



MASSACHUSETTS
GENERAL HOSPITAL

PSYCHIATRY ACADEMY

The Impact of COVID on Treatment Access and Delivery

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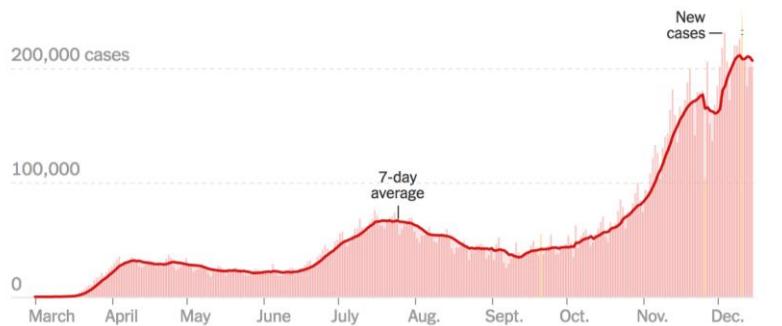
Disclosures

Neither I nor my spouse/partner has a relevant financial relationship with a commercial interest to disclose.

Objectives

- Pre-COVID-19 pandemic substance use service industry
- Regulatory changes and the COVID-19 pandemic
- Impact of the COVID-19 pandemic on substance use treatment
- The COVID-19 pandemic and substance use
- Final thoughts

Syndemic will have lasting, and unknown, effects on the U.S. substance use care landscape and marginalized populations



	TOTAL REPORTED	ON DEC. 15	14-DAY CHANGE
Cases	16.8 million+	201,649	+28% →
Deaths	305,934	2,957	+60% →
Hospitalized		112,816	+17% →

During late June, 40% of U.S. adults reported struggling with mental health or substance use¹

ANXIETY/DEPRESSION SYMPTOMS



STARTED OR INCREASED SUBSTANCE USE



TRAUMA/STRESSOR-RELATED DISORDER SYMPTOMS

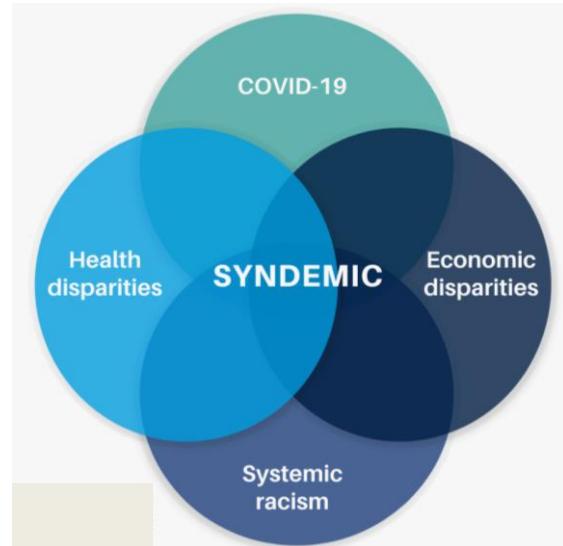


SERIOUSLY CONSIDERED SUICIDE¹



¹Based on a survey of U.S. adults aged ≥18 years during June 24–30, 2020

¹In the 30 days prior to survey



Black and Latinx respondents reported increased suicidal ideation and substance use

<https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html#map>,

Mendenhall, E.. Lancet. 2020. 396 (10264); 1731

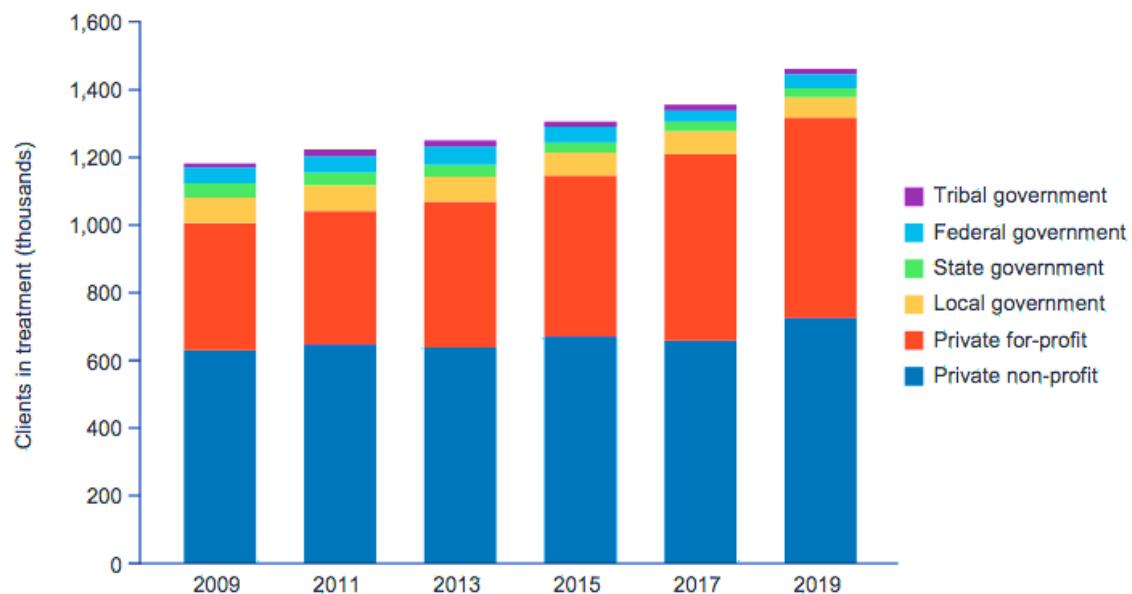
Czeisler MÉ , Lane RL, Petrosky E, et al. Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic — United States, June 24–30, 2020. MMWR Morb Mortal Wkly Rep 2020;69:1049–1057.

www.mghcme.org

Pre-COVID-19 pandemic substance use service industry

U.S. substance use care service industry

Clients in treatment, 2009-2019



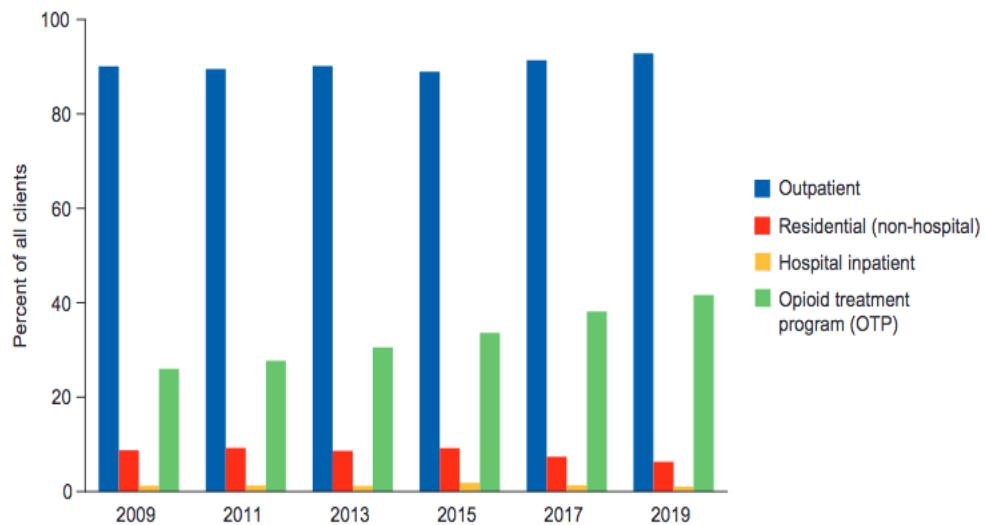
Over the last 10 years

- 23% ↑ Total clients
- 15% ↑ Private non-profit
- 58% ↑ Private for-profit

SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, National Survey of Substance Abuse Treatment Services (N-SSATS), 2009–2019.

https://wwwdasis.samhsa.gov/dasis2/nssats/NSSATS_2019/2019-NSSATS-R.pdf

U.S. substance use care service industry



SOURCE: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, National Survey of Substance Abuse Treatment Services (N-SSATS), 2009–2019.

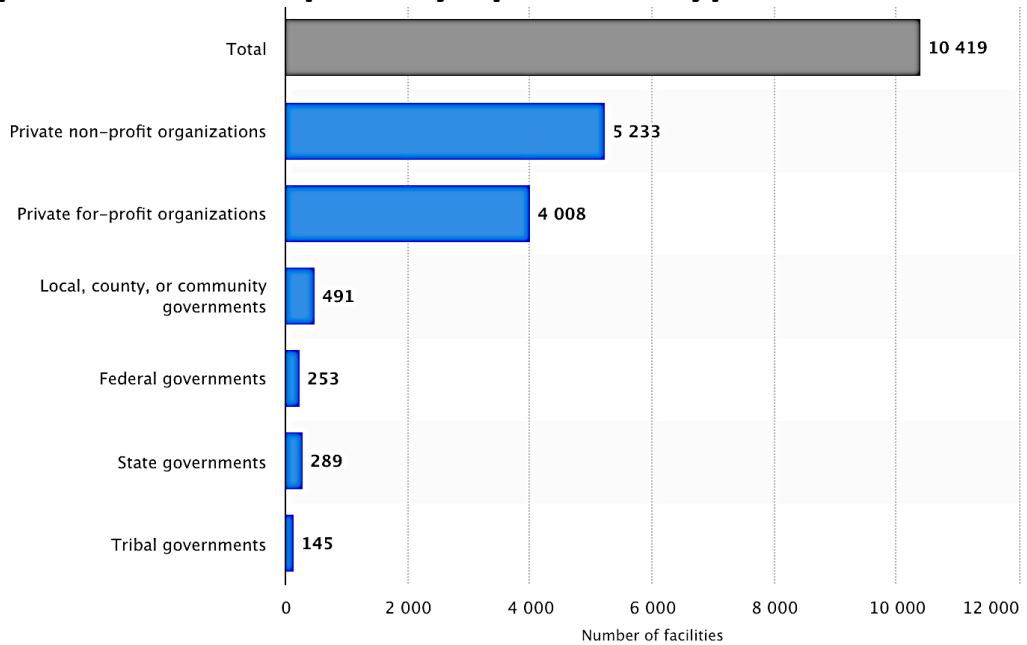
2019

- **93% of all clients, 1,355,024, received outpatient treatment**
- **408,550 received methadone**
- **702,914 received treatment for co-occurring mental and substance use disorders (54%↑ since 2019)**

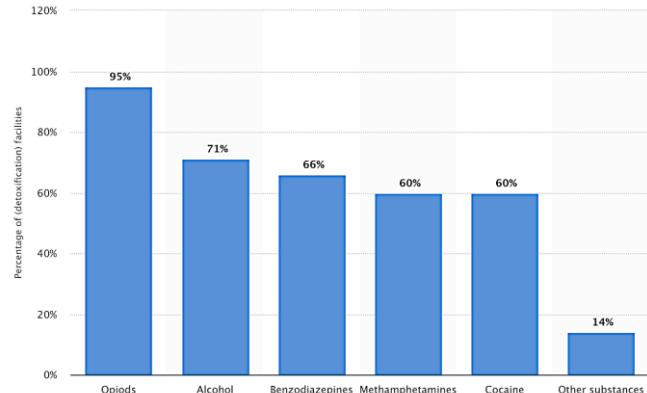
https://wwwdasis.samhsa.gov/dasis2/nssats/NSSATS_2019/2019-NSSATS-R.pdf

Pharmacotherapy

U.S. substance use care facilities providing pharmacotherapies, by operation type

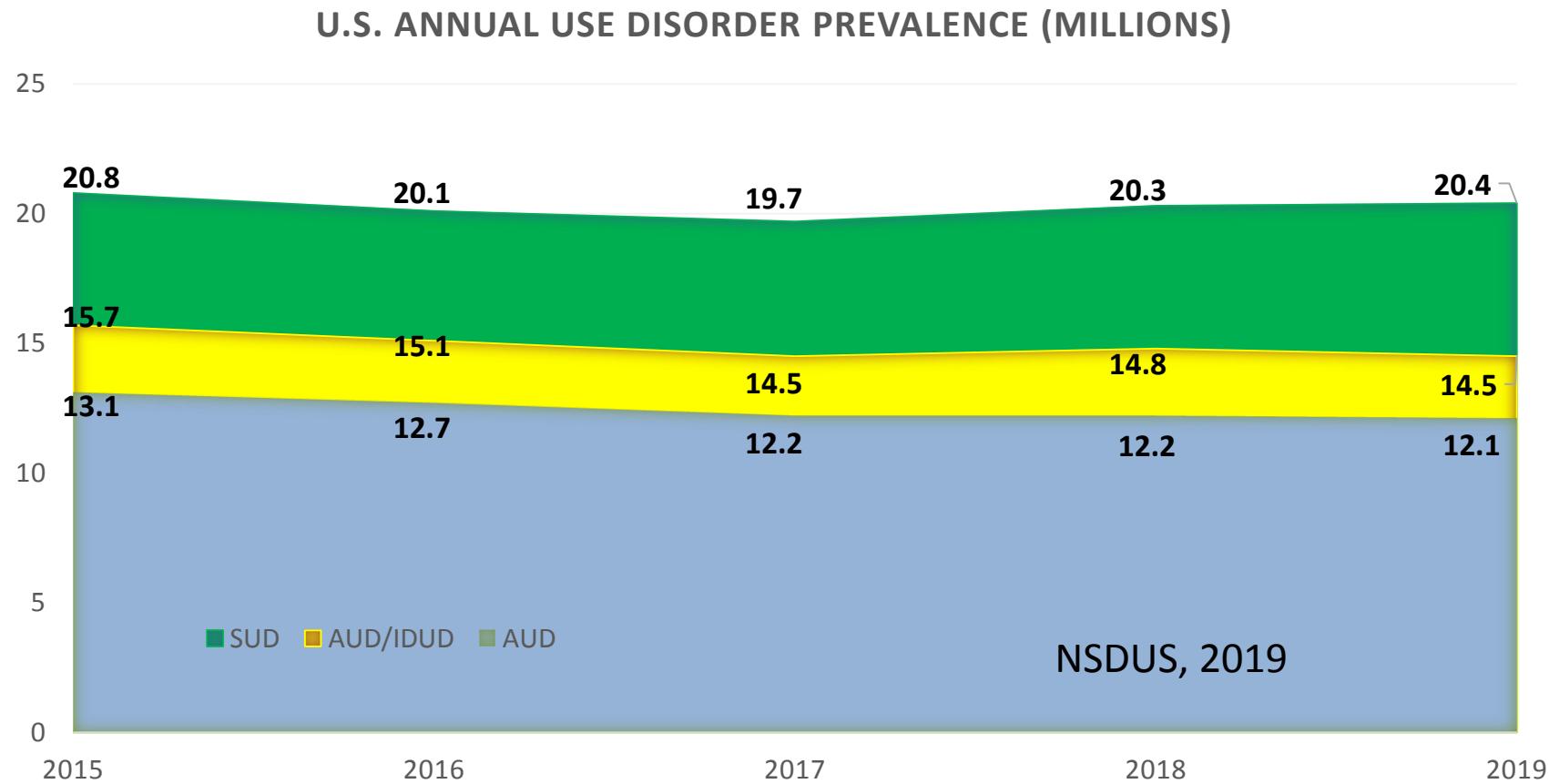


- **15,961 substance use care facilities**
- **3,508 facilities provide detoxification services**
- **65% offer pharmacotherapy**



Substance Abuse and Mental Health Services Administration, National Survey of Substance Abuse Treatment Services (N-SSATS): 2019. Data on Substance Abuse Treatment Facilities. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2020

Use disorders and treatment mismatch

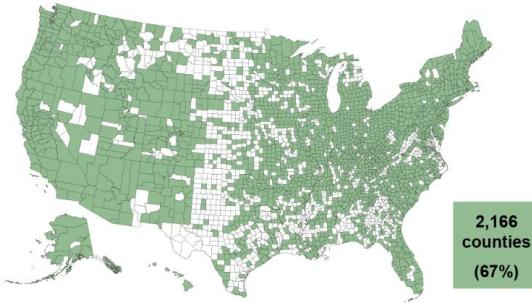


National Survey of Substance Abuse Treatment Services (N-SSATS), six treatment categories

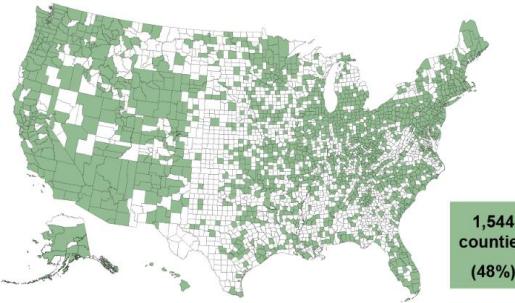
N-SSATS Categories of Substance Use Disorder Treatment	American Society of Addiction Medicine Levels of Care
Regular outpatient	Level 1.0 outpatient services: Fewer than 9 hours of service per week for recovery or motivational enhancement therapies or strategies.
Intensive outpatient	Level 2.1 intensive outpatient services: 9 or more hours of service per week to treat multidimensional instability.
Outpatient day or partial hospitalization	Level 2.5 partial hospitalization services: 20 or more hours of service per week for multidimensional instability not requiring 24-hour care.
Long-term residential	Level 3.1 clinically managed low-intensity residential services: 24-hour living support and structure with available trained personnel; at least 5 hours of clinical service per week or step-down from more intensive care. Level 3.3 clinically managed population-specific high-intensity residential services: 24-hour care with trained counselors to stabilize multidimensional imminent danger. Less intense milieu and group treatment for those with cognitive or other impairments unable to use full active milieu or therapeutic community.
Short-term residential	Level 3.5 clinically managed high-intensity residential services: 24-hour care with trained counselors to stabilize multidimensional imminent danger and prepare for outpatient treatment. Patients in this level are able to tolerate and use full active milieu or therapeutic community.
Hospital inpatient	Level 3.7 medically monitored intensive inpatient services withdrawal management: 24-hour nursing care with physician availability for significant problems in acute intoxication, withdrawal potential, or both; biomedical conditions and complications; above symptoms may or may not be accompanied by emotional, behavioral, or cognitive conditions and complications. Staffed by designated addiction treatment, mental health, and general medical personnel who provide a range of services in a 24-hour treatment setting. Level 4 medically managed intensive inpatient services: 24-hour nursing care and daily physician care for severe, unstable problems with acute intoxication, withdrawal potential, or both; biomedical conditions and complications; above symptoms may or may not be accompanied by emotional, behavioral, or cognitive conditions and complications. Counseling is available 16 hours a day to engage patient in treatment.

U.S. has limited substance use treatment capacity

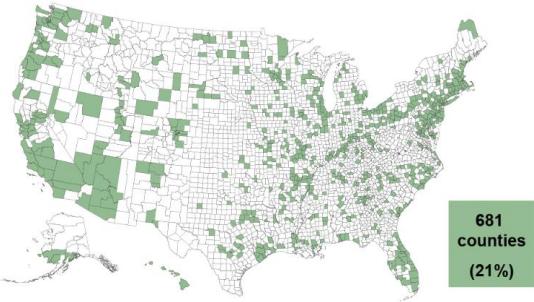
Regular outpatient treatment



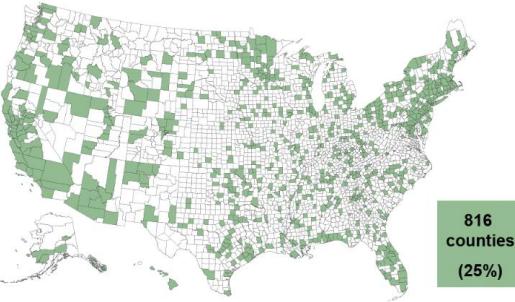
Intensive outpatient treatment



Outpatient day treatment/ partial hospitalization



Long-term residential treatment



Short-term residential treatment

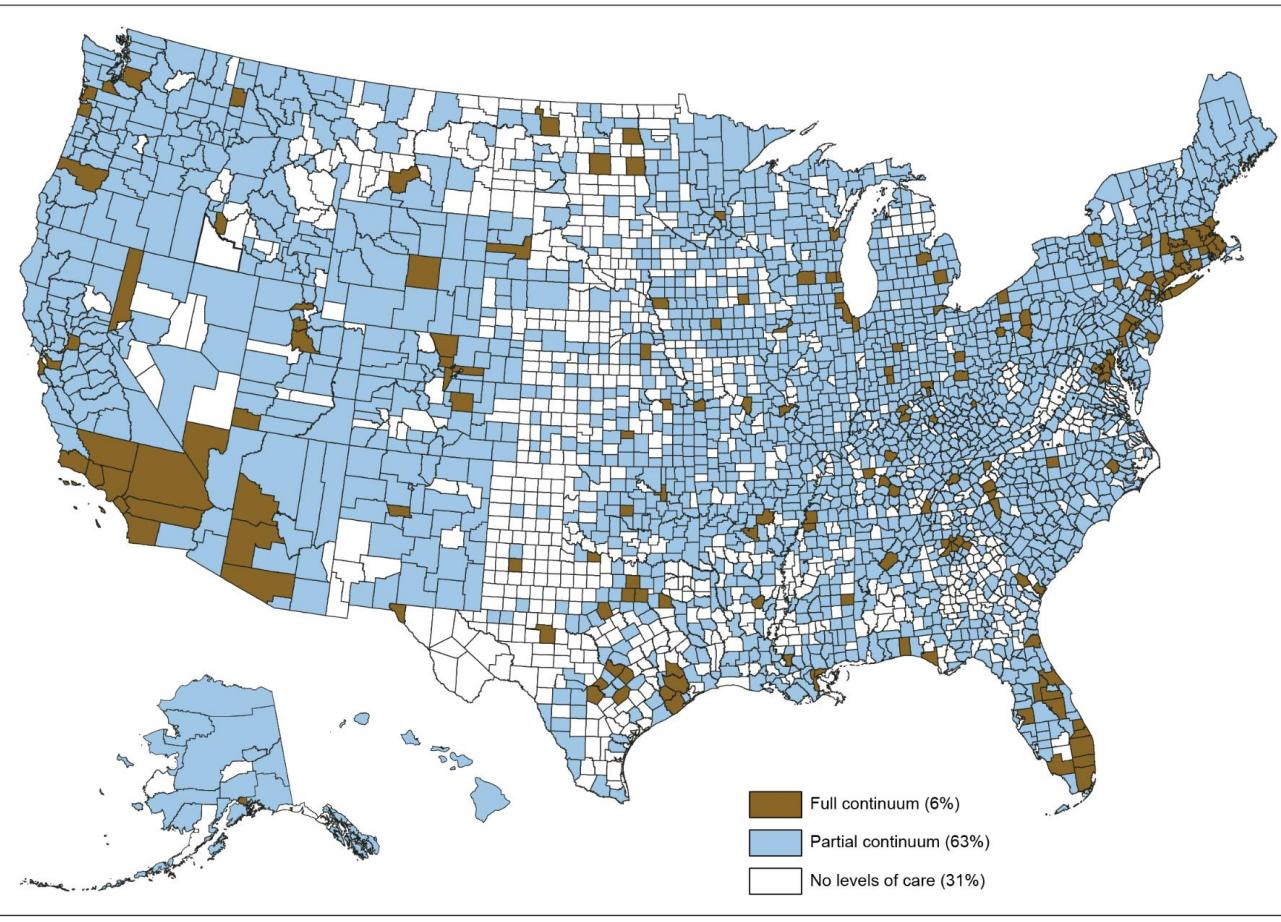


Hospital inpatient treatment



- **1/10 counties offer Hospital Inpatient Treatment**
- **1/5 counties offer PHPs**
- **1/4 counties offer short- term and long- term residential programs**

Gaps in substance use treatment capacity

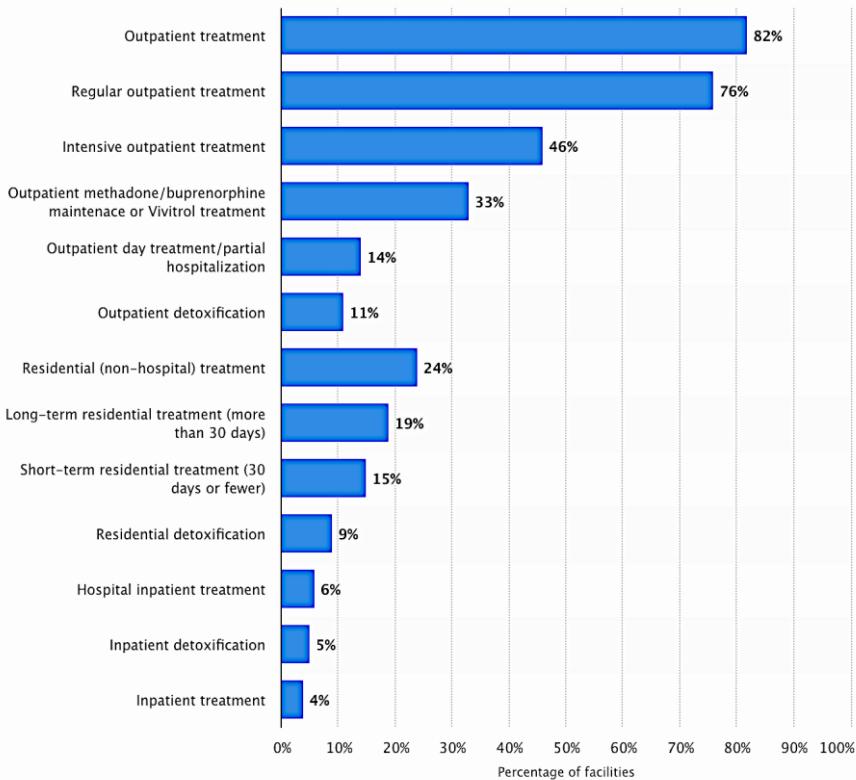


- 997 US counties have no treatment capacity
- 189 US counties have all 6 Levels of Care

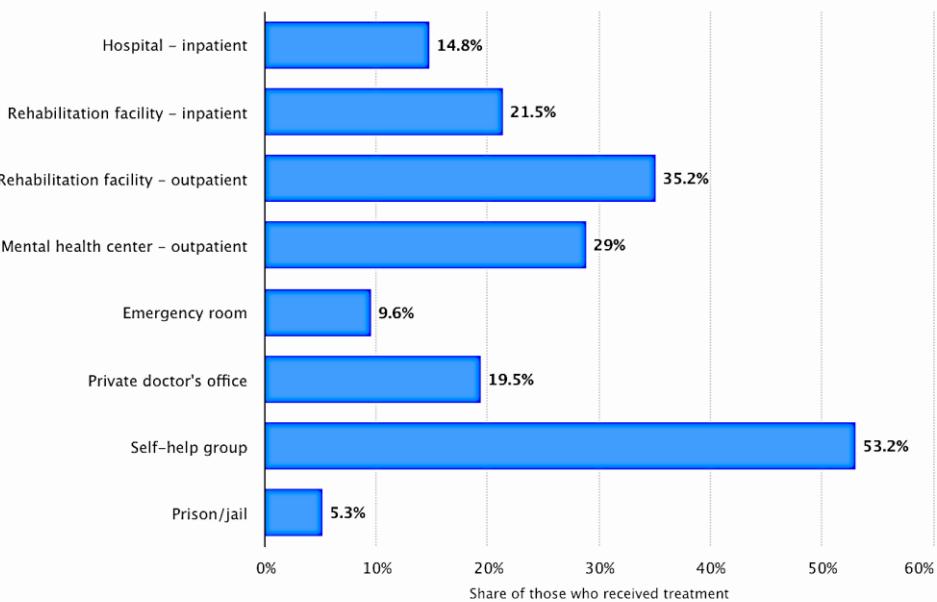
Source: GAO analysis of Substance Abuse and Mental Health Services Administration (SAMHSA) data. | GAO-21-58

In 2019, outpatient treatment and self-help groups - majority of substance use care service

Substance use care facilities, type of service

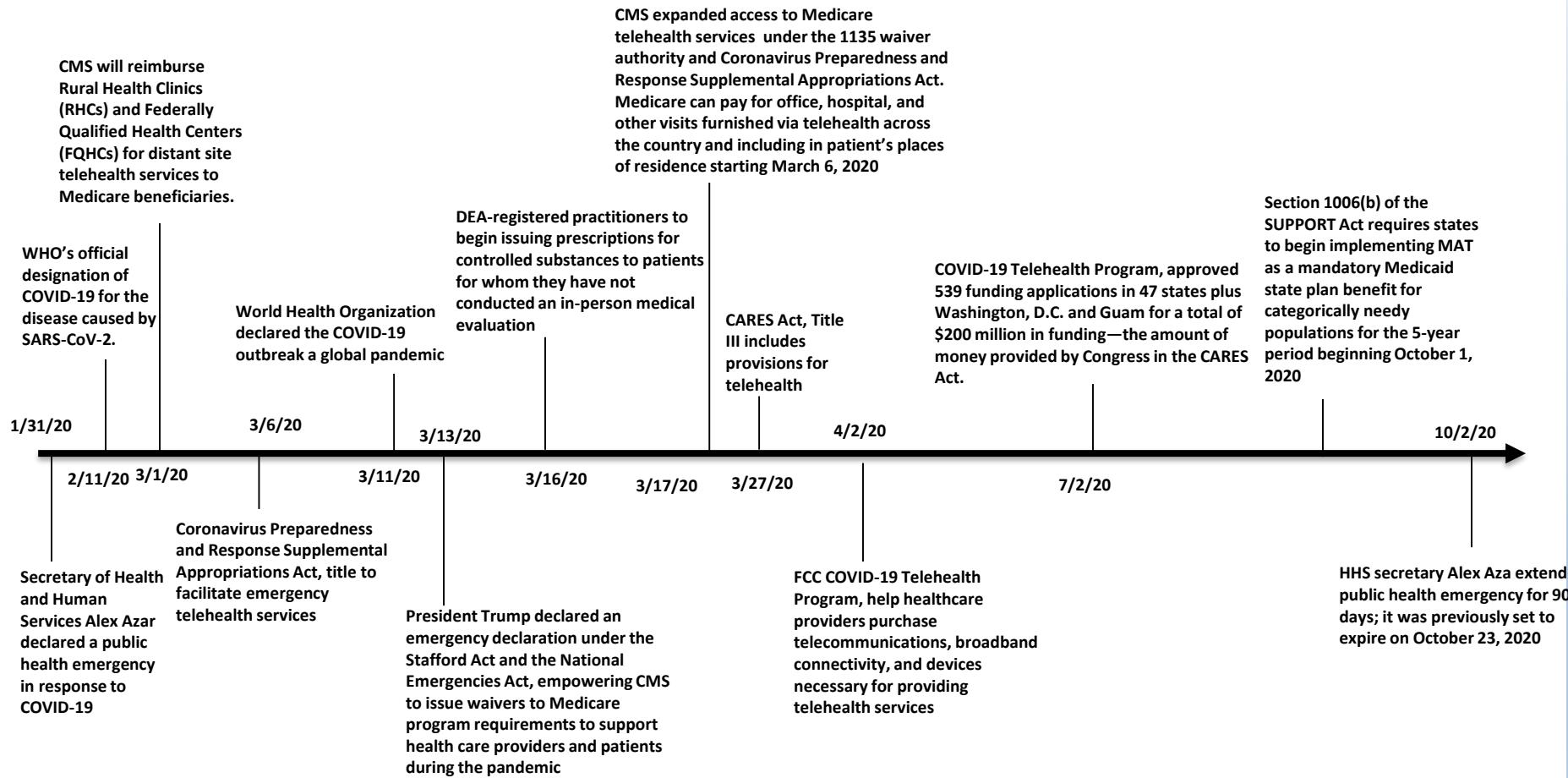


53% of patients received alcohol use care in Self-help groups



Regulatory changes and the COVID-19 pandemic

COVID-19 pandemic, the federal response and focus on person-centered care



Ryan Haight Online Pharmacy Consumer Protection Act of 2008

In March 2020,

DEA waived In-Person Medical Evaluation Requirement mandate that the dispensing of controlled substances by means of the internet be predicated on a valid prescription issued by a practitioner who has conducted at least one in-person medical evaluation of the patients

SAMHSA announced,

1. OTP exemption for an in-person evaluation requirement to prescribe buprenorphine
2. DATA-waived practitioners can prescribe buprenorphine to new patients and for maintenance or detoxification treatment on the basis of a telephone evaluation, “while complying with all applicable standards of care.”

[https://www.deadiversion.usdoj.gov/GDP/\(DEA-DC-022\)\(DEA068\)%20DEA%20SAMHSA%20buprenorphine%20telemedicine%20%20\(Final\)%20+Esign.pdf](https://www.deadiversion.usdoj.gov/GDP/(DEA-DC-022)(DEA068)%20DEA%20SAMHSA%20buprenorphine%20telemedicine%20%20(Final)%20+Esign.pdf)

Notification of Enforcement Discretion for Telehealth Remote Communications During the COVID-19 Nationwide Public Health Emergency

We are empowering medical providers to serve patients wherever they are during this national public health emergency. We are especially concerned about reaching those most at risk, including older persons and persons with disabilities.

– Roger Severino, OCR Director.

The Office for Civil Rights (OCR) at the Department of Health and Human Services (HHS) is responsible for enforcing certain regulations issued under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as amended by the Health Information Technology for Economic and Clinical Health (HITECH) Act, to protect the privacy and security of protected health information, namely the HIPAA Privacy, Security and Breach Notification Rules (the HIPAA Rules).

No penalties for good faith use of non-compliant videoconferencing software

<https://www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/notification-enforcement-discretion-telehealth/index.html>

Exemptions for non-observed methadone access



5600 Fishers Lane • Rockville, MD 20857
www.samhsa.gov • 1-877-SAMHSA-7 (1-877-726-4727)



3/16/2020 (Updated 3/19/2020)

Opioid Treatment Program (OTP) Guidance

SAMHSA recognizes the evolving issues surrounding COVID-19 and the emerging needs OTPs continue to face.

SAMHSA affirms its commitment to supporting OTPs in any way possible during this time. As such, we are expanding our previous guidance to provide increased flexibility.

FOR ALL STATES

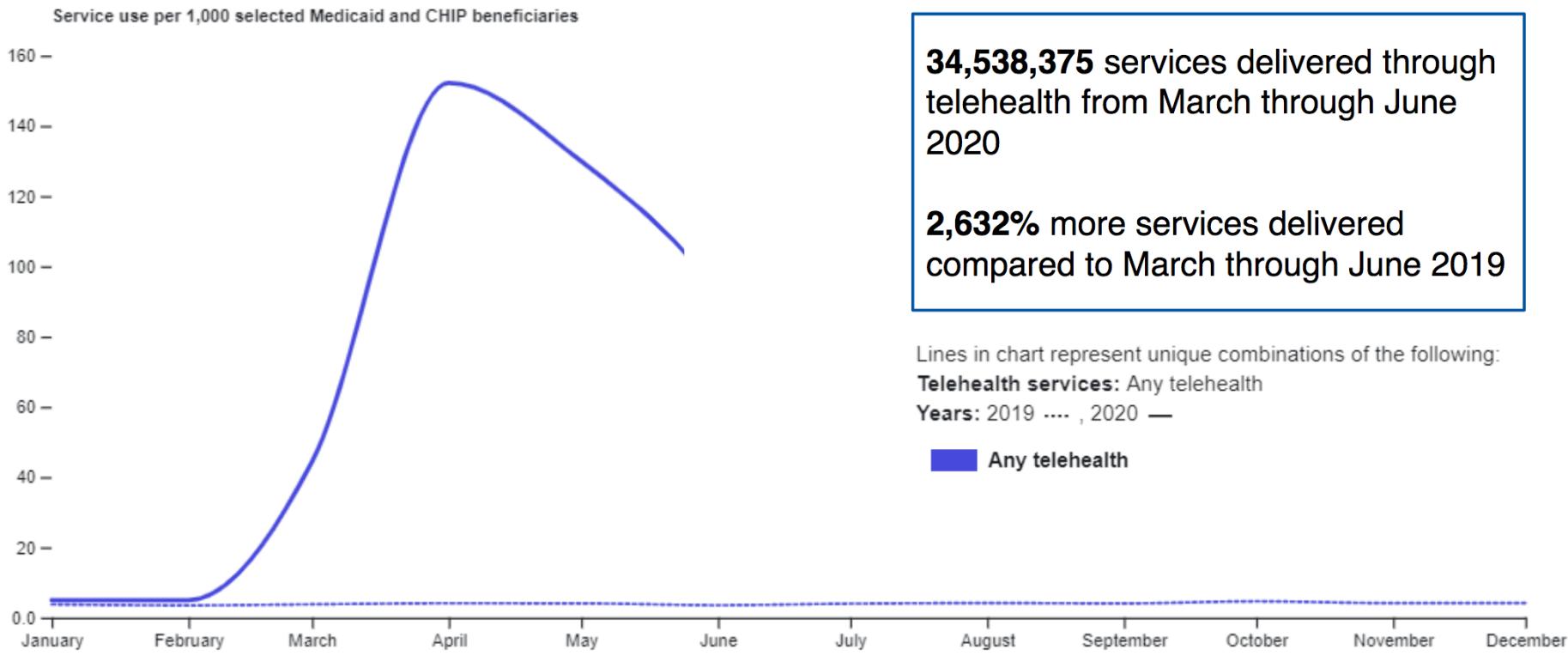
The state may request blanket exceptions for all stable patients in an OTP to receive 28 days of Take-Home doses of the patient's medication for opioid use disorder.

The state may request up to 14 days of Take-Home medication for those patients who are less stable but who the OTP believes can safely handle this level of Take-Home medication.

Services Delivered via Telehealth Among Medicaid & CHIP Beneficiaries During COVID-19

Preliminary Medicaid & CHIP Data Snapshot

Services through June 30, 2020



Services Delivered via Telehealth in Medicaid & CHIP

To identify services delivered via telehealth, we used a combination of Current Procedural Terminology (CPT) codes, Healthcare Common Procedure Coding System (HCPCS) codes, place of service codes, and procedure code modifiers.

Type of service delivered via telehealth	Description
Evaluation and management services	Routine office visits provided via video
Virtual check-ins	Remote evaluations of recorded video or images submitted by an established patient followed by a brief (5-10 minute) check-in with a physician or other provider via telephone or other telecommunications device to decide whether an office visit or other service is needed
Asynchronous electronic communication	Communication with an established patient through a patient portal or other online method, resulting in a digital evaluation and management service
Remote patient monitoring	Use of digital technologies to collect and transmit health data from individuals to health care providers
Critical care or interprofessional consults	Consultative services provided through digital technologies
Other telehealth visits	Any other services provided via telehealth

34,538,375 services delivered through telehealth from March through June 2020

2,632% more services delivered compared to March through June 2019

Lines in chart represent unique combinations of the following:

Telehealth services: Any telehealth

Years: 2019 —, 2020 —

Any telehealth

Payment reforms, regulatory exemptions/waivers – Telehealth, an emerging platform for care delivery

Pre-COVID

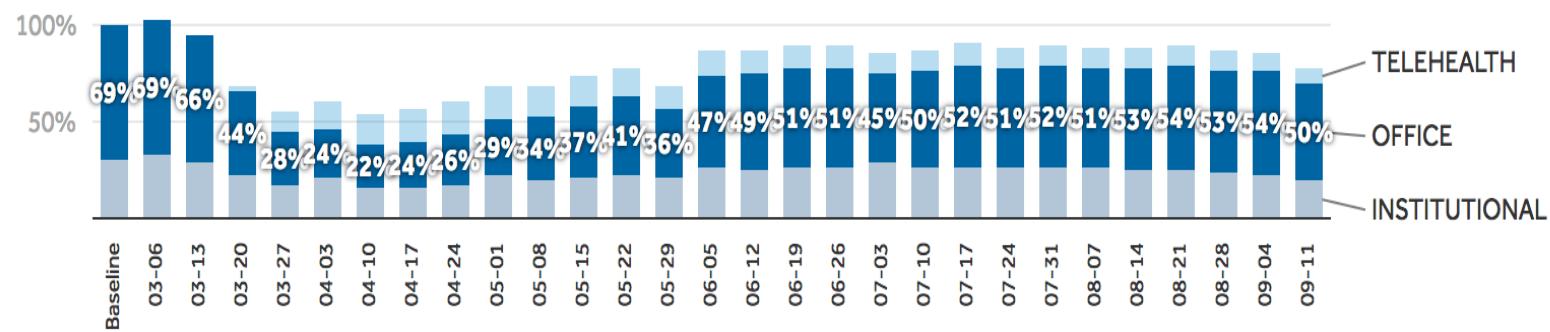
0.4% visit claims telehealth, peak 17.1% 4/24/20, 8.3%

9/11/20

69.3% visit claims office based, nadir 22.2% 4/10/20,

50.1% 9/11/20

Total visit claims by service type



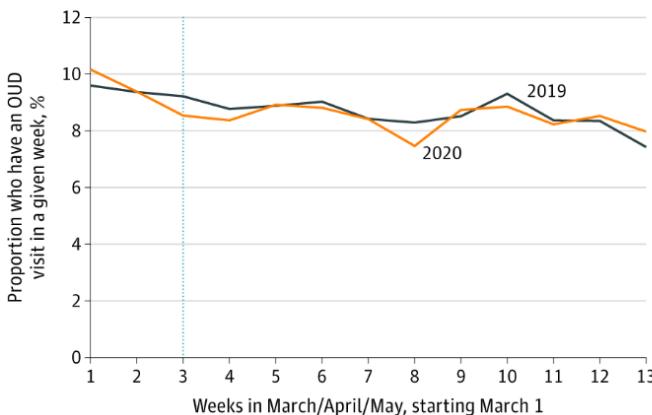
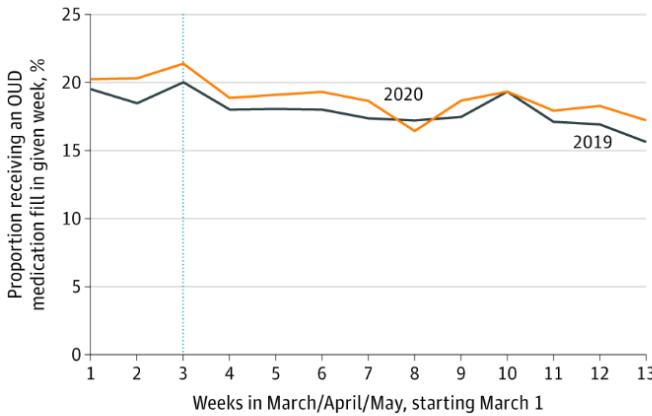
Note: Baseline = Average of claims for period W/E 1/10/2020-2/28/2020

Source: IQVIA Medical Claims Data Analysis, 2020 • [Get the data](#) • [PNG](#)

Peterson-KFF
Health System Tracker

Impact of COVID-19 pandemic on substance use treatment

Among commercially insured patients, no change in OUD medication prescriptions or visits during first three months of the COVID-19 pandemic



- **Among those with recent OUD medication treatment in 2020, OUD visits delivered via telemedicine increased from 0.48% in week 1 to 23.53% in week 13.**
- **Among those without recent OUD medication treatment, OUD visits delivered via telemedicine increased from 0.60% in week 1 of 2020 to 31.82% in week 13**

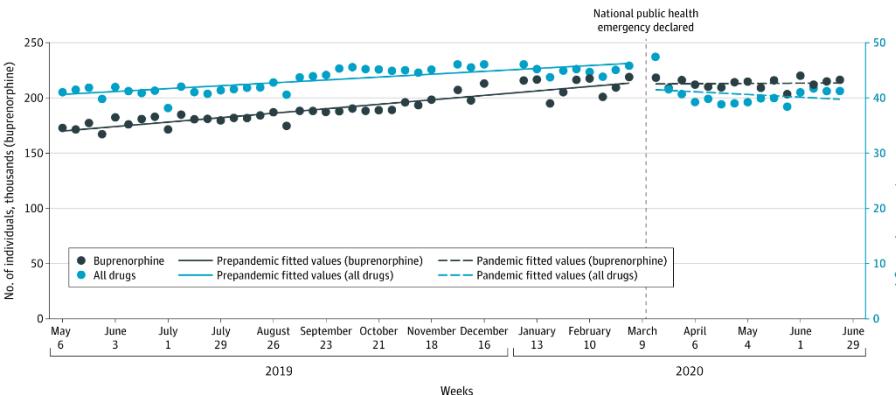
Table. Receipt of OUD-Related Care for March Through May 2019 vs March Through May 2020^a

	Cumulative No. (%) receiving OUD-related care, March-May					
	Receiving recent OUD medication treatment		Difference, % (95% CI)	Not receiving recent OUD medication treatment		
	2019 (n = 16 128)	2020 (n = 18 068)		2019 (n = 6 127 513)	2020 (n = 5 970 239)	Difference, % (95% CI)
OUD medication fills	10 542 (65.37)	12 284 (67.99)	-2.62 (-3.62 to -1.62)	9 661 (0.16)	7 431 (0.12)	0.03 (0.03-0.04)
OUD-related visits	4 387 (27.20)	4 851 (26.85)	0.35 (-0.59 to 1.30)	8 318 (0.14)	7 593 (0.13)	0.01 (0.004-0.01)
Urine OUD toxicology tests	2 227 (13.81)	1 908 (10.56)	3.25 (2.55 to 3.94)	7 056 (0.12)	5 025 (0.08)	0.03 (0.03-0.04)

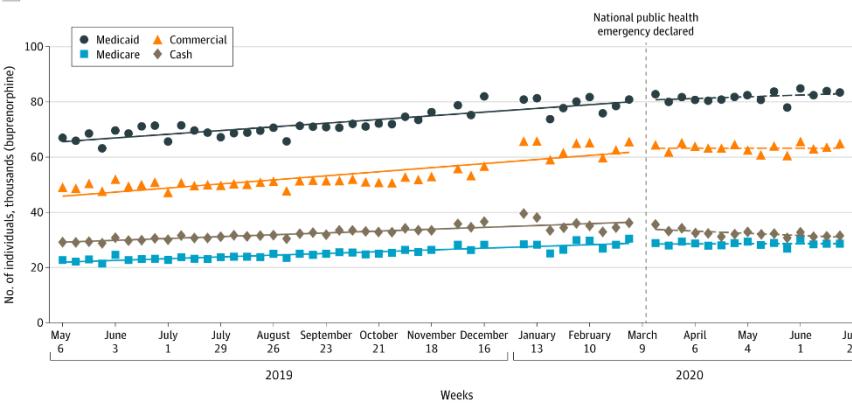
Abbreviation: OUD, opioid use disorder.

^a This study uses 2019 and 2020 claims data from the OptumLabs Data Warehouse. The panels include individuals who were continuously enrolled in medical, behavioral health, and pharmacy benefits for January through May of

the year in question. Recent OUD medication treatment is defined as at least 1 OUD medication fill in January or February of a given year. For both 2019 and 2020, the observation period included 13 weeks beginning on March 1.



B Individuals filling buprenorphine prescription by payer



Nguyen et al. Assessment of Filled Buprenorphine Prescriptions for Opioid Use Disorder During the Coronavirus Disease 2019 Pandemic. *JAMA Intern Med.*

No change in public/private buprenorphine reimbursement or number of prescriptions filled during pandemic

Table. Changes in Prescription Fills Before and During the COVID-19 Pandemic^a

Variable	Mean (95% CI)		Buprenorphine prescriptions by payer (thousands of individuals)			
	Buprenorphine vs any prescription		Medicaid	Medicare	Commercial	Cash
	Buprenorphine (thousands)	Any prescription (millions)				
Predicted No. of individuals (intercepts) ^b						
Prepandemic (3/2/2020 to 3/8/2020)	215.41 (211.64 to 219.19)	46.52 (45.49 to 47.54)	80.65 (79.09 to 82.21)	29.06 (28.42 to 29.70)	62.44 (60.59 to 64.29)	36.72 (35.93 to 37.52)
Pandemic (3/16/2020 to 3/22/2020)	212.71 (207.17 to 218.26)	41.49 (39.98 to 43.00)	80.75 (78.46 to 83.04)	28.53 (27.60 to 29.47)	63.25 (60.54 to 65.97)	33.81 (32.64 to 34.99)
Before-after change in level ^c	-2.7 (-9.41 to 4.00)	-5.03 (-6.85 to -3.20)	0.1 (-2.67 to 2.88)	-0.53 (-1.66 to 0.60)	0.81 (-2.47 to 4.10)	-2.91 (-4.33 to -1.49)
Weekly growth rate, % ^d						
Prepandemic	0.52 (0.45 to 0.59)	0.3 (0.22 to 0.39)	0.46 (0.38 to 0.53)	0.62 (0.53 to 0.70)	0.66 (0.55 to 0.78)	0.51 (0.43 to 0.59)
Pandemic	0.03 (-0.31 to 0.36)	-0.27 (-0.70 to 0.16)	0.19 (-0.18 to 0.56)	0.04 (-0.38 to 0.46)	0.001 (-0.56 to 0.56)	-0.61 (-1.02 to -0.20)
Before-after change in growth rate ^e	-0.50 (-0.84 to -0.15)	-0.57 (-1.01 to -0.14)	-0.27 (-0.65 to 0.11)	-0.58 (-1.01 to -0.15)	-0.66 (-1.24 to -0.09)	-1.12 (-1.54 to -0.70)

^a National pharmacy claims data between May 2019 and June 2020 from Symphony Health. We excluded several weeks with national holidays (November 26, 2019, December 24, 2019, and January 1, 2020), and week of March 8, 2020 to smooth the data.

^b The predicted means (intercepts) are calculated from ordinary least squares regressions of the weekly number of individuals filling prescriptions on weekly trends.

^c The differences in the intercepts and their 95% CI are used to test the before-after change.

^d The predicted growth rates are calculated as the slopes from log-linear regressions of logged number of individuals on weekly trends.

^e The differences in the predicted slopes and their 95% CI are used to test the before-after change.

National Council for Behavioral Health CEO survey, September 2020 – demand, capacity, revenue.

- 52% of organizations have seen demand increase for behavioral health services
- 50% of organizations that offer SUD services report demand has increased in the past 3 months
- 26% have terminated employees
- 24% have furloughed employees
- 43% have decreased staffing hours
- 54% have closed programs
- 65% have had to cancel, reschedule or turn away patients
- Organizations have lost an average 22.6% of their revenue
- 39% fear insolvency in the next six months

Impacts of COVID-19 on residential treatment programs for substance use disorder

Anna Pagano, Journal of Substance Abuse Treatment, 2020.

ABSTRACT

Introduction: The COVID-19 pandemic may present special challenges for residential substance use disorder (SUD) treatment facilities, which may lack infrastructure and support to implement infection control protocols while maintaining on-site treatment services. However, little is known about how residential SUD treatment programs are impacted by the COVID-19 pandemic.

Methods: This study conducted semi-structured interviews with 17 directors of 20 residential SUD treatment programs across California during the state's shelter-in-place order. The research team analyzed qualitative interview data thematically and coded them using ATLAS.ti software.

Findings: Thematic analyses identified six major themes: *program-level impacts*, *staff impacts*, *client impacts*, *use of telehealth*, *program needs*, and *positive effects*. "Program-level impacts" were decreased revenue from diminished client censuses and insufficient resources to implement infection control measures. "Staff impacts" included layoffs, furloughs, and increased physical and emotional fatigue. "Client impacts" were delayed treatment initiation; receipt of fewer services while in treatment; lower retention; and economic and psychosocial barriers to community re-entry. "Use of telehealth" included technical and interpersonal challenges associated with telehealth visits. "Program needs" were personal protective equipment (PPE), stimulus funding, hazard pay, and consistent public health guidance. "Positive effects" of the pandemic response included increased attention to hygiene and health, telehealth expansion, operational improvements, and official recognition of SUD treatment as an essential health care service.

Conclusion: Study findings highlight COVID-related threats to the survival of residential SUD treatment programs; retention of the SUD treatment workforce; and clients' SUD treatment outcomes. These findings also identify opportunities to improve SUD service delivery and suggest avenues of support for residential SUD treatment facilities during and after the COVID-19 pandemic.

- **20-60% decrease in client census**
- **Decreased client retention**
- **Reduced services, especially in-person group counseling**
- **Reduced reimbursement**
- **Staff physical and emotional fatigue**
- **Admission delays, early discharge, reduced services, isolation, job loss – impact on clients recovery**
- **Telehealth technical difficulties, internet bandwidth**
- **Financial assistance, client access to healthcare**
- **Access to PPE equipment**

A qualitative assessment of clinical transition experience to telemedicine for OUD treatment

Survey of ambulatory providers

Design

18 semi-structured interviews, April 2020

Baseline

11% use of telemedicine

COVID care delivery

72% offered no in-person visits

83% offered a combination of video and phone based visits

visits

20% telephone visits

Telemedicine criteria

High risk for COVID-19 related morbidity
distance from practice

In-person criteria

New patients
Recent relapse
h/o medication nonadherence/suspected diversion
lacked devices to support telemedicine
homelessness
Depot naltrexone administration (56%)
Co-morbid conditions

Most common model

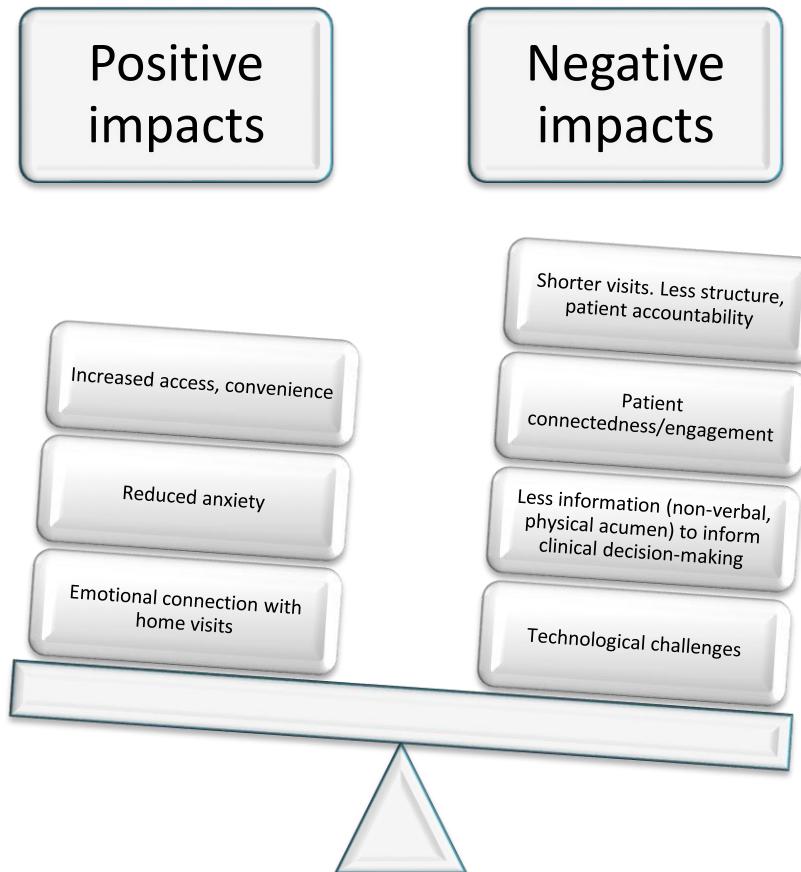
home based
less urine toxicology with stable patients
increased percentage of 30 day prescriptions

Participant characteristics.

Characteristic	N (%)
Profession	
Primary Care Physician	7 (38.9%)
Psychiatrist	6 (33.3%)
Nurse Practitioner	3 (16.7%)
Physician Assistant	2 (11.1%)
State	
NY	6 (33%)
FL	2 (11%)
IN	2 (11%)
PA	2 (11%)
AZ	1 (5.6%)
ID	1 (5.6%)
LA	1 (5.6%)
MI	1 (5.6%)
OH	1 (5.6%)
WA	1 (5.6%)
Primary practice setting	
Private practice	8 (44.4%)
Hospital primary care clinic	4 (22.2%)
Hospital outpatient behavioral health clinic	1 (5.6%)
Community health center (CHC, FQHC)	2 (11.1%)
Community behavioral health clinic	3 (16.7%)
Years in practice	
0-9	9 (50%)
10-19	2 (11.1%)
20-29	4 (22.2%)
30+	3 (16.7%)
Prior experience with telemedicine ^a	
Any prior experience (yes)	2 (11.1%)
OUD medications prescribed	
Buprenorphine ^b	17 (94.4%)
Naltrexone (injectable)	10 (55.6%)
Naltrexone (oral)	3 (16.7%)

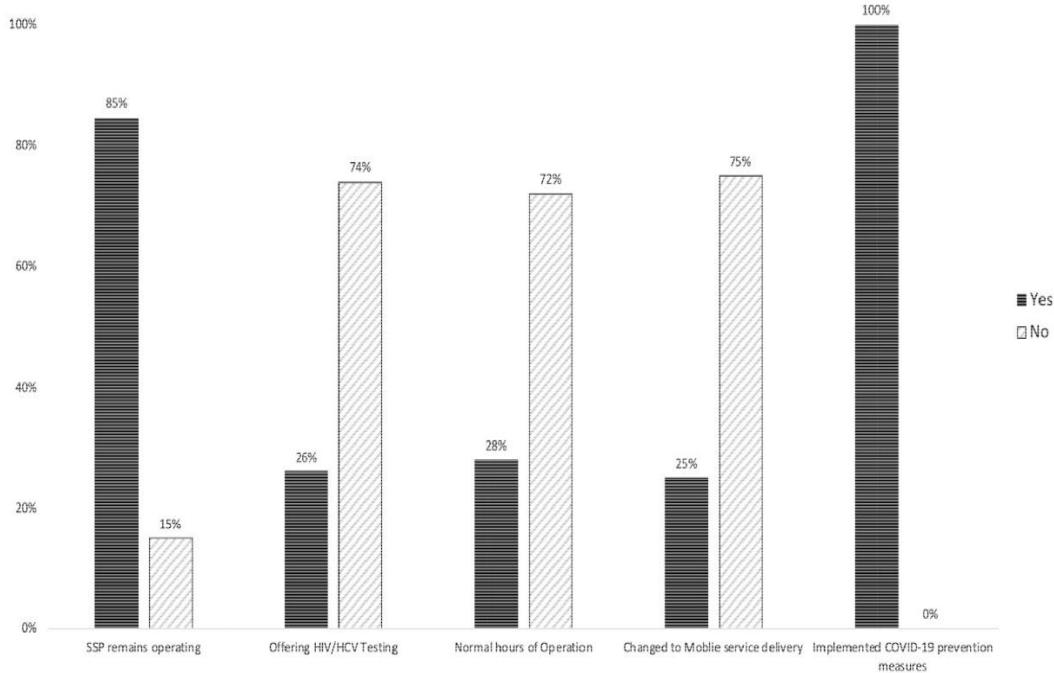
A qualitative assessment of clinical transition experience to telemedicine for OUD treatment

Quality Impacts of telemedicine



- **Shifting perceptions over time**
- **Negative consequences**
- **Lack of evidence on the comparative effectiveness of in-person vs telemedicine**
- **Experience with OUD medications, likelihood to transition to telemedicine**
- **Net impact of OUD telemedicine on quality and treatment adherence**
- **Which platform is best suited for OUD**
- **Critical tool during pandemic, role post-pandemic?**

Syringe Service Programs, operational and service delivery adaptations during COVID-19.



- 84.6% have remained operational
- 15.4% have discontinued all SSP operations
- 24.6% have switched to mobile delivery of new injection equipment
- 72.3% operating under restricted hours of operation
- 26.1% have continued providing on-site HIV/HCV testing, the majority have discontinued their medical services

Bartholomew TS, Nakamura N, Metsch LR, Tookes HE. Syringe services program (SSP) operational changes during the COVID-19 global outbreak. *Int J Drug Policy*. 2020;83:102821.

The COVID-19 pandemic and substance use

COVID-19 pandemic has not impacted the illicit drug industry, consequences on the overdose epidemic



DEA United States Drug Enforcement Administration

February 20, 2020

DEA launched Operation Crystal Shield, after identifying nine major methamphetamine trafficking hubs: Atlanta, Dallas, El Paso, Houston, Los Angeles, New Orleans, Phoenix, San Diego and St. Louis. Together these nine cities accounted for more than 75 percent of methamphetamine seized by DEA in 2019. From FY 2017 to FY 2019, DEA domestic seizures of methamphetamine increased 127 percent from 49,507 pounds to 112,146 pounds. During the same timeframe, the number of DEA arrests related to methamphetamine increased by nearly 20 percent.

September 22, 2020

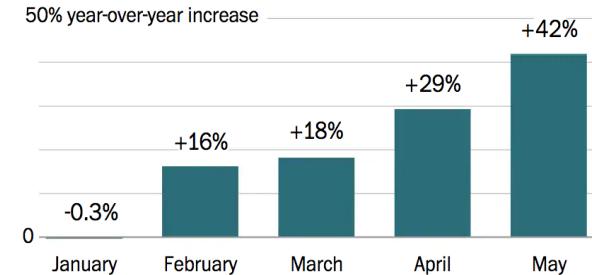
Department of Justice, through the Joint Criminal Opioid and Darknet Enforcement team, joined Europol to announce the results of Operation DisrupTor, a coordinated international effort to disrupt opioid trafficking on the Darknet, over 170 arrests worldwide.

Attorney General Barr and Acting Administrator Shea announced that in just six months, Operation Crystal Shield generated a total of more than 750 investigations, resulting in nearly 1,840 arrests and the seizure of more than 28,560 pounds of methamphetamine, \$43.3 million in drug proceeds, and 284 firearms

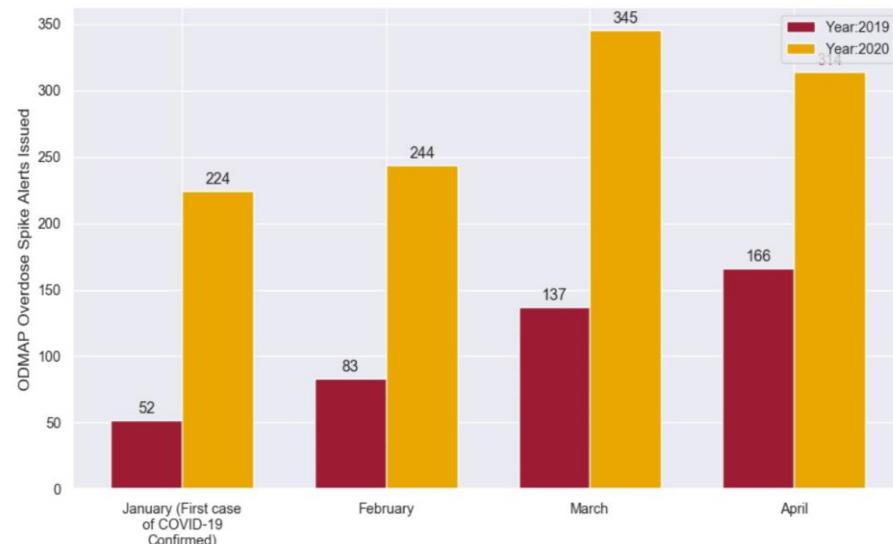
October 14, 2020

DEA Acting Administrator Timothy J. Shea and Los Angeles Field Division Special Agent in Charge Bill Bodner announced the seizure of 893 pounds of cocaine, 13 pounds of heroin, and 2,224 pounds of crystal methamphetamine, which is the largest domestic seizure of crystal methamphetamine in DEA history.

Overdoses increased up to 42% per month during the pandemic, as compared to the same months in 2019.



National ODMAP Submissions January-April 2019 and 2020 Comparison



MASSACHUSETTS
GENERAL HOSPITAL

PSYCHIATRY ACADEMY

<https://www.washingtonpost.com/health/2020/07/01/coronavirus-drug-overdose/>

<http://www.odmap.org/Content/docs/news/2020/ODMAP-Report-May-2020.pdf>

www.mghcme.org

Monthly retail sales of beer, wine, and liquor stores in the United States from 2017 to 2020 (in million U.S. dollars)

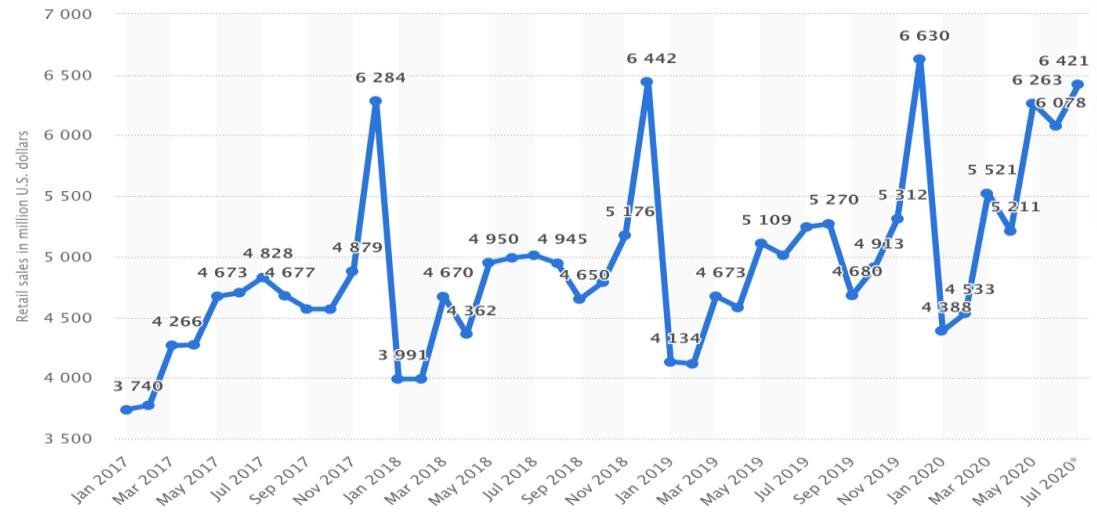


Figure 4. Percentage changes in per capita sales of spirits, wine, and beer (in gallons of ethanol) in April 2020 compared to the prior 3-year April average (i.e., average of April 2017, 2018, and 2019) in states with data available as of October 30, 2020.



- According to Nielsen's market data, total off-premise alcohol sales increased 24% during the pandemic.
- Online sales of alcohol skyrocketed, up 339%
- U.S. alcohol market needs to sustain 22% volume growth across all alcohol categories sold off-premise to maintain the level of sales of closed bars and restaurants

Pollard et al. Changes in Adult Alcohol Use and Consequences During the COVID-19 Pandemic in the US. *JAMA Network Open*, 2020.

Overall,

Frequency of alcohol consumption increased 0.74 days (95% CI, 0.33-1.15 days), representing an increase of 14% over the baseline of 5.48 days in 2019

Adults aged 30-59 years

- 0.93 days (95% CI, 0.36-1.51 days), an increase of 19% ♀
- 0.78 days (95% CI, 0.41-1.15 days), 17%↑ over the 2019 baseline of 4.58 days
- Significant increase of 0.18 days of heavy drinking (95% CI, 0.04-0.32 days), from a 2019 baseline of 0.44 days, 41%↑ over baseline. This equates to an increase of 1 day for 1 in 5 women
- Average increase in the Short Inventory of Problems scale of 0.09 (95% CI, 0.01-0.17 items), over the 2019 average baseline of 0.23, 39%↑, which is indicative of increased alcohol-related problems independent of consumption level for nearly 1 in 10 women

Non-Hispanic White individuals

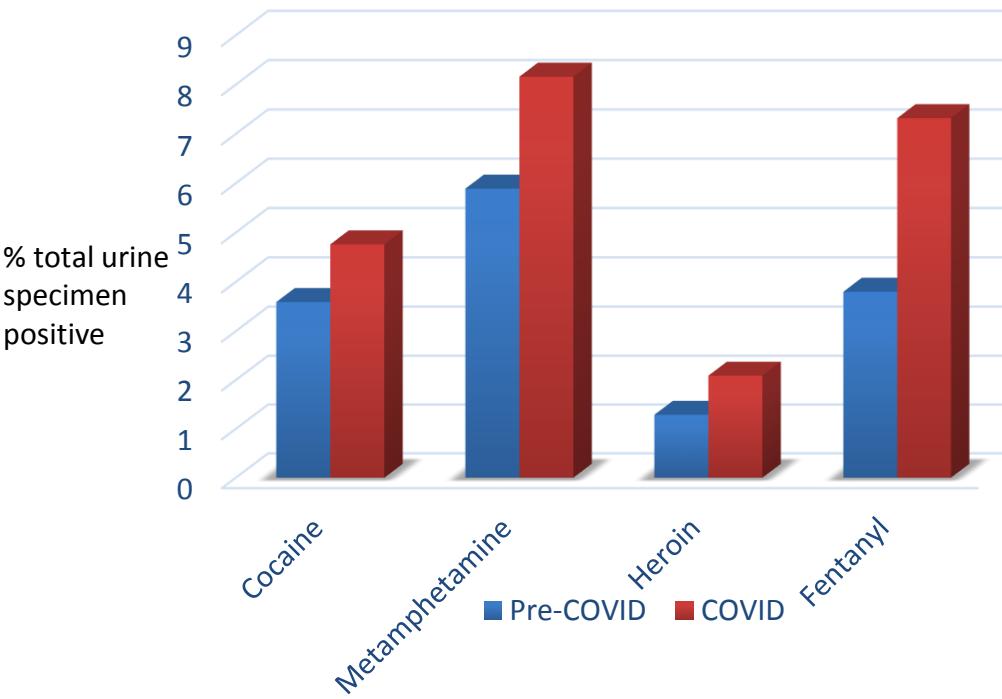
- 0.66 days (95% CI, 0.14 to 1.17 days), 10%↑ over the 2019 baseline of 6.46 days

On average,

Alcohol was consumed 1 day more per month by 3 of 4 adults

Health measure	Unit of measure (95% CI)		Age, y		Race/ethnicity			Other	Hispanic
	Overall	Men	Women	30-59	60-80	Non-Hispanic White	Non-Hispanic Black		
Days consumed alcohol, past 30 d									
Change from 2019	0.74 (0.33 to 1.15)	0.69 (-0.06 to 1.44)	0.78 (0.41 to 1.15)	0.93 (0.36 to 1.51)	0.37 (-0.11 to 0.84)	0.66 (0.14 to 1.17)	0.85 (-0.08 to 1.77)	0.94 (-0.38 to 2.26)	0.89 (-0.24 to 2.03)
Baseline days	5.48 (4.88 to 6.08)	6.45 (5.37 to 7.52)	4.58 (4.01 to 5.15)	4.98 (4.19 to 5.76)	6.41 (5.52 to 7.31)	6.46 (5.64 to 7.27)	3.13 (1.89 to 4.38)	4.11 (2.41 to 5.81)	3.91 (2.78 to 5.04)
No. of drinks, past 30 d									
Change from 2019	0.06 (-4.00 to 4.13)	1.00 (-6.13 to 8.14)	-0.81 (-5.04 to 3.43)	2.82 (-1.11 to 6.75)	-5.09 (-14.09 to 3.90)	0.16 (-4.57 to 4.90)	5.75 (-4.96 to 16.47)	5.52 (-3.48 to 14.53)	-5.95 (-19.15 to 7.25)
Baseline drinks, past 30 d	18.47 (14.01 to 22.84)	22.08 (15.04 to 29.12)	15.13 (9.82 to 20.45)	16.38 (11.83 to 20.93)	22.39 (13.20 to 31.58)	18.57 (13.68 to 23.45)	18.31 (0.73 to 35.89)	9.38 (5.53 to 13.24)	22.5 (8.80 to 36.21)
Heavy drinking days, past 30 d^a									
Change from 2019	0.13 (-0.09 to 0.34)	0.07 (-0.36 to 0.49)	0.18 (0.04 to 0.32)	0.23 (-0.05 to 0.51)	-0.07 (-0.39 to 0.25)	0.16 (-0.03 to 0.35)	0.27 (-0.53 to 1.06)	-0.49 (-1.41 to 0.44)	0.14 (-0.67 to 0.96)
Baseline heavy drinking days, past 30 d	0.69 (0.46 to 0.92)	0.95 (0.55 to 1.36)	0.44 (0.22 to 0.66)	0.79 (0.48 to 1.10)	0.50 (0.19 to 0.80)	0.44 (0.30 to 0.58)	1.02 (-0.03 to 2.07)	1.37 (-0.58 to 0.11)	1.22 (0.36 to 2.08)
SIP scale, past 3 mo									
Change from 2019	0.09 (-0.02 to 0.21)	0.10 (-0.13 to 0.33)	0.09 (0.01 to 0.17)	0.13 (-0.05 to 0.31)	0.03 (-0.04 to 0.10)	0.05 (-0.04 to 0.14)	-0.06 (-0.20 to 0.08)	-0.24 (-0.58 to 0.11)	0.48 (-0.07 to 1.04)
Baseline SIP, past 3 mo	0.30 (0.22 to 0.37)	0.37 (0.25 to 0.50)	0.23 (0.15 to 0.30)	0.38 (0.27 to 0.48)	0.15 (0.07 to 0.22)	0.31 (-0.22 to 0.41)	0.29 (0.13 to 0.45)	0.32 (-0.03 to 0.67)	0.22 (0.06 to 0.37)
No. ^c	1520 to 1529	648 to 652	868 to 877	812 to 820	701 to 710	1085 to 1090	147	76	211 to 213

COVID-19 pandemic associated significantly with urine toxicology positivity



Adjusted OR

Cocaine	1.19
Methamphetamine	1.23
Heroin	1.33
Fentanyl	1.67

Table 2. Logistic Regression Analysis for Populations With Positive Test Results for Selected Drugs Before vs During the COVID-19 Pandemic

US Census region	Cocaine		Fentanyl		Heroin		Methamphetamine	
	Adjusted OR (95% CI) ^a	P value ^b	Adjusted OR (95% CI) ^a	P value ^b	Adjusted OR (95% CI) ^a	P value ^b	Adjusted OR (95% CI) ^a	P value ^b
East North Central ^c	1.31 (1.14-1.51)	<.001	1.93 (1.70-2.20)	<.001	1.59 (1.18-2.14)	<.001	1.34 (1.16-1.56)	<.001
East South Central ^d	1.20 (0.91-1.58)	.07	1.99 (1.62-2.45)	<.001	1.58 (1.01-2.48)	.04	1.26 (1.05-1.53)	.002
Mid-Atlantic ^e	1.40 (0.97-2.03)	.12	2.04 (1.22-3.39)	<.001	2.36 (0.71-7.81)	.53	1.42 (0.87-2.32)	.55
Mountain ^f	1.31 (0.92-1.86)	.42	1.65 (1.25-2.19)	<.001	1.50 (1.04-2.15)	.01	1.51 (1.25-1.82)	<.001
New England ^g	1.27 (0.71-2.27)	.99	1.86 (1.02-3.39)	.03	0.89 (0.10-8.00)	>.99	1.14 (0.52-2.51)	>.99
Pacific ^h	1.22 (0.85-1.77)	.90	1.68 (1.21-2.33)	<.001	1.44 (1.12-1.85)	<.001	1.18 (1.00-1.37)	.04
South Atlantic ⁱ	1.08 (0.84-1.38)	>.99	1.33 (1.00-1.77)	.06	0.63 (0.31-1.27)	.68	0.92 (0.68-1.24)	>.99
West North Central ^j	0.84 (0.49-1.42)	>.99	1.11 (0.77-1.62)	>.99	0.94 (0.49-1.81)	>.99	0.96 (0.74-1.25)	>.99
West South Central ^k	1.23 (0.73-2.06)	>.99	1.69 (0.87-3.30)	.34	1.99 (0.67-5.93)	.76	1.46 (1.02-2.08)	.03
Total	1.19 (1.11-1.29)	<.001	1.67 (1.55-1.81)	<.001	1.33 (1.11-1.61)	.002	1.23 (1.14-1.32)	<.001

Abbreviations: COVID-19, coronavirus disease 2019; OR, odds ratio.

^a The ORs reflect the odds of testing positive for any of the selected drugs before vs during the COVID-19 pandemic and the 95% CIs were estimated using the Sidak-corrected method.

^b The P values were corrected using the Tukey method.

^c Includes Illinois, Indiana, Michigan, Ohio, and Wisconsin.

^d Includes Alabama, Kentucky, Mississippi, and Tennessee.

^e Includes New Jersey, New York, and Pennsylvania.

^f Includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

^g Includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

^h Includes Alaska, California, Hawaii, Oregon, and Washington.

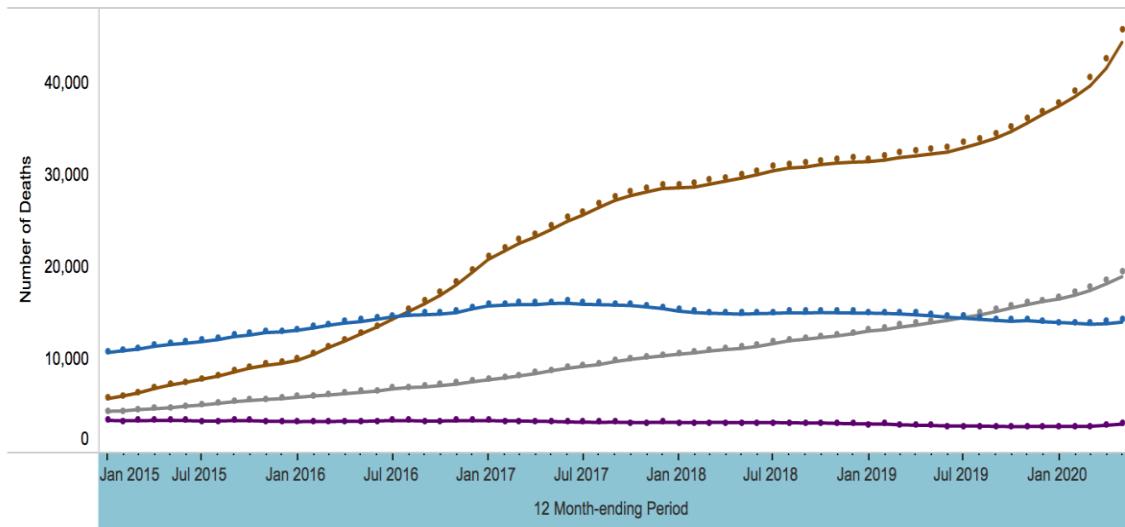
ⁱ Includes Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, District of Columbia, and West Virginia.

^j Includes Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

^k Includes Arkansas, Louisiana, Oklahoma, and Texas.

Methadone related overdoses stable during early phases of COVID-19 pandemic

12-month Provisional Number of Overdose Deaths



Legend for Drug or Drug Class

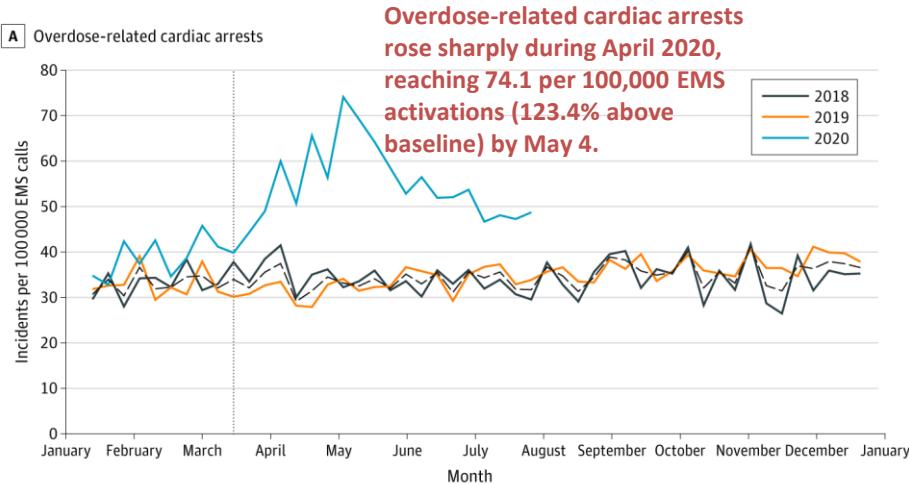


Methadone ODs

Provisional drug overdose death counts. National Center for Health Statistics. 2020.

Overdose-Related Cardiac Arrests Observed by Emergency Medical Services During the US COVID-19 Epidemic

A Overdose-related cardiac arrests



B Change in mobility and opioid-related incidents

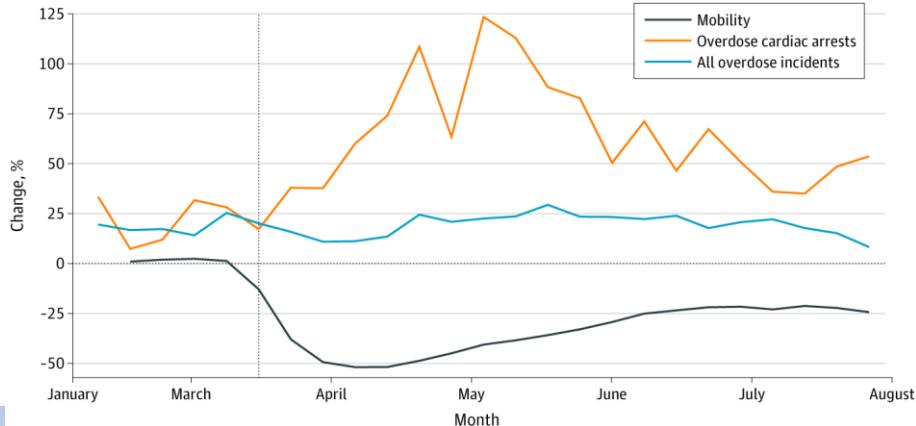


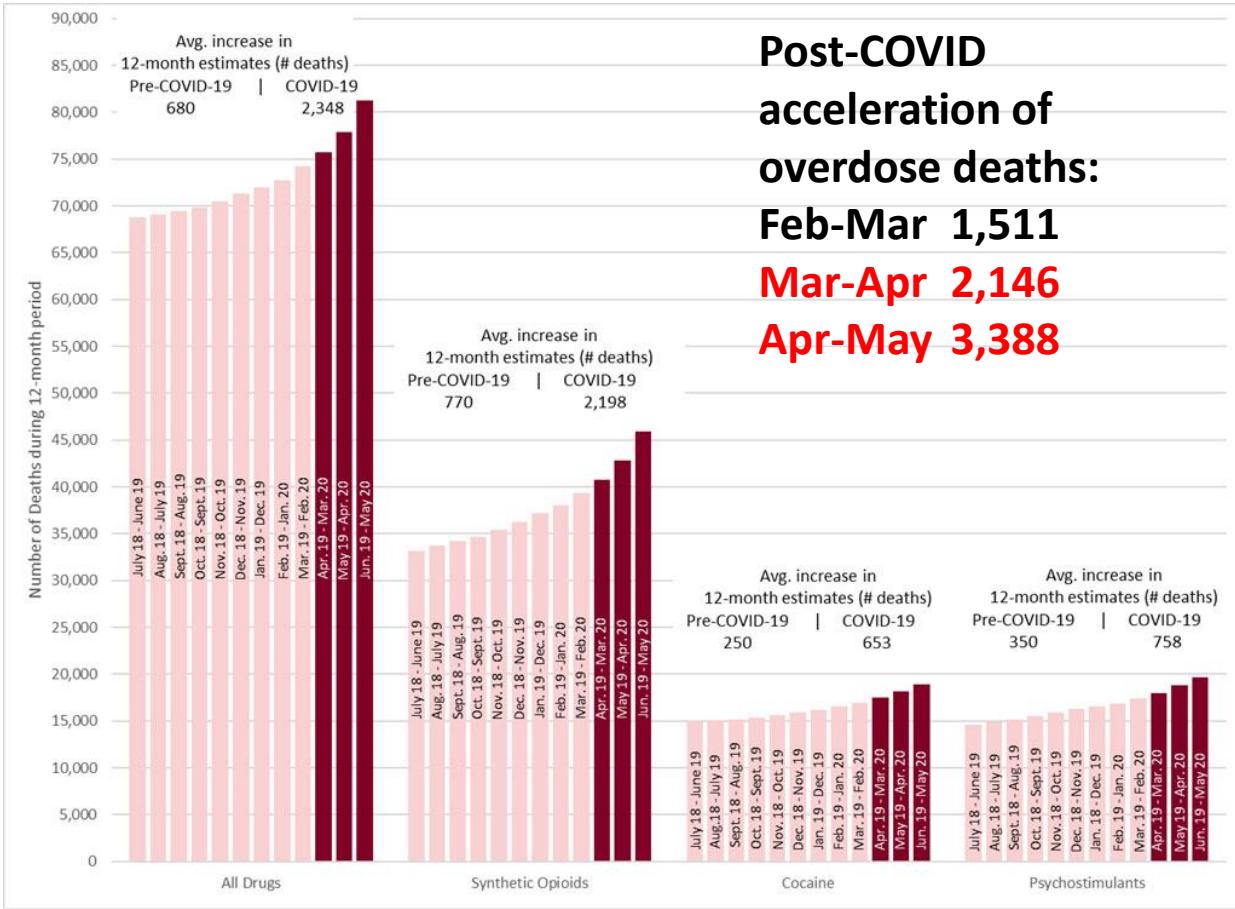
Table. Characteristics of the National EMS Information System Database, 2018-2020

Characteristic ^a	EMS activations, No. (%) in millions		
	2020 (n = 25.9)	2019 (n = 36.1)	2018 (n = 26.3)
Age, y			
No.	21 904 630	30 560 105	22 178 238
≤17	1.2 (5.5)	1.9 (6.2)	1.4 (6.3)
18-60	9.7 (44.3)	13.3 (43.5)	9.8 (43.9)
≥61	11.0 (50.2)	15.4 (50.3)	11.0 (49.3)
Sex			
No.	22 028 271	30 803 060	22 512 209
Female	11.1 (50.5)	16.0 (51.8)	11.7 (52.1)
Male	10.9 (49.5)	14.8 (48.2)	10.8 (47.9)
Race/ethnicity			
No.	17 141 837	25 217 659	18 423 105
American Indian or Alaska Native	0.2 (1.1)	0.3 (1.1)	0.2 (1.0)
Asian	0.2 (1.2)	0.3 (1.3)	0.2 (1.3)
Black or African American	4.4 (25.4)	6.3 (25.0)	4.4 (23.9)
Hispanic or Latino	1.5 (8.8)	2.2 (8.8)	1.6 (8.6)
Native Hawaiian or other Pacific Islander	0.1 (0.3)	0.1 (0.4)	0.1 (0.4)
White	10.8 (63.2)	16.0 (63.4)	11.9 (64.8)
Census division			
No.	25 429 370	35 382 385	25 714 306
South Atlantic	8.0 (31.4)	11.6 (32.7)	7.4 (28.7)
Middle Atlantic	3.6 (14.2)	3.3 (8.9)	2.8 (10.9)
West South Central	3.5 (13.9)	4.7 (13.2)	3.5 (13.5)
Pacific	2.6 (10.4)	4.8 (13.6)	3.3 (12.8)
East North Central	2.1 (8.1)	3.5 (9.8)	2.8 (10.8)
Mountain	2.0 (7.8)	3.0 (8.5)	2.3 (9.1)
East South Central	1.6 (6.3)	1.9 (5.4)	1.6 (6.1)
West North Central	1.1 (4.4)	1.6 (4.4)	1.2 (4.6)
New England	0.9 (3.5)	1.2 (3.5)	0.9 (3.5)
Territories	<0.1 (0)	<0.1 (0.1)	<0.1 (0.1)

^a Patient age category, sex, race/ethnicity, and census division where the incident occurred are shown. Counts for 2020 represent January through August. Missing values can be ascertained as the difference between each year's total and the variable-specific total.

Friedman et al. Overdose-Related Cardiac Arrests Observed by Emergency Medical Services During the US COVID-19 Epidemic. *JAMA Psychiatry*. 2020.

www.mghcme.org



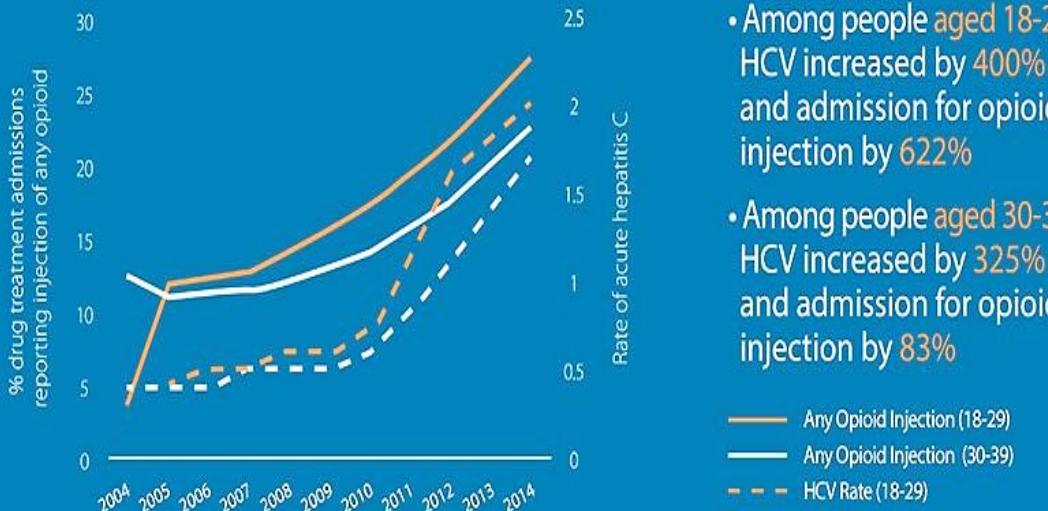
Post-COVID acceleration of overdose deaths:

Feb-Mar 1,511
Mar-Apr 2,146
Apr-May 3,388

- One-month increases, respectively for the 12-month periods, are the largest increases recorded since January 2015.
- Overdose deaths involving cocaine and psychostimulants 6/2019 – 5/2020 increased by 26.5% and 34.8%, respectively.

Increases in acute hepatitis C infection related to a growing opioid epidemic and associated injection drug use

HEPATITIS C AND OPIOID INJECTION ROSE DRAMATICALLY IN YOUNGER AMERICANS FROM 2004-2014



Age 18-29:

- 400%↑ in acute hepatitis C
- 817%↑ in admissions for injection of prescription opioids
- 600%↑ in admissions for heroin injection

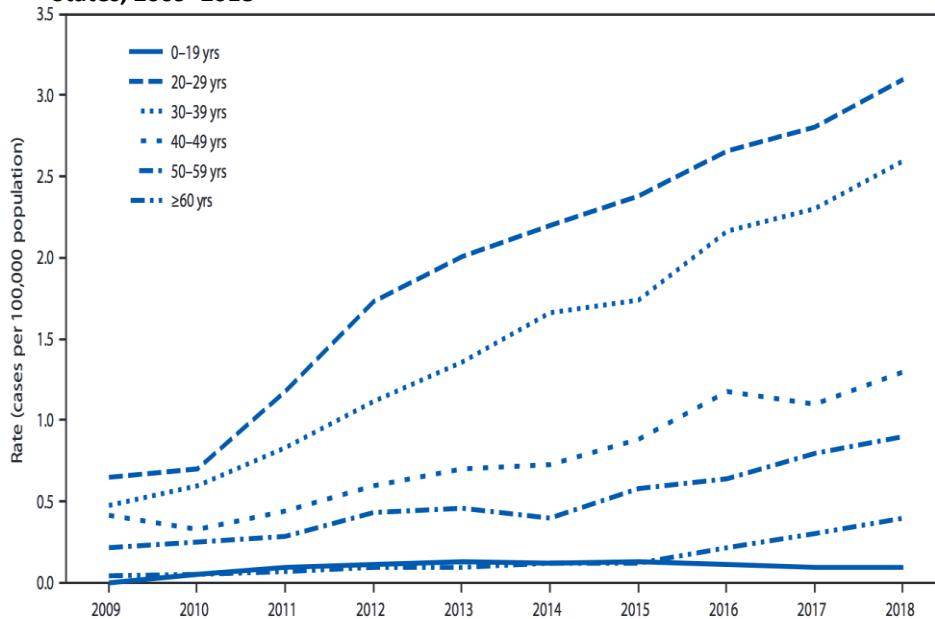
Age 30-39:

- 325%↑ in acute hepatitis C
- 169%↑ in admissions for injection of prescription opioids
- 77%↑ in admissions for heroin injection

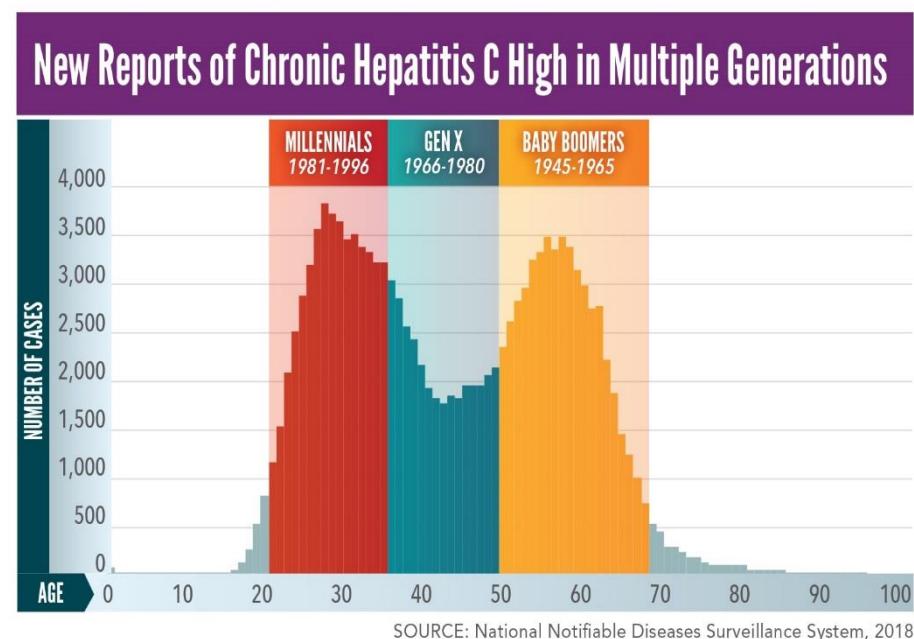
<https://www.cdc.gov/nchhstp/newsroom/2017/hepatitis-c-and-opioid-injection.html>

COVID-19, substance use and hepatitis C

Rate of acute hepatitis C cases, by year and age group —
National Notifiable Diseases Surveillance System, United
States, 2009–2018



Newly reported chronic hepatitis C cases, by sex and age —
National Notifiable Diseases Surveillance System, United States, 2018



Ryerson et al. *Vital Signs: Newly Reported Acute and Chronic Hepatitis C Cases — United States, 2009–2018*. MMWR Morb Mortal Wkly Rep 2020;69:399–404.

Impact of COVID-19 pandemic on a hospital system hepatitis C testing capacity

Large safety net, academic facility, approximately 1.1 million patient visits per year, primary safety net care provider, >70% of patients identify as minority; >50% identify as African American; >20% identify as Hispanic/Latino. Approximately 25% patients are homeless and >30% do not speak English.

	Before	After	% Difference
Hospital-wide			
Mean daily HCV Ab tests (SD)	45.7 (24.7)	22.8 (8.9)	-50.1
Mean daily new HCV+ identified (SD)	1.9 (1.3)	1.5 (1.5)	-21.1
Total HCV Ab tests	4847	2442	-49.6
New HCV+ identified	159	92	-42.1
Ambulatory only			
Mean daily HCV Ab tests (SD)	30.7 (22.7)	8.5 (7.6)	-72.3
Mean daily new HCV+ identified (SD)	1.9 (1.8)	0.5 (0.7)	-73.7
Total HCV Ab tests	3249	912	-71.9
New HCV+ identified	60	22	-63.3

- **50% decrease in hospital-wide hepatitis C testing by 50%**
- **60% decrease in new hepatitis C diagnoses**
- **Ambulatory hepatitis C testing 71.9%↓**
- **Inpatient/ED hepatitis C testing 4.3%↓**

Final thoughts

- The long-term impacts of the COVID-19 pandemic are unknown but current data suggests opioid and stimulant related deaths have accelerated.
- COVID-19 has exposed the syndemic of health disparities, economic disparities, systemic racism that plagues individuals with substance use disorders.
- The COVID-19 pandemic has exacerbated the gaps in the substance use industry, likely worsening the opioid and stimulant epidemics, and injection use associated infectious complications.
- Telemedicine expansion, payment reform, controlled substance use exemptions/waivers and a patient-centered approach has benefited individuals with opioid use disorders.
- Telemedicine has rapidly evolved as a critical component of substance use care delivery and treatment, and will be an effective modality post pandemic.
- The COVID-19 pandemic has caused the transformation of substance use care, partially addressing the suboptimal treatment capacity of the industry and the pervasive stigma and discrimination towards individuals with substance use disorders.
- The COVID-19 pandemic is an opportunity to modernize the substance use care industry, to develop strategies to standardize evidence-based care, to mandate universal treatment and medication access, to address and reduce racial and geographic disparities in access to care.