

Utah Health Status Update

KEY FINDINGS

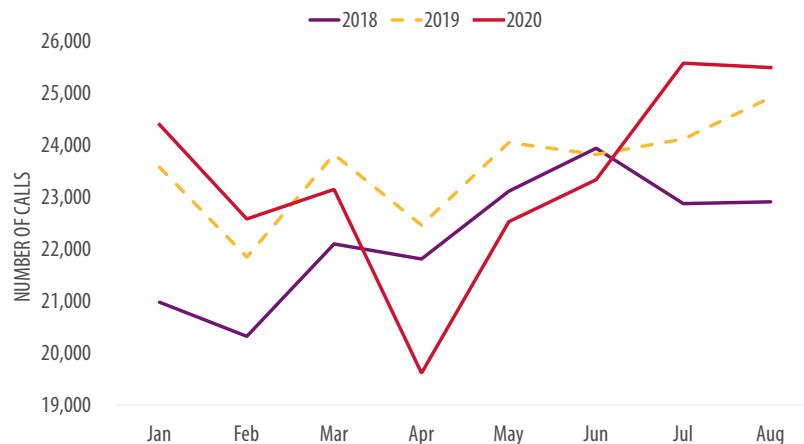
- Dispatched calls to EMS agencies dropped dramatically in April 2020 (Figure 1).
- Lower call volumes for EMS services in March and April 2020 (Figure 1 and Figure 2) coincided with an increase in COVID-19 cases.
- The percentage change in possible illness calls showed an increase of 13.2% in March and 13.6% in July 2020 compared to 2.7% March and 1.4% in July 2019 (Figure 3).
- EMS calls in March may have been more related to people who believed they might be ill despite being in good health and not actual COVID-19 related calls.

COVID-19 and 911 Calls

The health care system in the United States has seen unprecedented challenges in 2020. The spread of COVID-19 in the US became evident with the first case identified in Washington state in a traveler from China.¹ Utah recorded its first case of COVID-19 on March 13, 2020 in a traveler,² followed by multiple community cases one week later.³ In the first two months of the pandemic, emergency medical services (EMS) call volumes were higher than previous years as shown in Figure 1. However, dispatched calls to EMS agencies dropped in March and even more dramatically by April of 2020.

EMS 911 Call Volume by Month 2018–2020 January–August

Figure 1. 911 Call volume was the lowest in April 2020 (19,612) and the highest in July 2020 (25,567) between 2018–2020.

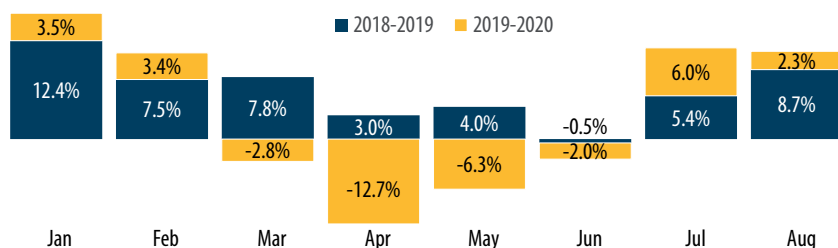


Utah Department of Health, Bureau of Emergency Medical Services and Preparedness.

The reduction in call volumes for EMS services in March and April (Figure 1 and Figure 2) coincided with an increase in COVID-19 cases and Utah Governor Gary Herbert’s “Stay Home, Stay Safe” directive issued on March 27, 2020.⁴ This directive advised Utahns to stay home to help ‘flatten the curve’ of the increasing pandemic.

Percentage Change in Overall Call Volume by Month, January–August 2018–2019 and 2019–2020.

Figure 2. The percentage change in overall call volume decreased to -12.7% in April 2020, and increased to 6.0% in July 2020.



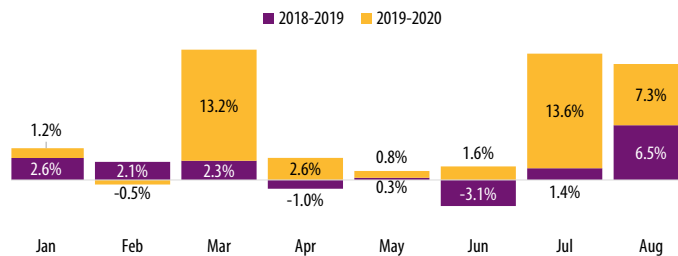
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Feature article continued

Although overall EMS call volume decreased between March and May 2020, complaint calls of "sick person" or "breathing problem" dramatically increased in March (Figure 3).

Percentage Change in Possible Illness Call Volume by Month, January-August 2018–2019 and 2019–2020

Figure 3. The percentage change in possible illness calls showed an increase of 13.2% in March and 13.6 in July 2020 compared to 2.7% March and 1.4% in July 2019.

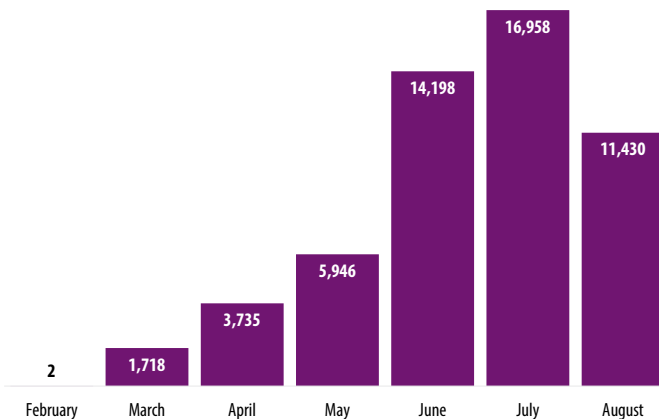


Utah Department of Health, Bureau of Emergency Medical Services and Preparedness.

Based on data submitted to the Bureau of Emergency Medical Services and Preparedness (Figures 2-3), and compared with confirmed case counts from the Bureau of Epidemiology (Figure 4), EMS calls in March may have been related to individuals concerned about possible COVID-19 symptoms. COVID-19 case counts were highest in June, July, and August, which is reflected in EMS call volumes and "possible illness" calls during the same time period (Figures 3-4).

COVID-19 Cases by Date of Symptom Onset or Diagnosis

Figure 4. In July 2020, Utah COVID-19 cases increased to 16,958 for the month, then decreased to 11,430 for the month of August, reflecting EMS call volumes.



Utah Department of Health, Bureau of Epidemiology.

Local and national EMS data indicates more individuals who suffered cardiac arrest were declared dead in their homes during the initial months of the pandemic, than in past years.⁵⁻⁷ One study of reduced EMS call volume showed 29% of the 2,200 surveyed weren't calling 9-1-1 because they were afraid of contracting COVID-19.⁶ National trends saw a similar decrease in cardiac arrest calls,⁵⁻⁷ and a nationwide media campaign was launched to inform the public that getting the necessary care was more important than the fear of getting COVID-19.⁷ In Utah, the majority of these 'scene of cardiac arrest' were in the home.⁸

More recently, EMS call volume and patients pronounced dead at home normalized. The message to the public remains important: Call 9-1-1 for concerning symptoms related to your heart, possible stroke, or major trauma. Ignoring life-threatening symptoms carries a much higher risk of morbidity or mortality.

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- Utah Department of Health. (3/6/2020). Utah Health Officials Announce First Case of COVID-19. Retrieved from <https://health.utah.gov/featured-news/utah-health-officials-announce-first-case-of-covid-19>
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- Utah Department of Health. (3/27/2020) Stay Safe, Stay Home Directive. Retrieved from <https://coronavirus.utah.gov/stay-at-home/>
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- Mann, N. Clay, et al. (9/10/2020) EMS by the Numbers, Impact of COVID-19. Retrieved from <https://nemsis.org/ems-by-the-numbers-impact-of-covid-19/>
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- Utah Department of Health. Bureau of EMS & Preparedness Cardiac Arrest Incident Scene Location Data Years 2018–2020.

Updates on Recreational Water Quality Health Guidelines

The Utah Department of Environmental Quality and the Utah Department of Health updated their health-based guidelines for recreational water to protect the public from exposure to harmful algal blooms (HABs) and other waterborne pathogens (Figure 1). HABs develop when naturally-occurring cyanobacteria grow out of control and form large areas of scum or mats. In addition to health risks from the cyanobacterial cells themselves, blooms can produce harmful cyanotoxins that may pose serious health risks to humans, animals, and livestock. Cyanotoxins target different organs in the body (i.e., liver, kidney, nerves) depending on the type of toxin. *E. coli* is generally used as an indicator for other, non-HAB harmful waterborne pathogens (i.e., bacteria and viruses) from fecal contamination of water. People can be exposed to HABs and other harmful waterborne pathogens while recreating in affected waters. Activities such as swimming, where accidentally swallowing small amounts of water is likely, are the most common routes of exposure. Updated health guidelines for microcystins and cylindrospermopsin come from updates in incidental water ingestion rates in children during recreational swimming used to calculate advisory levels and were implemented spring of 2020. For anatoxin-a, Utah benchmarked with health-based guidelines developed by the Oregon Health Authority. Updated *E. coli* levels reflect new research in the EPA's 2012 Recreational Water Quality Criteria. EPA provides Beach Action Values (BAVs) as an early alert tool for warning swimmers of unhealthy levels of pathogens in the water.² Utah is adopting the BAV of 235 cfu/100 mL¹ for use in notifying the public and protecting public health for the upcoming recreational season in 2021.

For more information on HABs, please visit habs.utah.gov. For more information about waterborne pathogens, please visit deq.utah.gov/water-quality/waterborne-pathogens.

Updated Health-based Guidelines for HABs in Utah Recreational Waters

Figure 1. The minimum parameters for **Warning Advisory** within the most recent HAB guidelines have increased in from 20,000 to 40,000 cells/mL for Cyanobacteria cell density, 4 to 8 ug/L for Microcystins, >8* to >15* ug/L for Cylindrospermopsin, and any detected ug/L Anatoxins to 20 ug/L.³

	Warning Advisory	Danger Advisory
Cyanobacteria Cell Density (cells/mL)	40,000 – 10,000,000	> 10,000,000
Microcystins (µg/L)	8 – 2,000	> 2,000
Cylindrospermopsin (µg/L)	> 15 *	
Anatoxin-a (µg/L)	20 – 90	> 90
Health Risks	<ul style="list-style-type: none"> · Potential for long-term illness · Short-term effects (e.g., skin and eye irritation, nausea, vomiting, diarrhea) 	<ul style="list-style-type: none"> · Potential for acute poisoning · Short-term effects (e.g., skin and eye irritation, nausea, vomiting, diarrhea) · Potential for long-term illness
Recommended Actions	<ul style="list-style-type: none"> · Issue WARNING advisory · Post WARNING signs · Sampling recommended at least weekly 	<ul style="list-style-type: none"> · Issue DANGER advisory · Post DANGER signs · Sampling recommended at least weekly · Consider CLOSURE

*Data are sparse on where cylindrospermopsin advisory break points should be. Consult with UDEQ and UDOH as needed on this issue.

¹ Colony forming units (cfu) per 100 milliliters (mL)

² Environmental Protection Agency, <https://www.epa.gov/wqc/recreational-water-quality-criteria-and-methods#rec1>

³ The Utah Department of Environmental Quality, Utah HAB Guidance summary. http://health.utah.gov/enviroepi/appletree/HAB/HAB_Guidance_Summary_2017.pdf

Infant Safe Sleep Recommendations

Every year in the United States, about 3,500 sleep-related infant causes, including those from sudden infant death syndrome (SIDS), accidental suffocation and strangulation in bed, and unknown causes¹. In Utah, SIDS is the leading cause of death for infants older than 27 days². To reduce risk factors for sleep-related infant deaths, the American Academy of Pediatrics (AAP) recommends placing babies on their back for every sleep; putting babies to sleep on a firm sleep surface; keeping the sleep area free of soft objects, loose bedding, and blankets; and room sharing where infant and caregiver sleep on separate sleep surfaces.

The Utah Pregnancy Risk Assessment Monitoring System (PRAMS) measures the extent to which these guidelines are followed. Data collected during 2016–2018 found 85.9% of women put their babies to sleep on their backs, which is slightly lower than the national Healthy People 2030 target of 88.9%. Additional findings are shown in the accompanying table.

Utah PRAMS Survey Responses to American Academy of Pediatrics Recommendations, 2016–2018

Figure 1. A majority of women reported following AAP recommendations to put their infants to sleep on their backs for every sleep (85.9%), however, far fewer women reported following AAP recommendations for placing their infants to sleep on a firm surface (40.7%), room sharing without bed sharing (35.2%) and having no soft objects in sleep areas (28%).

AAP Recommendation	Utah PRAMS Responses 2016-2018
No soft objects in sleep area	28.0%
Room share without bed sharing	35.2%*
Infant placed to sleep on firm surface	40.7%**
Infant placed to sleep on back for every sleep	85.9%

*Infant usually placed to sleep in a crib, bassinet, or pack and play, not on a couch, sofa, armchair, car seat or swing

**Infant usually placed to sleep without a blanket, toys, cushions, pillows, or bumper pads

While 91% of women reported being told by a healthcare provider to put their babies to sleep on their backs and 79% were told to keep soft objects out of baby's sleep space, only 44% reported being told they should place their baby's crib in their room. Monitoring PRAMS data helps in evaluating the effectiveness of strategies to raise awareness of AAP's safe-sleep recommendations.

1. AAP TASK FORCE ON SUDDEN INFANT DEATH SYNDROME. SIDS and Other Sleep-Related Infant Deaths: Updated 2016 Recommendations for a Safe Infant Sleeping Environment. *Pediatrics*. 2016;138(5):e20162938
2. Center of Disease Control and Prevention, WONDER online database <https://wonder.cdc.gov/>.

Monthly Health Indicators

Monthly Report of Notifiable Diseases, September 2020	Current Month # Cases	Current Month # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
Campylobacteriosis (<i>Campylobacter</i>)	36	47	320	428	0.7
COVID-19 (SARS-CoV-2)	Cases updated at https://coronavirus.utah.gov/case-counts/ .				
Shiga toxin-producing <i>Escherichia coli</i> (<i>E. coli</i>)	22	13	143	107	1.3
Hepatitis A (infectious hepatitis)	1	5	10	42	0.2
Hepatitis B, acute infections (serum hepatitis)	0	1	7	3	2.2
Influenza*	Weekly updates at http://health.utah.gov/epi/diseases/influenza .				
Meningococcal Disease	0	0	1	0	2.5
Pertussis (Whooping Cough)	6	27	108	296	0.4
Salmonellosis (<i>Salmonella</i>)	25	34	299	299	1.0
Shigellosis (<i>Shigella</i>)	1	6	33	42	0.8
Varicella (Chickenpox)	5	16	64	149	0.4
West Nile (Human cases)	1	10	2	23	0.1
Quarterly Report of Notifiable Diseases, 3rd Qtr 2020	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV/AIDS†	31	36	81	97	0.8
Chlamydia	2,648	2,558	7,545	7,500	1.0
Gonorrhea	777	660	2,085	1,772	1.2
Syphilis	25	32	76	87	0.9
Tuberculosis	5	6	19	20	1.0
Medicaid Expenditures (in Millions) for the Month of September 2020	Current Month	Expected/ Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance over (under) Budget
Mental Health Services	\$ 13.8	\$ 13.7	\$ 57.3	\$ 58.5	\$ (1.2)
Inpatient Hospital Services	24.3	24.4	42.6	43.2	(0.6)
Outpatient Hospital Services	4.0	4.7	7.4	8.8	(1.4)
Nursing Home Services	19.3	19.4	48.5	50.1	(1.6)
Pharmacy Services	10.7	11.5	29.2	30.9	(1.7)
Physician/Osteo Services‡	3.4	4.3	8.7	10.1	(1.4)
Medicaid Expansion Services	63.3	63.5	181.2	182.4	(1.2)
***TOTAL MEDICAID	300.3	301.2	816.1	818.1	(2.0)

|| Updates for COVID-19 can be found at <https://coronavirus.utah.gov>. This includes case counts, deaths, number of Utahns tested for disease, and latest information about statewide public health measures to limit the spread of COVID-19 in Utah.

* More information and weekly reports for Influenza can be found at <http://health.utah.gov/epi/diseases/influenza>.

† Diagnosed HIV infections, regardless of AIDS diagnosis.

Notes: Data for notifiable diseases are preliminary and subject to change upon the completion of ongoing disease investigations. Active surveillance for West Nile Virus will start in June for the 2020 season.

‡ Medicaid payments reported under Physician/Osteo Services does not include enhanced physician payments.

***The Total Medicaid Program costs does not include costs for the PRISM project.

Monthly Health Indicators

Program Enrollment for the Month of September	Current Month	Previous Month	% Change [§] From Previous Month	1 Year Ago	% Change [§] From 1 Year Ago
Medicaid	345,865	336,104	+2.9%	289,287	+19.6%
CHIP (Children's Health Ins. Plan)	16,348	16,354	-1.0%	17,490	-6.5%
Commercial Insurance Payments [#]	Current Data Year	Number of Members	Total Payments	Payments per Member per Month (PMPM)	% Change [§] From Previous Year
Medical	2018	10,355,207	\$ 3,146,492,372	\$ 303.86	-0.9%
Pharmacy	2018	8,195,234	543,507,290	66.32	+3.6%
Annual Community Health Measures	Current Data Year	Number Affected	Percent \ Rate	% Change [§] From Previous Year	State Rank ^{**} (1 is Best)
Obesity (Adults 18+)	2018	618,400	27.8%	+10.1%	13 (2018)
Child Obesity (Grade School Children)	2018	38,100	10.6%	+11.6%	n/a
Cigarette Smoking (Adults 18+)	2018	200,100	9.0%	+0.9%	1 (2018)
Vaping, Current Use (Grades 8, 10, 12)	2019	37,100	12.4%	+11.3%	n/a
Binge Drinking (Adults 18+)	2018	236,700	10.6%	-7.7%	1 (2018)
Influenza Immunization (Adults 65+)	2018	182,300	52.0%	-7.1%	16 (2018)
Health Insurance Coverage (Uninsured)	2018	300,300	9.5%	-3.1%	n/a
Motor Vehicle Traffic Crash Injury Deaths	2018	239	7.6 / 100,000	-16.2%	8 (2018)
Drug Overdose Deaths Involving Opioids	2018	404	12.8 / 100,000	-0.9%	24 (2018)
Suicide Deaths	2018	665	21.0 / 100,000	-1.5%	46 (2018)
Unintentional Fall Deaths	2018	262	8.3 / 100,000	+14.8%	31 (2018)
Traumatic Brain Injury Deaths	2018	604	19.1 / 100,000	-6.5%	28 (2018)
Asthma Prevalence (Adults 18+)	2018	205,500	9.2%	+3.6%	21 (2018)
Diabetes Prevalence (Adults 18+)	2018	185,900	8.3%	+17.5%	12 (2018)
High Blood Pressure (Adults 18+)	2017	532,900	24.5%	+3.8%	3 (2017)
Poor Mental Health (Adults 18+)	2018	418,300	18.8%	+3.1%	20 (2018)
Coronary Heart Disease Deaths	2018	1,624	51.4 / 100,000	-5.8%	4 (2018)
All Cancer Deaths	2018	3,262	103.2 / 100,000	+1.3%	1 (2018)
Stroke Deaths	2018	919	29.1 / 100,000	+1.6%	24 (2018)
Births to Adolescents (Ages 15-17)	2018	363	4.9 / 1,000	-15.3%	10 (2018)
Early Prenatal Care	2018	35,975	76.2%	-1.0%	n/a
Infant Mortality	2018	255	5.4 / 1,000	-7.0%	24 (2017)
Childhood Immunization (4:3:1:3:3:1:4) ^{††}	2018	36,400	72.0%	+5.9%	22 (2018)

[§] Relative percent change. Percent change could be due to random variation.

[#] Figures subject to revision as new data is processed.

^{**} State rank based on age-adjusted rates where applicable.

^{††} Data from 2018 NIS for children aged 24 months (birth year 2016).