

Supplement 1. Demographic and Clinical Characteristics of Patients Receiving an Emergency Psychiatry consult stratified by race

Characteristic	Overall (12,977)		Black (N=6,287)		White (N=5,263)	
	Median	IQR	Median	IQR	Median	IQR
Age, median (IQR), years	37.0	27.0, 52.0	36.0	26.0, 49.0	42.0	29.0, 56.0
Height, median (IQR), In ^b	67.0	64.0, 70.0	67.0	64.4, 70.0	67.0	64.0, 70.2
	N	% ^a	N	% ^a	N	% ^a
Sex						
Female	5,816	44.8	2,606	41.5	2,493	47.4
Male	7,159	55.2	3,681	58.5	2,770	52.6
Missing	2	0.0	0	0.0	0	0.0
Ethnicity						
Hispanic	566	4.4	20	0.3	96	1.8
Non-Hispanic	12,137	93.5	6,215	98.9	5,072	96.4
Unreported	266	2.0	51	0.8	95	1.8
Missing	8	0.1	1	0.0	0	0.0
Shift						
12:00am – 3:59am	1,620	12.5	944	15.0	516	9.8
4:00am – 7:59am	782	6.0	459	7.3	250	4.8
8:00am – 11:59am	1,640	12.6	808	12.9	663	12.6
12:00pm – 3:59pm	2,881	22.2	1,276	20.3	1,280	24.3
4:00pm – 7:59pm	3,141	24.2	1,378	21.9	1,402	26.6
8pm – 11:59pm	2,911	22.4	1,422	22.6	1,152	21.9
Diagnosis						
Bipolar disorder	2,045	15.8	900	14.3	937	17.8
Psychotic disorder	4,383	33.8	2,719	43.2	1,174	22.3
Missing	225	1.7	102	1.6	93	1.8
	No./no. total	%	No./no. total	%	No./no. total	%
Laboratory tests ^c						

Amphetamine	320/ 8,358	3.8	53/ 3,989	1.3	232/ 3,507	6.6
THC	2,239/ 8,351	26.8	1,320/ 3,987	33.1	720/ 3,502	20.6
Cocaine	1,646/ 8,361	19.7	1,081/ 3,989	27.1	466/ 3,510	13.3
Opiate	552/ 8,359	6.6	180/ 3,989	4.5	334/ 3,508	9.5
Peak ethanol level ≥80mg/dl	1,063/ 8,138	13.1	424/ 3,897	10.9	530/ 3,404	15.6

^aDenotes column percentages.

^bHeight was missing from 2,019 (15.6%) encounters.

^cAmphetamine screen was not obtained in 4,619 (35.6%) encounters; THC screen was not obtained in 4,626 (35.6%) encounters; Cocaine screen was not obtained in 4616 (35.6%) encounters; Opiate screen was not obtained in 4618 (35.6%) encounters; Blood alcohol level was not obtained in 4,839 (37.3%) encounters.

Supplement. Crude and Adjusted Odds of Receiving Physical restraint by variable

Characteristic	Crude OR	95% CI	Adjusted OR	Robust 95% CI
Age (reference: 18-20)				
20-40	2.01	1.44-2.81	1.00	.64-1.57
40-60	.99	.70-1.41	.53	.32-.86
60-80	.90	.60-1.35	.40	.21-.73
80-100	.82	.36-1.87	.95	.31-2.91
Height	1.02	1.00-1.04	1.03	1.00-1.06
Sex (reference: female)				
Male	1.23	1.08-1.41	.96	.74-1.25
Race (reference: white)				
Asian	1.03	.58-1.83	.58	.21-1.64
Black	1.67	1.44-1.94	1.35	1.07-1.72
Multiracial	2.09	1.60-2.75	1.84	1.20-2.80
Other	1.39	.90-2.15	1.32	.65-2.65
Unreported	2.09	1.28-3.42	.84	.29-2.43
Ethnicity (reference: non-Hispanic)				
Hispanic	.89	.61-1.30	.82	.46-1.47
Unreported	1.18	.77-1.82	1.05	.50-2.23

Shift (reference: 12:00am – 3:59am)				
4:00am – 7:59am	1.34	.99-1.82	2.03	1.30-3.17
8:00am – 11:59am	1.28	1.00-1.65	1.57	1.05-2.34
12:00pm – 3:59pm	1.18	.94-1.49	1.51	1.06-2.17
4:00pm – 7:59pm	.92	.73-1.16	.96	.66-1.40
8:00pm – 11:59pm	.78	.61-1.00	.79	.54-1.15
Urine drug screen				
Amphetamine	.76	.46-1.24	.69	.38-1.27
THC	2.11	1.77-2.52	1.75	1.42-2.17
Cocaine	.88	.69-1.13	.68	.51-.91
Opiates	.85	.59-1.23	1.19	.77-1.85
Peak ethanol level ≥80mg/dl	.69	.52-.91	1.38	.98-1.95
Diagnosis				
Psychotic disorder	2.32	2.03-2.64	2.30	1.87-2.84
Bipolar disorder	1.91	1.64-2.23	2.37	1.89-2.97

Supplement. Crude and Adjusted Odds of Receiving Chemical restraint by variable

Characteristic	Crude OR	95% CI	Adjusted OR	Robust 95% CI
Age (reference: 18- 20)				
20-40	2.12	1.64-2.73	1.24	.89-1.71
40-60	1.55	1.19-2.00	1.01	.72-1.42
60-80	1.59	1.19-2.11	.89	.60-1.31
80-100	1.82	1.12-2.96	1.63	.81-3.28
Height	1.02	1.00-1.04	1.01	.99-1.03
Sex (reference: female)				
Male	1.31	1.19-1.44	1.24	1.04-1.49
Race (reference: white)				
Asian	1.13	.77-1.66	1.10	.66-1.84
Black	1.57	1.42-1.75	1.33	1.15-1.55
Multiracial	1.84	1.50-2.26	2.11	1.56-2.84

Other	1.23	.90-1.69	1.52	.94-2.46
Unreported	2.27	1.60-3.23	1.30	.64-2.65
Ethnicity (reference: non-Hispanic)				
Hispanic	.72	.55-0.93	.73	.48-1.10
Unreported	1.19	.87-1.64	.92	.55-1.53
Shift (reference: 12:00am – 3:59am)				
4:00am – 7:59am	1.11	.89-1.40	1.09	.80-1.50
8:00am – 11:59am	1.03	.86-1.24	1.04	.80-1.36
12:00pm – 3:59pm	1.11	.94-1.31	1.18	.94-1.49
4:00pm – 7:59pm	.87	.74-1.03	.85	.67-1.07
8:00pm – 11:59pm	.84	.71-.99	.83	.65-1.04
Urine drug screen				
Amphetamine	.83	.60-1.13	1.02	.71-1.47
THC	1.68	1.49-1.90	1.53	1.32-1.78
Cocaine	.87	.75-1.01	.80	.67-.96
Opiates	.92	.73-1.17	1.28	.97-1.70
Peak ethanol level >80mg/dl	.96	.81-1.15	1.41	1.14-1.74
Diagnosis				
Psychotic disorder	2.72	2.47-3.00	2.83	2.47-3.24
Bipolar disorder	1.83	1.63-2.05	2.29	1.95-2.68

Supplement. Sensitivity Analysis of Physical Restraints Using Multiple Imputation

Characteristic	Adjusted OR	Robust 95% CI
Age (reference: 18- 20)		
20-40	1.59	1.13-2.24
40-60	.93	.64-1.33
60-80	.86	.56-1.33
80-100	1.08	.46-2.52
Height	1.00	.97-1.02
Sex (reference: female)		

Male	1.14	.95-1.38
Race (reference: white)		
Asian	.90	.50-1.60
Black	1.28	1.09-1.51
Multiracial	1.95	1.45-2.62
Other	1.53	.97-2.42
Unreported	1.58	.90-2.76
Ethnicity (reference: non-Hispanic)		
Hispanic	.63	.42-.95
Unreported	1.00	.61-1.67
Shift (reference: 12:00am – 3:59am)		
4:00am – 7:59am	1.32	.97-1.80
8:00am – 11:59am	1.32	1.02-1.72
12:00pm – 3:59pm	1.26	1.00-1.60
4:00pm – 7:59pm	.95	.74-1.21
8:00pm – 11:59pm	.77	.60-.99
Urine drug screen		
Amphetamine	.80	.41-1.56
THC	1.77	1.42-2.21
Cocaine	.79	.62-1.01
Opiates	1.08	.74-1.75
Peak ethanol level ≥80mg/dl	1.06	.80-1.42
Diagnosis		
Psychotic disorder	2.17	1.88-2.50
Bipolar disorder	2.00	1.71-2.35

Supplement. Sensitivity Analysis of Chemical Restraints by Multiple Imputation

Characteristic	Adjusted OR	Robust 95% CI
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Age (reference: 18-20)		
20-40	1.58	1.22-2.05
40-60	1.33	1.01-1.74
60-80	1.42	1.05-1.91
80-100	2.33	1.40-3.89
Height	1.00	.98-1.02
Sex (reference: female)		
Male	1.24	1.08-1.42
Race (reference: white)		
Asian	1.12	.76-1.64
Black	1.26	1.12-1.41
Multiracial	1.92	1.53-2.42
Other	1.57	1.10-2.22
Unreported	2.01	1.33-3.03
Ethnicity (reference: non-Hispanic)		
Hispanic	.56	.41-.76
Unreported	1.00	.70-1.44
Shift (reference: 12am- 4am)		
4:00am – 7:59am	1.09	.86-1.39
8:00am – 11:59am	1.04	.85-1.26
12:00pm – 3:59pm	1.16	.98-1.38
4:00pm – 7:59pm	.88	.74-1.05
8:00pm – 11:59pm	.82	.69-.98
Urine drug screen		
Amphetamine	.85	.55-1.31
THC	1.58	1.36-1.83
Cocaine	.80	.67-.96
Opiates	1.22	.92-1.60
Peak ethanol level ≥80mg/dl	1.43	1.19-1.72
Diagnosis		
Psychotic disorder	2.68	2.42-2.97
Bipolar disorder	2.02	1.79-2.28

