

December 1, 2021



Center for Substance Abuse Research

University Hospital (Newark, New Jersey)

Drug Test Results from the Hospital's Electronic Health Records, January 2016-June 2021

University Hospital submitted drug test results for 1,687 specimens tested by the hospital laboratory from January 1, 2016 through June 30, 2021 that met the study eligibility criteria. De-identified data were obtained for patients 18 years or older presenting to the emergency department with: 1) an ICD-10-CM T36-T50 diagnosis code (any intent or encounter type) AND a complaint of "drug overdose"; or 2) an ICD-10-CM T36-T50 initial encounter diagnosis code of poisoning with accidental (unintentional), intentional self-harm, or undetermined intent that had a drug urinalysis conducted with valid drug test results available.

Highlights from Table 1 and Figures 1 and 3

- Benzodiazepine positives reached a 6-year high (35%) in April-June 2021 while opiates reached a 6-year low (18%; Table 1, Figure 1).
- Benzodiazepines are at the top of their 6-year range, while opiates, amphetamines, PCP, and barbiturates are at/near their lowest levels (Figure 3).

Figures 4, 5, and 6 analyze combined data from January 2016-June 2021

- Patients testing positive for barbiturates, opiates, and cocaine were older while those positive for PCP, amphetamines, and marijuana were the youngest (Figure 4).
- Patients positive for methadone had the largest average number of drugs in their specimens (2.69), while patients positive for PCP had the lowest number (1.96, Figure 5).
- 68% of cocaine positive patients, 50% of benzodiazepine-positive patients, and 50% of methadone positive patients were also positive for opiates. Opiate positive specimens were most likely to also contain cocaine (49%), benzodiazepines (33%), or marijuana (19%, Figure 6).

The Emergency Department Drug Surveillance (EDDS) project is funded by the Executive Office of the President, Office of National Drug Control Policy (ONDCP), Cooperative Agreement #G2099ONDCP09A awarded to Center for Substance Abuse Research (CESAR) at University of Maryland, College Park. The information and opinions expressed herein are the views of the authors and do not necessarily represent the views of ONDCP or any other agency of the Federal Government. For additional data: <https://cesar.umd.edu/landing/EDDS>.

**Table 1: Drugs Detected in Specimens from University Hospital (Newark, New Jersey)
Emergency Department (ED) Drug Overdose Patients, By Quarter**

(N=1,687 specimens collected from January 2016 through June 2021)

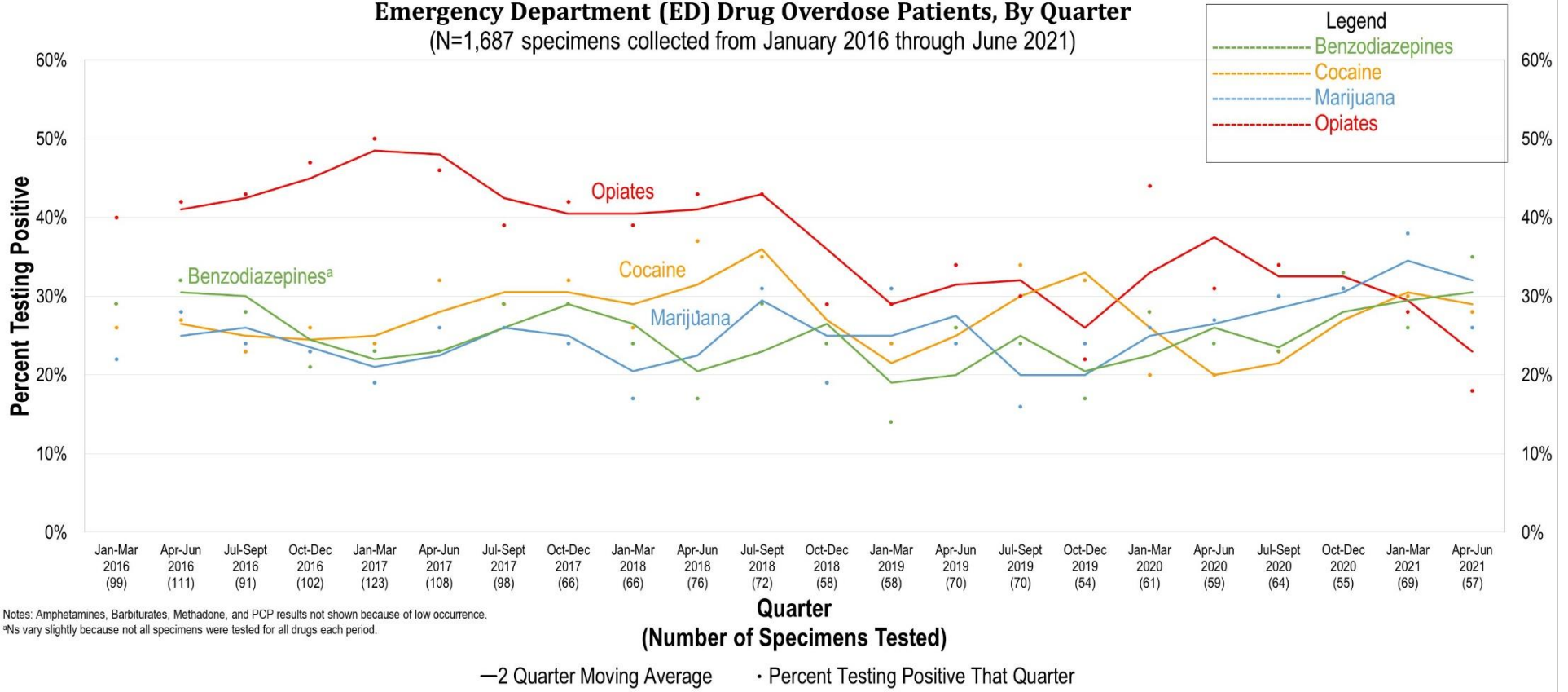
Quarter (N of specimens tested)	Opiates %	Cocaine %	Benzodiazepines ^a %	Marijuana %	PCP %	Methadone %	Amphetamines %	Barbiturates %
January-March 2016 (99)	40	26	29	22	13 H	9	5	0
April-June 2016 (111)	42	27	32	28	7	12 H	7	2
July-September 2016 (91)	43	23	28	24	11	7	4	2
October-December 2016 (102)	47	26	21	23	9	4	5	0
January-March 2017 (123)	50 H	24	23	19	4	4	3	1
April-June 2017 (108)	46	32	(n=107) 23	26	7	5	2	2
July-September 2017 (98)	39	29	29	26	3	2	4	1
October-December 2017 (66)	42	32	29	24	5	11	5	6 H
January-March 2018 (66)	39	26	24	17	5	11	9	2
April-June 2018 (76)	43	37 H	17	28	4	5	1	1
July-September 2018 (72)	43	35	29	31	6	3	15 H	3
October-December 2018 (58)	29	19 L	24	19	12	3	7	2
January-March 2019 (58)	29	24	14 L	31	5	5	3	2
April-June 2019 (70)	34	26	26	24	10	1	4	3
July-September 2019 (70)	30	34	24	16 L	7	1 L	4	1
October-December 2019 (54)	22	32	17	24	7	11	0 L	2
January-March 2020 (61)	44	20	28	26	3	2	7	2
April-June 2020 (59)	31	20	24	27	7	2	5	2
July-September 2020 (64)	34	23	23	30	6	5	5	2
October-December 2020 (55)	31	31	33	31	2 L	9	4	4
January-March 2021 (69)	28	30	26	38 H	9	9	9	1
April-June 2021 (57)	18 L	28	35 H	26	4	5	2	0 L

Notes: H: Highest %. L: Lowest %. If there are multiple highs or lows, the most recent quarter is selected as the high/low.

^aNs vary slightly because not all specimens were tested for all drugs each period.

The percentage of specimens testing positive for benzodiazepines was at its series high (35%) in the most recent quarter (April-June 2021) since January 2016 and opiates were at their series low (18%).

Figure 1: Most Prevalent Drugs Detected in Specimens from University Hospital (Newark, New Jersey) Emergency Department (ED) Drug Overdose Patients, By Quarter
(N=1,687 specimens collected from January 2016 through June 2021)



Eighteen percent of specimens were positive for opiates in the most recent quarter (April-June 2021), its lowest level since they peaked at 50% in January-March 2017. 35% of specimens were positive for benzodiazepines in the most recent quarter (April-June 2021), its highest level since their lowest level of 14% reached in January-March 2019.

Figure 2: Least Prevalent Drugs Detected in Specimens from University Hospital (Newark, New Jersey)

Emergency Department (ED) Drug Overdose Patients, By Quarter

(N=1,687 specimens collected from January 2016 through June 2021)

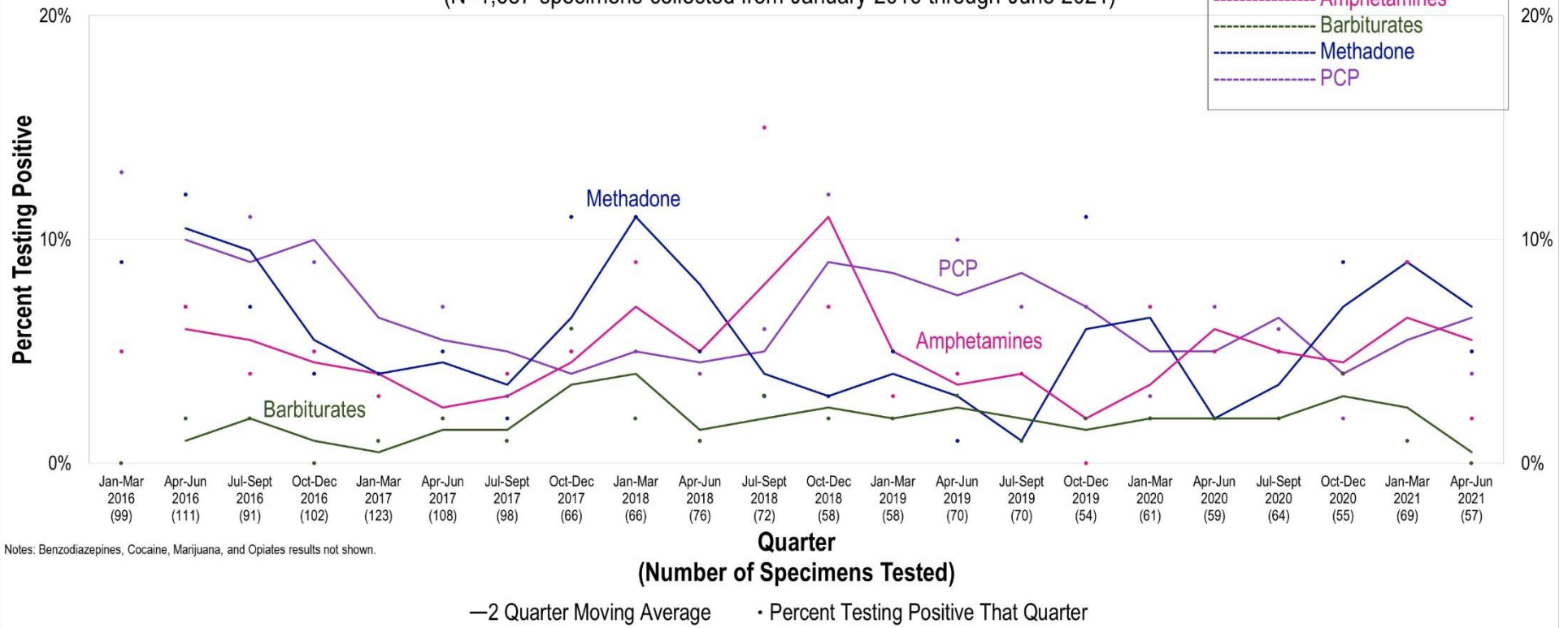
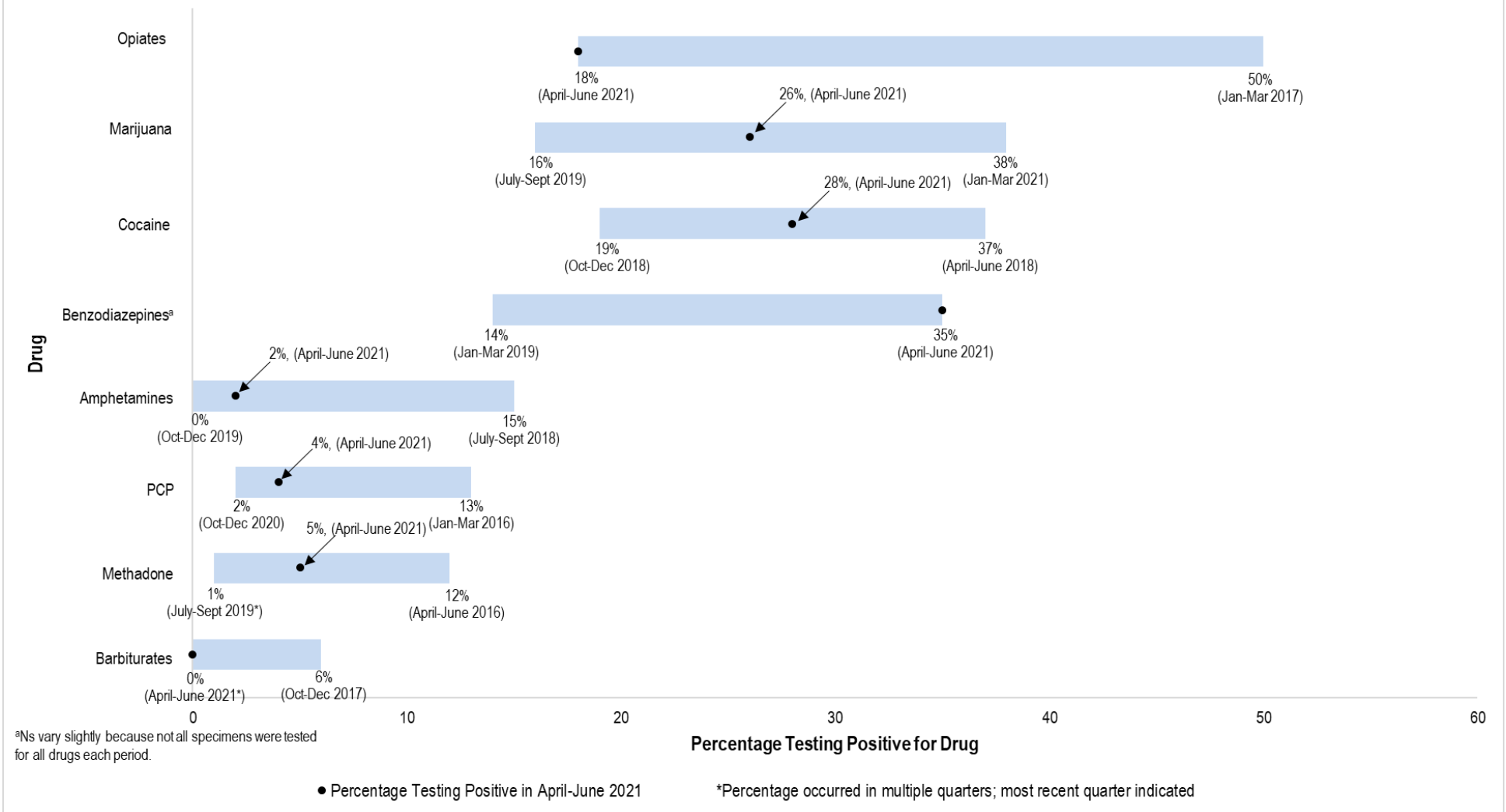


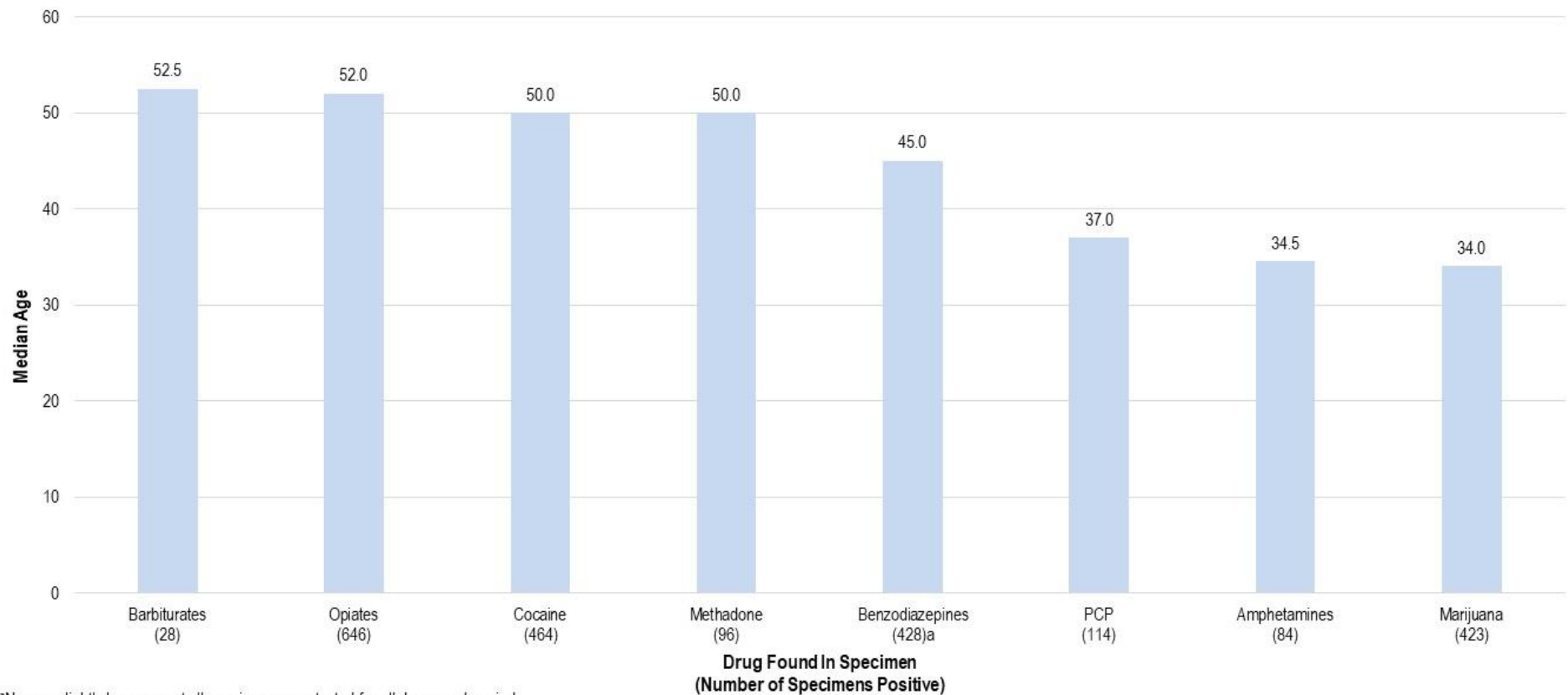
Figure 3: Range of the High and Low of Quarterly Percentages Testing Positive for Each Drug at the University Hospital (Newark, New Jersey) Emergency Department (ED), January 2016-June 2021

(N=1,687 specimens collected from drug overdose patients)



Benzodiazepines are at the top of their 6-year range, while opiates, amphetamines, PCP, and barbiturates are at/near their lowest levels.

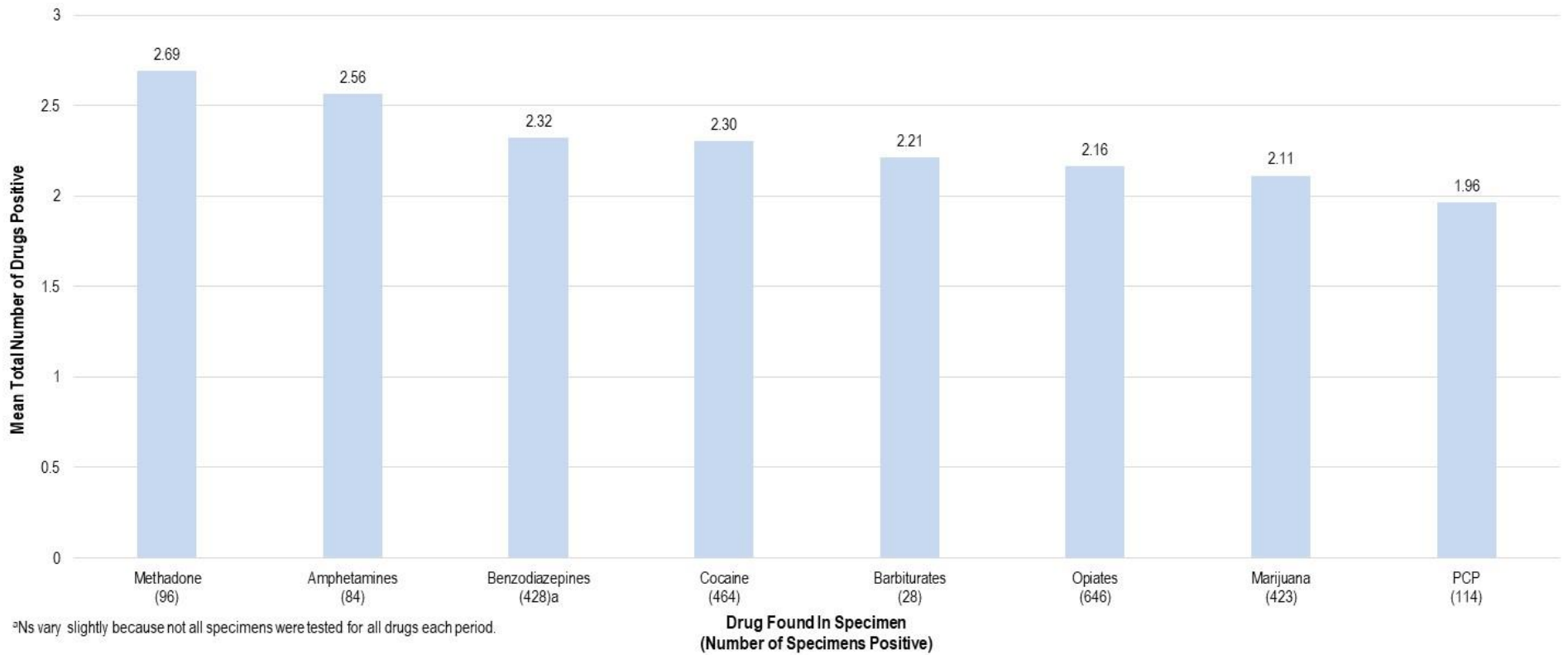
Figure 4: Median Patient Age, By Drug Positive in Specimens from University Hospital (Newark, New Jersey) Emergency Department (ED) Drug Overdose Patients
 (N=1,687 specimens from January 2016 through June 2021 combined)



^aNs vary slightly because not all specimens were tested for all drugs each period.

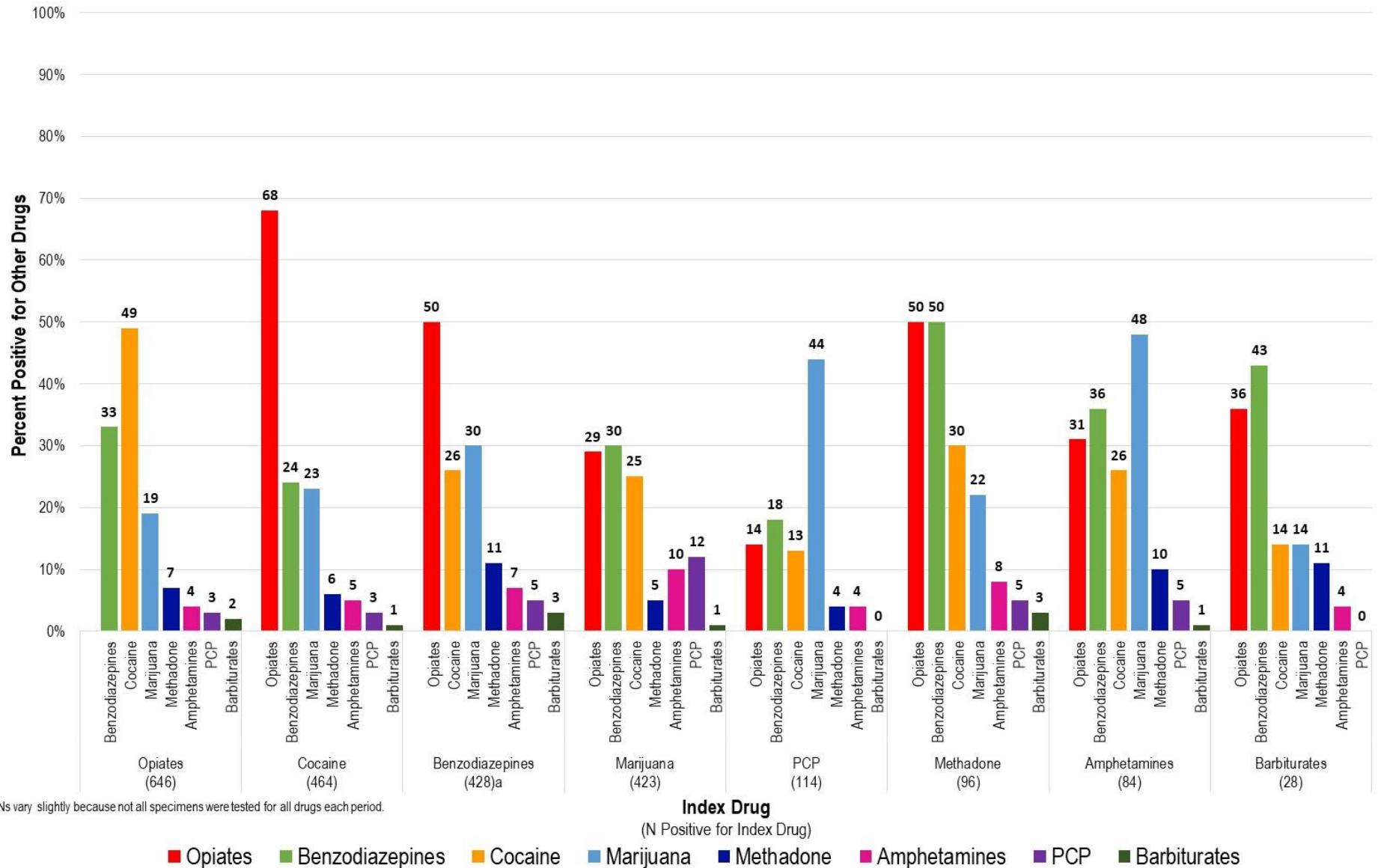
Patients testing positive for barbiturates, opiates, and cocaine were older. Patients positive for PCP, amphetamines, and marijuana were the youngest.

Figure 5: Mean Total Number of Drugs Positive, By Drug Positive in Specimens from University Hospital (Newark, New Jersey) Emergency Department (ED) Drug Overdose Patients
(N=1,687 specimens from January 2016 through June 2021 combined)



Patients positive for methadone had the largest average number of drugs in their specimens (2.69), while patients positive for PCP had the lowest number (1.96).

Figure 6: Other Drugs Found in Specimens Positive for an Index Drug
 (N=1,687 specimens from University Hospital, Newark, New Jersey from January 2016 through June 2021 combined)



68% of cocaine positive patients, 50% of benzodiazepine-positive patients, and 50% of methadone positive patients were also positive for opiates. Opiate positive specimens were most likely to also contain cocaine (49%), benzodiazepines (33%), or marijuana (19%).