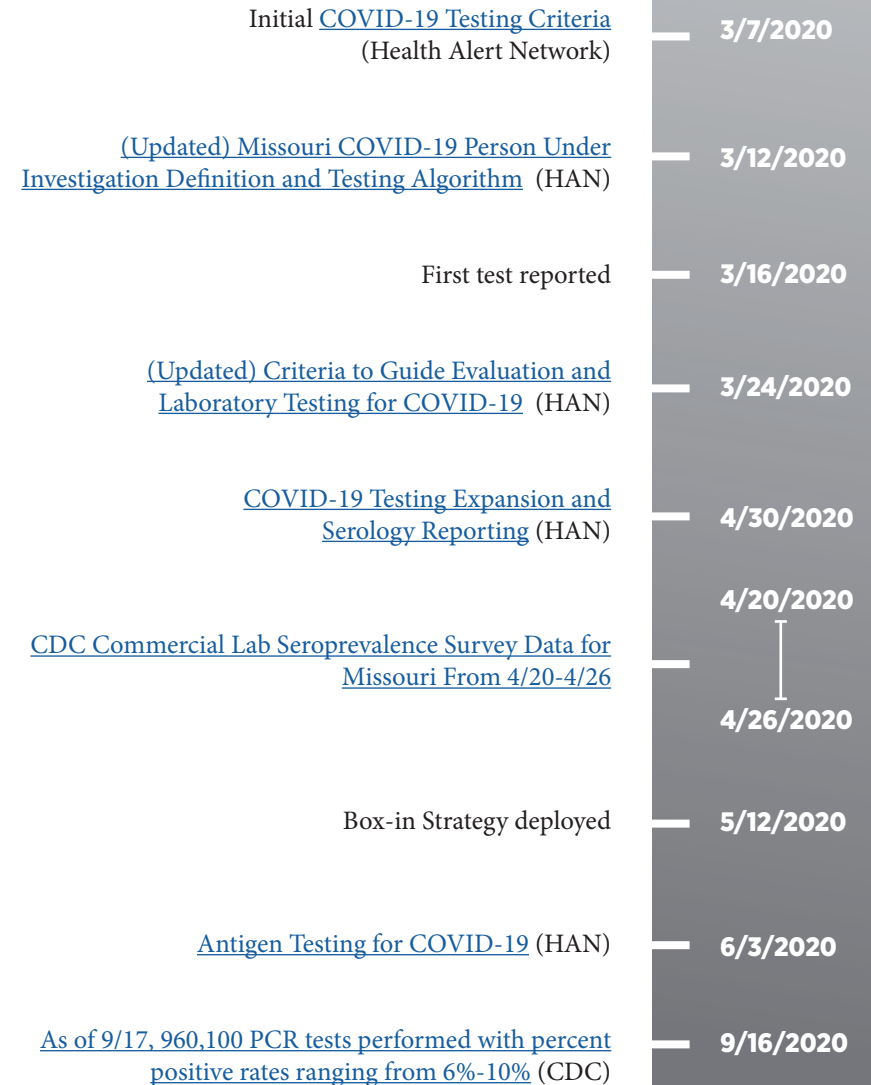
### Federal Resources

- Centers for Disease Control and Prevention [Optimizing Supply of PPE and Other Equipment during Shortages](#)
- National Institute of Occupational Safety and Health [Hierarchy of Controls](#)

### State Resources

- The [PPE Marketplace](#) matches health care providers with suppliers of PPE and other medical supplies.
- State- or federally-sourced PPE reserves may be requested through an [online request form](#).
- MHA established [Reintroduction of Visitor Guidance](#).
- Current [COVID-19 PCR Testing update from Missouri DHSS](#).

## Testing Guidance Throughout the COVID-19 Pandemic



# ACTIVATION, PREPARING FOR SURGE

The majority of Missouri hospitals report activating their emergency operations plan in mid-March.

Did your hospital activate an emergency operations plan for the COVID-19 response?

Answer Choices	Responses	
Yes	90.63%	232
No	9.38%	24
	Answered	256

If “Yes,” is the EOP still activated?

Answer Choices	Responses	
Yes	83.69%	195
No	15.02%	35
	Answered	233

Did you restrict visitors during the COVID-19 pandemic?

Answer Choices	Responses	
Yes	100.00%	244
No	0.00%	0
	Answered	244

If “Yes,” did you follow CDC and CMS guidance on visitor policies?

Answer Choices	Responses	
Yes	97.89%	232
No	2.11%	5
	Answered	237

First Missouri case identified (St. Louis)

3/7/2020

WHO declares COVID-19 a pandemic<sup>i,ii</sup>

Missouri establishes COVID-19 information hotline

3/11/2020

Under the [Stafford Act](#), U.S. declares a national emergency for COVID-19<sup>iii</sup>

Missouri declares State of Emergency

DHSS establishes PPE ordering for health care workers through Healthcare Coalitions

3/13/2020



## If you followed CDC and CMS guidance on visitor policies, how closely did your hospital adhere to the guidance?

Answer Choices	Responses	
Very strict adherence	62.82%	147
Closely followed	33.33%	78
Used for general guidance	3.85%	9
	<b>Answered</b>	<b>234</b>

## During the COVID-19 pandemic, did you allow visitors for: (select all that apply)

Answer Choices	Responses	
Births	56.89%	128
End of life	93.33%	210
Significant health events	41.78%	94
Dementia or other cognition disorders	49.78%	112
No restrictions	0.00%	0
	<b>Answered</b>	<b>225</b>

## Are you currently restricting visitors?

Answer Choices	Responses	
Yes	95.87%	232
No	4.13%	10
	<b>Answered</b>	<b>242</b>

U.S. exceeds 100 COVID-19 deaths

CMS expands telehealth<sup>1</sup>

MHA releases guidance for cancellation of elective surgeries and other procedures

3/17/2020

## Did your hospital cancel elective procedures, including surgeries?

Answer Choices	Responses	
Yes	89.47%	204
No	8.77%	20
Unknown	2.19%	5
	<b>Answered</b>	<b>228</b>

## If "Yes," select what reasons were the basis for your decision to cancel procedures. (choose one primary reason)

Answer Choices	Responses	
Indications of surge in the immediate service area	18.59%	37
Indications of surge in the referral region	8.54%	17
Indications of surge in Missouri or neighboring state	8.54%	17
Lack of testing and awareness of local/regional viral spread	12.56%	25
National recommendation (e.g. Surgeon General or CDC)	45.73%	91
Other recommendation (e.g. association)	6.03%	12
	<b>Answered</b>	<b>199</b>

## If "Yes," what is your current status as of July 2020?

Answer Choices	Responses	
All elective procedures resumed, including surgeries	86.76%	177
Only critical procedures and surgeries resumed	5.88%	12
Other	7.35%	15
	<b>Answered</b>	<b>204</b>

First COVID-19 death reported in Missouri (Boone County)

3/18/2020

Did your hospital utilize regulatory waivers granted by the Centers for Medicare & Medicaid Services or the state?

Answer Choices	Responses	
Yes	62.72%	143
No	8.33%	19
Unknown	30.26%	69
	<b>Answered</b>	<b>228</b>

If “Yes,” which waivers were utilized? *(select all that apply)*

Answer Choices	Responses	
Licensure of individual providers (reciprocity, calling back inactive or retired licensees, graduate nurse status)	11.85%	16
Enhanced use of APRNs, physician assistants, assistant physicians	23.70%	32
Physical plant (alternate care sites, alternate use of designated beds, ability to exceed bed capacity)	40.00%	54
Telemedicine (alternate technology, sites of care)	91.85%	124
Flexibility in Conditions of Participation (visitor policy, discharge planning, verbal orders, licensure requirements, minimum personnel requirements)	60.00%	81
Flexibility in post-acute care access (three-day inpatient rule, home health, hospice, long-term care)	32.59%	44
EMTALA waivers for screening/alternate care sites	29.63%	40
Stark waivers	6.67%	9
Pharmacy (compounding, remote technicians)	6.67%	9
Extension of time to renew license or trauma, stroke or STEMI designation	22.22%	30
EMS and patient transfers	9.63%	13
Medicaid waivers	17.04%	23
	<b>Answered</b>	<b>135</b>
	<b>Skipped</b>	<b>169</b>

U.S. experiences first day with 5,000 cumulative cases

3/21/2020

U.S. experiences first day with 10,000 cumulative cases

3/23/2020

First time Missouri cumulative case count exceeds 500 (512)

Missouri declares disaster for COVID-19

3/26/2020

## Did your hospital request any specific waivers from CMS or the state that were not covered in MHA requests or blanket waivers?

Answer Choices	Responses		If "Yes," what did they relate to?	
Yes	1.86%	4	Medical Gas Inspections	
No	53.49%	115	LPC	
Unknown	44.65%	96	Life Safety Inspections	
	Answered	215	Answered	4

## Key Takeaways

- MHA maintains a [waiver tracker](#) and legal resource [toolkit](#) to assist member hospitals in staying abreast of current waivers, their scope and their expiration. Efforts continue to establish waiver permanence where feasible and beneficial to member hospitals.
- MHA created [Reintroduction of Visitor Guidance](#) that is updated routinely.

## How did you learn about most, or the majority of, waivers that were granted?

Answered	135	MHA	CMS	DHSS	Hospital
		69	26	5	30

## Who in your hospital was responsible for requesting, monitoring or implementing waivers?

Answered	148	CEO	CNO	CFO	Quality	Admin	COVID-19 Team	Compliance/Regulatory	Legal	Incident Command	Risk Mgmt
		24	8	5	19	5	1	20	9	8	6

## Were the waivers granted in sufficient time to allow you to prepare for a patient surge?

Answer Choices	Responses	
Yes	95.24%	120
No	4.76%	6
	Answered	126

## Do you have continued need to utilize the waivers?

Answer Choices	Responses	
Yes	72.59%	98
No	27.41%	37
	Answered	135

Missouri mobilizes National Guard

MHA establishes daily situational COVID-19 hospital dashboard

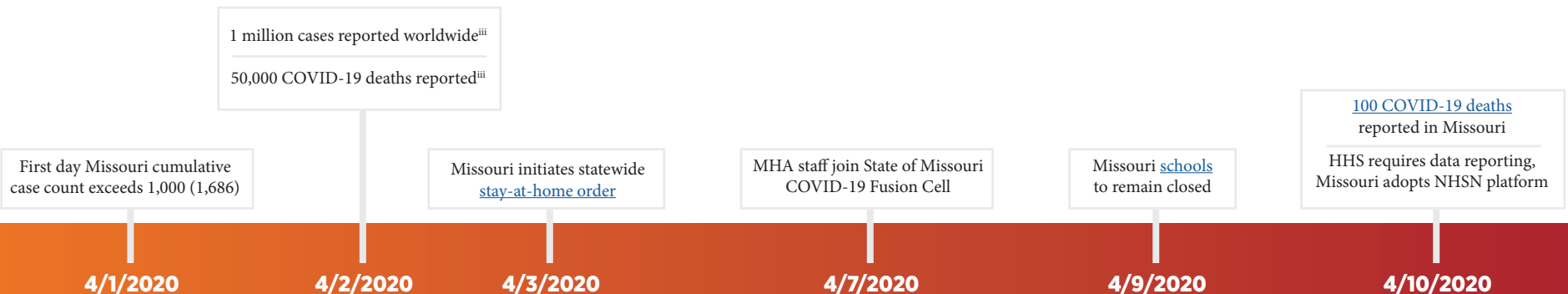
# CARING FOR COVID-19 PATIENTS

What were the biggest barriers in providing care for COVID-19 patients?

Answer Choices	Responses	
Workforce supply	42.03%	87
PPE supply	73.91%	153
Ventilator supply	9.66%	20
Access to clinicians with infection prevention and control expertise	15.46%	32
Rate at which guidance changed	72.95%	151
Visitors	20.29%	42
Access to medications	14.98%	31
Post-discharge placement	35.27%	73
	Answered	207

If your facility restricted visitor access, how did the hospital communicate with patient representatives and post-discharge care providers?

Answer Choices	Responses	
Video	11.82%	24
Phone/Audio	60.59%	123
Scheduled rounds with clinicians	4.93%	10
Email	5.42%	11
Other	17.24%	35
	Answered	203



## Did your hospital implement contingency operations during the COVID-19 pandemic?

Answer Choices	Responses	
Yes	67.31%	140
No	16.83%	35
Unsure	15.87%	33
	Answered	208

## Did your hospital implement crisis standards of care during the COVID-19 pandemic?

Answer Choices	Responses	
Yes	39.32%	81
No	43.69%	90
Unsure	16.99%	35
	Answered	206

## Did your hospital have in place policies on crisis standards of care prior to the COVID-19 pandemic?

Answer Choices	Responses	
Yes	62.37%	116
No	37.63%	70
	Answered	186

## If “No,” did your hospital consider developing, or develop, policies on crisis standards of care during the COVID-19 pandemic?

Answer Choices	Responses	
Yes	69.89%	65
No	30.11%	28
	Answered	93

## Key Takeaways

- [Framework for Managing the 2020 COVID-19 Pandemic Response and Implementing Crisis Standards of Care \(April 2020\)](#)
- [Hospital to Post-Acute Care Transfer COVID-19 Assessment](#)

### Remdesivir EUA granted<sup>i</sup>

- Remdesivir, a product first donated to hospitals by Gilead Sciences, Inc., is administered to patients in accordance with the Scope of Authorization and all additional requirements included in the FDA’s EUA issued to Gilead Sciences, Inc., on May 1, as well as the corresponding [Fact Sheet for Health Care Providers](#). Early in the response, MHA maintained signed attestations from hospitals to guide distribution of the donated medication and treatment and provided DHSS with hospitalization data for hospitals with a signed attestation.

Beginning July 2020, [commercially available](#) remdesivir began to be allocated by state departments of health and available for purchase by hospitals with COVID-19 hospitalizations.

H2HC opens surge facility

4/14/2020

First day Missouri cumulative case count reaches [5,000](#)

State extends [stay-at-home order](#)

4/16/2020

MHA releases [Guidance for Resuming Elective Procedures](#)

4/22/2020

200,000 COVID-19 deaths reported<sup>iii</sup>  
Batelle system in place in Missouri

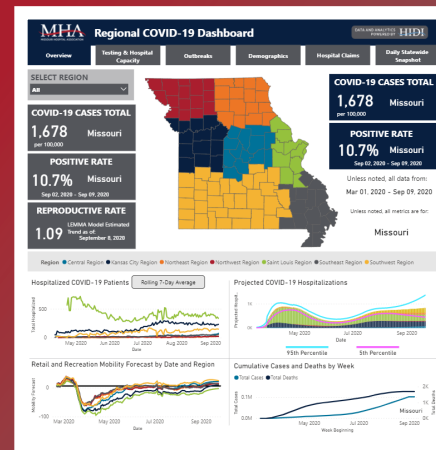
4/26/2020

5/1/2020



# REFINED COORDINATION, ONGOING STATE AND FEDERAL RESOURCES

In early May, as the state began to reopen, Missouri health care leaders and state public health officials began to prioritize efforts to resume operations and to begin a path to the “new normal” considering the long-standing impacts of COVID-19. Throughout this time, several systems of coordination were established at the state and federal level to assist health care providers with their prolonged response to COVID-19.

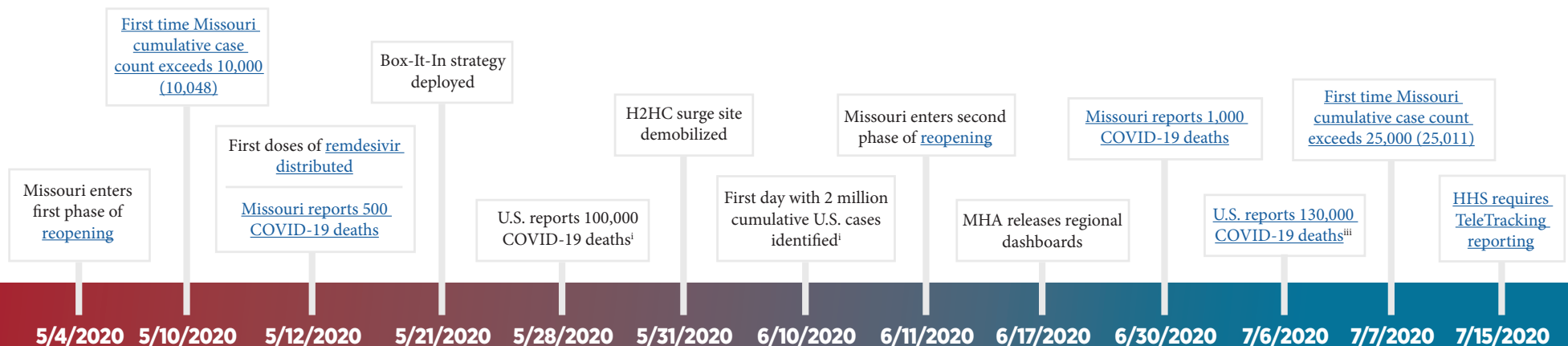


## Key Takeaways

Resources  
 DHSS COVID-19 [Dashboard](#)  
 MHA COVID-19 [Dashboards](#)

## Resources for TeleTracking

- [HHS Guidance](#)
- [TeleTracking Portal](#)
- [Video Tutorials](#)
- [TeleTracking Help Desk](#)
- [TeleTracking Technical Support: 1-877-570-6903](#)



# NEXT STEPS

While Missouri health care providers anticipated a reprieve during the summer months, in anticipation of a resurgence of both COVID-19 and seasonal influenza cases, the summer months resulted in more cases than expected. Throughout this time, Missouri hospitals and public health leaders have focused on continued refinement of existing plans, and the development of efficient and effective systems for managing COVID-19, as well as other highly infectious diseases or all-hazard events impacting health care in the long term.

	Total Cases (as of 9/16/20)	Total Deaths (as of 9/16/20)
Worldwide	29,674,488	937,204
United States	6,616,458	196,436
Missouri	106,587	1,739

As this report reflects, several successes among Missouri hospitals have resulted in response to the COVID-19 pandemic. These include but are not limited to the following.

- Hospital incident command and management
- Increasing surge capacity
- Regional coordination
- Workforce management
- Managing community-based outbreaks
- Waivers for flexibility

Despite this progress, many of the difficulties identified early in the pandemic remain. Continued efforts are ongoing to develop systems to mitigate these ongoing challenges, which include the following.

- Testing supplies, capacity and strategy
- Personal protective equipment
- Local public health coordination and communication
- Rapidly changing guidance
- Visitor management
- Managing special populations – long-term care, behavioral health and the homeless

To share best practices, develop opportunities to refine processes and address identified challenges, MHA developed a weekly virtual event speaker series focused on Lessons Learned from COVID-19. Join MHA and your peers as we convene weekly through fall 2020 to address challenges, share feasible solutions and create learning opportunities to be better prepared for a prolonged response to the COVID-19 pandemic. Visit [MHA's website](#) for more information.





**Suggested Citation:**

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**References:**

- <sup>i</sup> AJMC Staff. (2020, July 3). A Timeline of COVID-19 Development in 2020. *American Journal of Managed Care*. Retrieved from <https://www.ajmc.com/view/a-timeline-of-covid19-developments-in-2020>
- <sup>ii</sup> World Health Organization. (2020, July 30). Timeline of WHO's Response to COVID-19. Retrieved from <https://www.who.int/news-room/detail/29-06-2020-covidtimeline>
- <sup>iii</sup> Taylor, D. B. (2020, August 6). A Timeline of the Coronavirus Pandemic. *The New York Times*. Retrieved from <https://www.nytimes.com/article/coronavirus-timeline.html>