

Illicit Drug Use Patterns in Myrtle Beach, S.C. from 2017-2022



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Background

As a Level 1 trauma center in the vacation destination of Myrtle Beach, S.C., Grand Strand Medical Center collects a diverse population of patients year-round. Urine drug screens ordered in the emergency department are useful in working up patients with undifferentiated altered mental status, suspected overdose, psychiatric presentations, and traumatic injuries. Grand Strand's Urine Drug Screen (UDS) tests for Amphetamine, Barbiturates, Benzodiazepines, Cannabinoids (THC), Cocaine, Opiates, and PCP. Our UDS cannot delineate recreational from physician-directed use. Opiate immunoassays are typically designed to detect morphine or codeine, however other opiates such as hydrocodone, oxycodone, and oxymorphone may be detected at higher urine concentrations. Other testing modalities may be used to detect synthetic opiates such as fentanyl, methadone, and buprenorphine.

Objective

Our study aims to better ascertain current trends of illicit drug use in our population of patients visiting the Grand Strand Emergency Department over a recent 5 year period. It is our hypothesis that Cannabinoid (THC) would rank highest in use and, likely, increase over time due to increasing nation-wide legalization and decreasing stigmatization nationwide despite any legalization in South Carolina.

Methods

Retrospective chart review of emergency department drug screens

Study period:
January 2017 to
September 2022

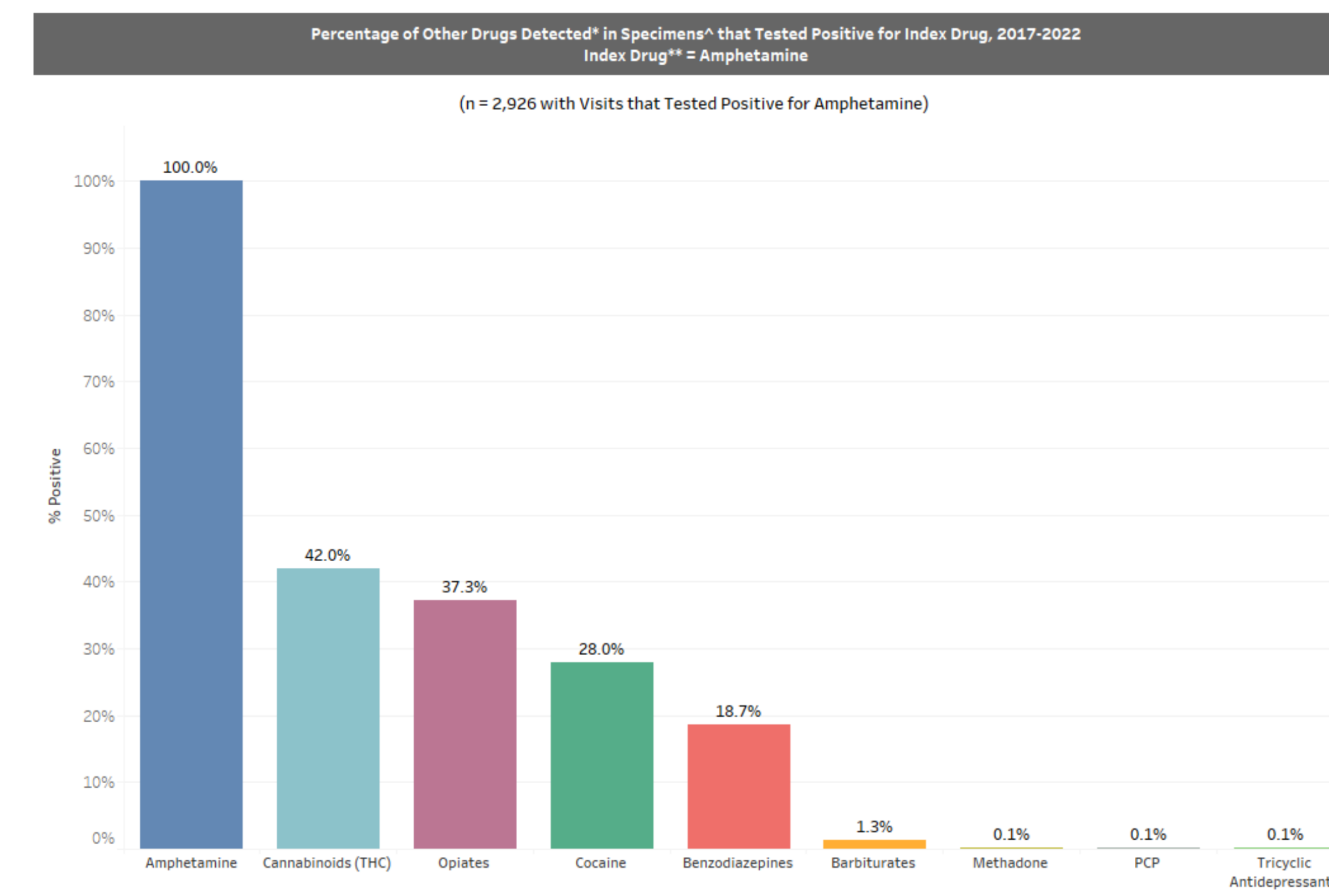
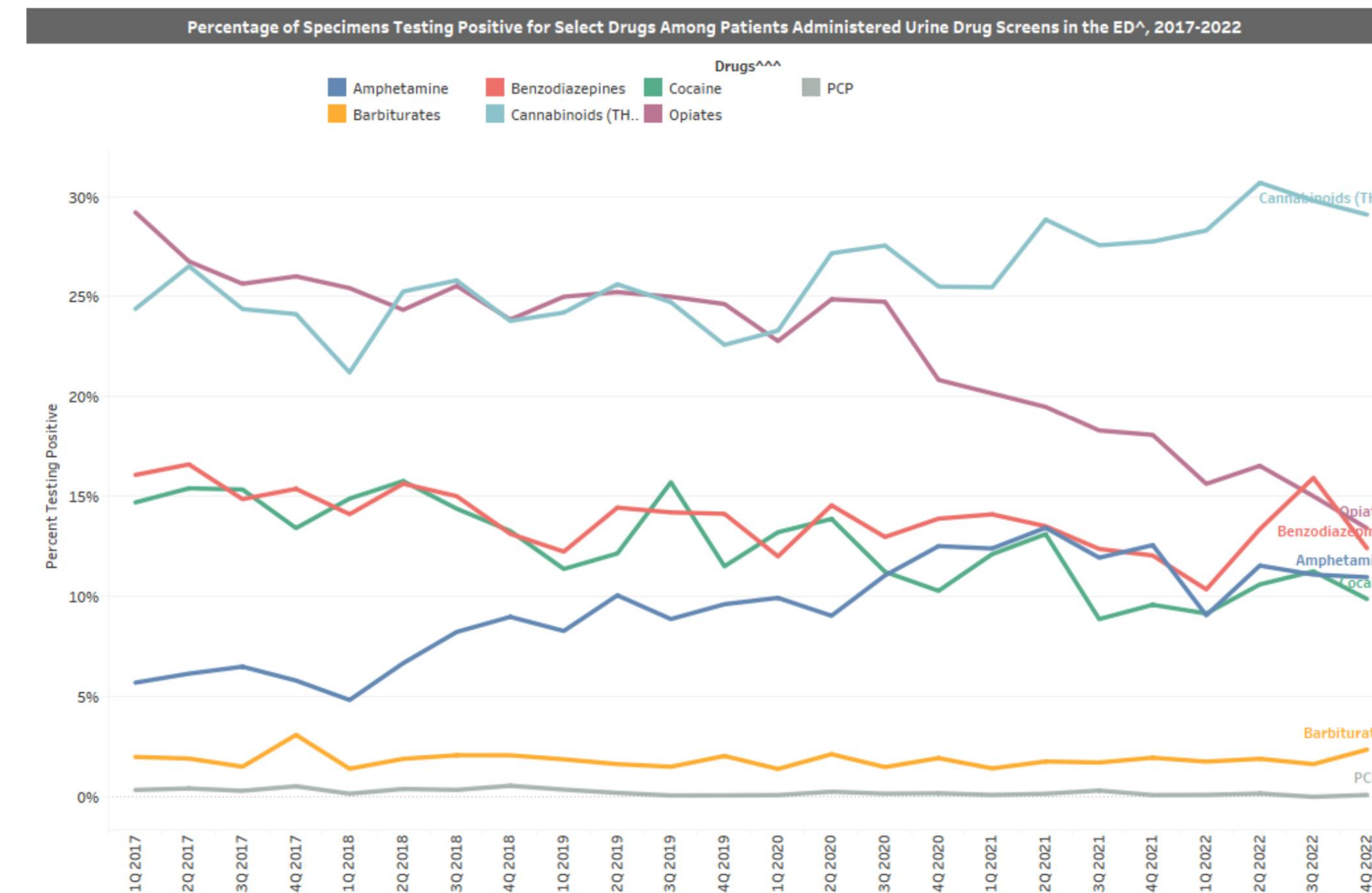
Number of UDS
ordered:
31,807
Drugs tested for:
Amphetamine
Barbiturate
Benzodiazepine
Cannabinoid (THC)
Cocaine
Opiates
PCP

100 consecutive de-identified urine specimens which tested positive for any drug and 50 which tested negative for all drugs underwent further drug testing via quadruple time-of-flight Mass Spectrometry

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Results

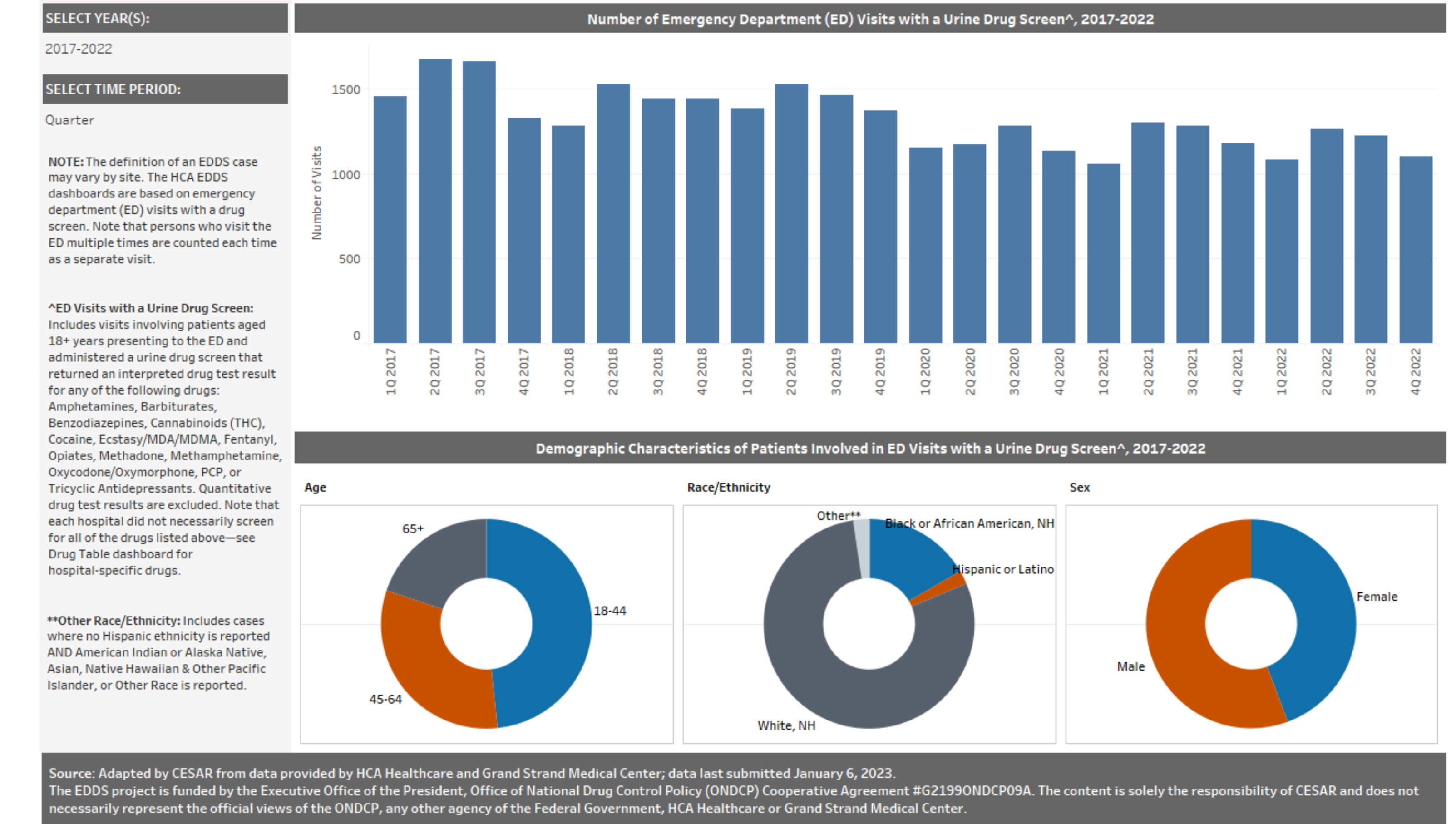


Year of Admit Date	Quarter of Admit Date	# Tests Ordered* (Standard Panel)	Amphetamine	Barbiturates	Benzodiazepines	Cannabinoids (THC)	Cocaine	Opiates	PCP
2017	Q1	1,455	5.7%	2.0%	16.1%	24.4%	14.7%	29.2%	0.3%
	Q2	1,674	6.2%	1.9%	16.6%	26.5%	15.4%	26.8%	0.4%
	Q3	1,661	6.5%	1.5%	14.9%	24.4%	15.4%	25.6%	0.3%
	Q4	1,326	5.8%	3.1%	15.4%	24.1%	13.4%	26.0%	0.5%
2018	Q1	1,282	4.8%	1.4%	14.1%	21.2%	14.9%	25.4%	0.2%
	Q2	1,528	6.7%	1.9%	15.6%	25.3%	15.8%	24.3%	0.4%
	Q3	1,445	8.2%	2.1%	15.0%	25.8%	14.4%	25.5%	0.3%
	Q4	1,446	9.0%	2.1%	13.1%	23.8%	13.3%	23.9%	0.6%
2019	Q1	1,388	8.3%	1.9%	12.2%	24.2%	11.4%	25.0%	0.4%
	Q2	1,530	10.1%	1.6%	14.4%	25.6%	12.2%	25.2%	0.2%
	Q3	1,464	8.9%	1.5%	14.2%	24.7%	15.7%	25.0%	0.1%
	Q4	1,372	9.6%	2.0%	14.1%	22.6%	11.5%	24.6%	0.1%
2020	Q1	1,150	9.9%	1.4%	12.0%	23.3%	13.2%	22.8%	0.1%
	Q2	1,174	9.0%	2.1%	14.6%	27.2%	13.9%	24.9%	0.3%
	Q3	1,281	11.1%	1.5%	13.0%	27.6%	11.2%	24.7%	0.2%
	Q4	1,137	12.5%	1.9%	13.9%	25.5%	10.3%	20.8%	0.2%
2021	Q1	1,056	12.4%	1.4%	14.1%	25.5%	12.1%	20.2%	0.1%
	Q2	1,303	13.4%	1.8%	13.5%	28.9%	13.1%	19.5%	0.2%
	Q3	1,284	11.9%	1.7%	12.4%	27.6%	8.9%	18.3%	0.3%
	Q4	1,178	12.6%	2.0%	12.1%	27.8%	9.6%	18.1%	0.1%
2022	Q1	1,081	9.1%	1.8%	10.4%	28.3%	9.2%	15.6%	0.1%
	Q2	1,264	11.6%	1.9%	13.4%	30.7%	10.6%	16.5%	0.2%
	Q3	1,225	11.1%	1.6%	15.9%	29.8%	11.3%	15.0%	0.0%
	Q4	1,103	11.0%	2.4%	12.4%	29.1%	9.9%	13.4%	0.1%

Red % = Quarter(s) with highest % positive; Green % = Quarter(s) with lowest % positive

CESAR EMERGENCY DEPARTMENT DRUG SURVEILLANCE (EDDS) SYSTEM

MYRTLE BEACH, SOUTH CAROLINA: HCA Healthcare — Grand Strand Medical Center



Discussion

Cannabinoids and Opioids were consistently the leading positive findings on the drug screens, with increase in Cannabinoids and decrease in Opioids. It is possible the decrease in opiate prevalence could be attributed to the increase in fentanyl abuse, which is not detected on the UDS utilized at our institution. Barbiturates and PCP were low or not detected at all. Benzodiazepines, Amphetamines, and Cocaine were consistently mid-range in comparison, with rise in Amphetamine use over time.

Conclusion

The data confirms our suspicion that cannabinoid use has increased in prevalence over the past 5 years. Interestingly, amphetamine use also increased, which has obvious health and social impacts. Further investigation regarding use of newer designer drugs, especially during tourist season could provide additional insights. This data provides insight into illicit drug use patterns in the community we serve, allowing us to more effectively treat our patients.

References

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