

Letter in Reply

To the Editor:

We appreciate the interest of Reisfield et al¹ in our case report, “The Role of Alcohol Biomarkers in Detecting a Physician’s COVID-19-Related Acute Stress Response: A Case Report,”² which underscores the complexity of work performed by those who specialize in professional health monitoring. We acknowledge that when an individual presents with an ethyl glucuronide (EtG) level over 1500 ng/mL and ethyl sulfate (EtS) level approaching 400 ng/mL, by far the most likely explanation is intentional ingestion of beverage alcohol. Indeed, we conceded in the initial report that we could not conclusively determine that Dr. X did not purposefully ingest alcohol. However, after taking into account all available clinical data and the limited published research findings in this area, neither can one conclusively state that he did. Adequate monitoring of healthcare workers, both before and especially during the COVID-19 era, involves much more than reducing a person’s struggles to a single urine drug test (UDT) lab result, whether positive or negative.

In fact, our primary goal in sharing the case was to highlight how the professional health monitoring process served its intended purpose, identifying aberrant behavior. By utilizing the positive UDT result as an opportunity to further explore Dr. X’s current situation and functioning, rather than simply a reason for disciplinary action, we uncovered a previously undiagnosed trauma history and posttraumatic stress response. As a result, we were able to connect him with appropriate resources and treatment. Whether Dr. X consumed alcohol or not, this method resulted in a successful clinical outcome that may not have been realized absent his involvement in the monitoring process.

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We regret that our intended focus of the case was insufficiently emphasized and may have been overshadowed by discussion of the limited research documenting ethanol biomarker levels following cutaneous exposure to hand sanitizer. The data from studies involving purposeful intensive exposure to hand sanitizer in a controlled research paradigm can be instructive when making clinical determinations about purported “incidental exposure” to ethanol-based sanitizing products in the workplace. Results of such studies suggested that the EtG results we observed were feasible without beverage alcohol consumption. This is despite the fact that the studies involved lower quantity^{3,4} and frequency² of use, with lower ethanol concentration of the sanitizer,⁴ and did not include the more direct route of exposure via sustained inhalation of ethanol vapors,^{3,4} which we hypothesized to be the primary contributor to the observed UDT results in the current case, based on the findings of the Arndt et al³ study. However, as noted by Reisfield et al, an alternative interpretation of the UDT results may also be drawn. Given the dearth of published data involving ethanol vapor inhalation, we look forward to results of future research quantifying typical EtG/EtS results and ratios specific to this scenario, which would offer more conclusive standards and enhance clinical guidance for future cases.

Finally, we acknowledge the confusion that may have arisen from our exclusion of the normalized EtG/EtS values after adjusting for Dr. X’s low creatinine level. This information was removed from the report at the request of a peer reviewer who felt it overly complicated the case presentation, particularly when the intended focus of the report was uncovering the posttraumatic stress reaction. We appreciate the opportunity to clarify these points and to reiterate the importance of the professional health monitoring process in both supporting healthcare heroes on the front lines of the COVID-19 pandemic, and safeguarding the patients they serve.

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Factors Associated With Drug Overdoses During the COVID-19 Pandemic

To the Editor:

We read with interest your *Journal’s* commentary describing the impact of the COVID-19 pandemic on access to needle and syringe programs¹ and recommendations for policies to improve the treatment of substance use disorders (SUDs) with telehealth.² Here, we consider these topics in the context of overdoses, treatment, and service access during the pandemic.

To address potentially catastrophic interactions between the overdose epidemic and COVID-19 pandemic, clinicians have rapidly provided alternative and additional services. However, preliminary evidence suggests overdoses may be increasing.³ Between April 27 and

May 13, 2020, the Addiction Policy Forum fielded to their US network of patients, families, and survivors of SUDs an IRB-approved anonymized survey (n = 1148 consenting respondents) assessing COVID-19-related impacts.⁴ To identify possible factors linked to overdoses, we describe responses from individuals experiencing overdoses during the pandemic (Table 1).

Forty-seven individuals (4.17%) reported that they or their family members had experienced an overdose during the COVID-19 period. The most commonly reported educational attainment among individuals reporting an overdose was some college but no degree (34%). Fifty-five percent of individuals who overdosed reported using nicotine, 72% reported opioid use. Among those reporting an overdose, 53% identified as a family member of someone impacted by substance use, 38% identified as in recovery, and 21% reported current use. Regarding COVID-19 status, 72% reported they were never tested and had no symptoms or diagnosis.

Individuals who reported an overdose reported changes or disruptions in treatment (67%) and that substance use had increased due to the pandemic

(61%). Some of these individuals reported access to greater take-home doses (13%) and curbside medication pickup (13%), but also reported inability to access naloxone (15%), needle exchange services (15%), or general needed services (31%).

Survey limitations include the small convenience sample and online self-report format which did not distinguish between individuals who had personally overdosed and those whose family members had overdosed. These findings may not indicate which

TABLE 1. Demographic and COVID-19 Variables

	None (n = 1079)	Overdose (n = 47)	P, (OR)*
Sex (%)			0.942
Female	677 (65.6)	28 (70.0)	
Male	333 (32.3)	12 (30.0)	
Other	22 (2.1)	0 (0.0)	
Age (%)			0.334
18–25	43 (4.2)	3 (7.3)	
26–40	344 (33.3)	16 (39.0)	
41–60	467 (45.2)	18 (43.9)	
61–64	90 (8.7)	1 (2.4)	
65–74	80 (7.7)	2 (4.9)	
75 yrs or older	9 (0.9)	1 (2.4)	
Hispanic or Latino Ethnicity (%)	81 (7.9)	1 (2.3)	0.246 (0.28)
Race/Ethnicity (%)			0.176
American Indian/Alaskan Native	17 (1.7)	0 (0.0)	
Asian	12 (1.2)	1 (2.3)	
Black or African American	46 (4.5)	1 (2.3)	
Native Hawaiian/Pacific Islander	1 (0.1)	1 (2.3)	
Other	47 (4.6)	2 (4.7)	
White	900 (88.0)	38 (88.4)	
Education (%)			0.018
Less than high school	11 (1.1)	1 (2.3)	
High school/equivalent	120 (11.6)	6 (14.0)	
Some college, no degree	242 (23.5)	15 (34.9)	
Associate degree	108 (10.5)	9 (20.9)	
Bachelor's degree	283 (27.4)	6 (14.0)	
Graduate or professional degree	267 (25.9)	6 (14.0)	
Involved Substances			
Polysubstance (%)	704 (66.0)	36 (76.6)	0.156 (1.68)
Alcohol (%)	700 (65.6)	30 (63.8)	0.876 (0.93)
Nicotine (%)	426 (39.9)	26 (55.3)	0.047 (1.86)
Stimulants (%)	450 (42.2)	25 (53.2)	0.174 (1.56)
Opioids (%)	492 (46.1)	34 (72.3)	<0.001 (3.05)
Sedatives (%)	228 (21.4)	11 (23.4)	0.718 (0.92)
Marijuana (%)	406 (38.1)	17 (36.2)	0.879 (1.12)
Other substances (%)	95 (8.9)	7 (14.9)	0.189 (1.79)
Personal Involvement			
Family member (%)	423 (39.4)	25 (53.2)	0.068 (1.75)
In recovery (%)	582 (54.2)	18 (38.3)	0.037 (0.53)
Currently using (%)	111 (10.3)	10 (21.3)	0.028 (2.34)
In treatment (%)	80 (7.4)	4 (8.5)	0.775 (1.15)
COVID status (%)			0.030
Never tested, no symptoms	915 (85.0)	34 (72.3)	
Never tested, yes symptoms	96 (8.9)	5 (10.6)	
Tested and diagnosed	2 (0.2)	0 (0.0)	
Tested negative	64 (5.9)	8 (17.0)	
COVID impacts			
Substance use has increased (%)	203 (19.0)	26 (60.5)	<0.001 (6.52)
Yes, COVID impacted services (%)	340 (33.1)	28 (66.7)	<0.001 (4.04)
Accessed telehealth (%)	188 (18.4)	11 (28.2)	0.141 (1.75)
Accessed more doses (%)	30 (2.9)	5 (12.8)	0.007 (4.85)
Accessed curbside medication (%)	43 (4.2)	5 (12.8)	0.027 (3.34)
Unable to access naloxone (%)	23 (2.2)	6 (15.4)	<0.001 (7.88)
Unable to access syringes (%)	18 (1.8)	6 (15.4)	<0.001 (10.1)
Unable to access needed services (%)	139 (13.6)	12 (30.8)	0.008 (2.82)

*P value calculated by Fisher exact test due to small cell sizes. Odds ratios given for 2 × 2 tables.

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individuals may have been at greater risk for overdose during this period, as we did not recruit matched cohorts of equivalent baseline overdose risks. Rather, they suggest some initial factors to explore in future research of the relationship between COVID-19 and overdoses. They suggest that educational attainment, a proxy for socioeconomic status, is linked to overdose during the COVID-19 period, as has previously been shown in analyses of overdoses before the COVID-19 pandemic.⁵ The information suggests that disruptions in care and increased substance use are important to target to reduce likelihoods of overdoses. Importantly, naloxone and syringe exchange disruptions were more common among those who reported an overdose, as was usage of spatially distanced services such as curbside pick-up and extended take-home medications. This underscores the need to expand access to naloxone and other overdose reduction services and evaluate the efficacies of specific interventions as in-person interactions are reduced.

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Letter in Reply

In Reply:

Addiction Policy Forum surveys provide valuable initial evidence on substance use during the COVID-19 pandemic.^{1,2} Of particular interest are findings that persons (or their family members) who report an overdose during the pandemic were more likely to use curbside pick-up services and extended take-home medications,¹ and that persons using multiple substances were more likely to use telehealth services than persons using a single substance.²

At first glance, these findings might suggest that decreases in quality of care intrinsic to remote forms of care delivery, notably telehealth, led to increases in overdoses. We caution readers against such an interpretation, however. Evidence on the relative clinical effectiveness of telehealth for substance use disorder treatment remains scarce.³ The surveys’ findings may reflect an increased demand for treatment among

persons that are at increased risk of an overdose. That is, persons with increased overdose risk may have more aggressively sought treatment during the pandemic and were thus more likely to use curbside pick-up services, extended take-home medications, and telehealth. The survey results thus further highlight the urgent need to determine the relative effectiveness of remote forms of substance use disorder treatment.⁴

An unequivocally concerning result of the surveys is that persons who experienced an overdose had trouble accessing naloxone and syringe services.¹ The pandemic has increased access barriers to these services.⁵ Policy-makers should make every effort to incorporate naloxone and syringe delivery into programs persons with substance use disorder already use—curbside pick-up among them¹—to mitigate access barriers to these critical services.

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