

Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.

eMethods

Clinician Variation in UDS Completion

We calculated rates of UDS completion for each clinician and month in care, for months one through six, as follows. For each clinician, we calculated the total amount of patient time associated with each month in care (defined using 30-day intervals from the start of treatment). For example, if a clinician had a panel of only two patients, one who was retained for 90 days and another who was retained for 180 days, they would have 60 days of patient-time for months 1-3 and 30 days of patient-time for months 4-6. We then calculated the total number of UDS completed among a clinician's patients for each month in care. The rate of UDS completion for each clinician and month in care was then calculated as the total number of UDS completed per one year of patient time for a given clinician and month in care. Clinician months in care were excluded if they had less than 180 days of patient-time.

We then summarized the clinician rates of UDS completion for each month in care

We observed variation in rates of UDS completion across clinicians and months in care, which is presented in eTable 2 (and Figure 1).

eTable 1: U.S. state of all patients (n=3,395)

U.S. state	N (%)
Pennsylvania	1,476 (43.5%)
New York	1,033 (30.4%)
Florida	287 (8.5%)
Maryland	98 (2.9%)
Texas	87 (2.6%)
California	79 (2.3%)
Connecticut	74 (2.2%)
New Jersey	67 (2.0%)
Arizona	60 (1.8%)
Virginia	58 (1.7%)
Maine	32 (0.9%)
Vermont	25 (0.7%)
Washington	14 (0.4%)
Montana	<10

eTable 2: Clinician rates of completed UDS per patient year, by month in care

		Completed UDS per patient-month	
Month in care	Number of clinicians	Mean (SD)	Median (IQR)
One	44	1.18 (0.43)	1.13 (0.86-1.32)
Two	43	0.61 (0.28)	0.6 (0.41-0.81)
Three	41	0.44 (0.23)	0.45 (0.31-0.53)
Four	40	0.34 (0.2)	0.36 (0.24-0.43)
Five	40	0.36 (0.17)	0.35 (0.27-0.48)
Six	39	0.33 (0.14)	0.32 (0.27-0.41)

eTable 3: Urine drug screen results during baseline (first urine drug screen within 30 days of initiating treatment) and follow-up (closest urine drug screen to 180 days after initiating treatment, between 150 and 210 days after initiating treatment) (n=1,178)

Drug	Baseline N (%)	Follow-up N (%)	p-value*
Buprenorphine	1,140 (96.8%)	1,160 (98.5%)	0.01
Opioids	90 (7.6%)	42 (3.6%)	<0.001
Fentanyl	46 (3.9%)	19 (1.6%)	0.001
Methadone	9 (0.8%)	3 (0.3%)	0.15
Oxycodone	27 (2.3%)	16 (1.4%)	0.08
Tramadol	7 (0.6%)	5 (0.4%)	0.75
Other opioids	23 (2.0%)	6 (0.5%)	0.001
Methamphetamine	52 (4.4%)	43 (3.7%)	0.22
Cocaine	44 (3.7%)	32 (2.7%)	0.11
Benzodiazepines	105 (8.9%)	82 (7.0%)	0.030
Amphetamines	115 (9.8%)	123 (10.4%)	0.51
Alcohol	148 (12.6%)	141 (12.0%)	0.69
Cannabis	440 (37.4%)	441 (37.4%)	1.00

*p-values calculated using McNemar's tests.

eTable 4: Urine drug screen results during baseline (first urine drug screen within 30 days of initiating treatment) and follow-up (closest urine drug screen to 180 days after initiating treatment, between 90 and 270 days after initiating treatment) (n=1,904)

Drug	Baseline N (%)	Follow-up N (%)	p-value*
Buprenorphine	1,845 (96.9%)	1,876 (98.5%)	0.001
Opioids	150 (7.9%)	63 (3.3%)	<0.001
Fentanyl	82 (4.3%)	31 (1.6%)	<0.001
Methadone	15 (0.8%)	4 (0.2%)	0.02
Oxycodone	41 (2.2%)	22 (1.2%)	0.009
Tramadol	9 (0.5%)	6 (0.3%)	0.58
Other opioids	34 (1.8%)	11 (0.6%)	<0.001
Methamphetamine	75 (3.9%)	58 (3.0%)	0.04
Cocaine	67 (3.5%)	40 (2.1%)	0.002
Benzodiazepines	169 (8.9%)	125 (6.6%)	0.001
Amphetamines	175 (9.2%)	198 (10.4%)	0.091
Alcohol	241 (12.7%)	230 (12.1%)	0.55
Cannabis	733 (38.5%)	714 (37.5%)	0.34

*p-values calculated using McNemar's tests.

eTable 5: Urine drug screen results during baseline (within 30 days of initiating treatment) by whether or not patient has a urine drug screen during follow-up (between 120 and 240 days after initiating treatment) (n=2,782)

Drug	Has baseline and follow-up urine drug screen (n=1,754) N (%)	Does not have baseline and follow-up urine drug screen (n=1,028) N (%)	p-value*
Buprenorphine	1,699 (96.9%)	974 (94.7%)	0.005
Opioids	138 (7.9%)	126 (12.3%)	<0.001
Fentanyl	76 (4.3%)	86 (8.4%)	<0.001
Methadone	15 (0.9%)	7 (0.7%)	0.6
Oxycodone	36 (2.1%)	27 (2.6%)	0.3
Tramadol	8 (0.5%)	8 (0.8%)	0.3
Other opioids	33 (1.9%)	29 (2.8%)	0.11
Methamphetamine	66 (3.8%)	71 (6.9%)	<0.001
Cocaine	60 (3.4%)	59 (5.7%)	0.004
Benzodiazepines	155 (8.8%)	100 (9.7%)	0.4
Amphetamines	164 (9.4%)	117 (11.4%)	0.086
Alcohol	214 (12.2%)	142 (13.8%)	0.2
Cannabis	680 (38.8%)	412 (40.1%)	0.5

*p-values calculated using chi-squared tests.