



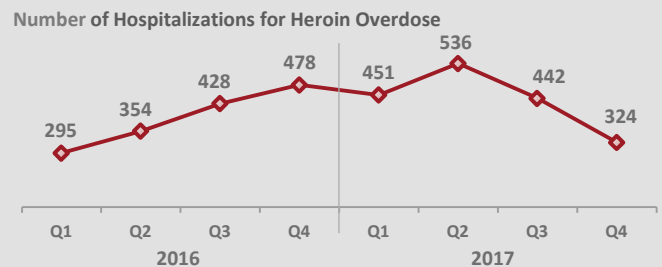
## Hospitalizations for Opioid Overdose – 2016 to 2017

This research brief is part of a series produced by the PA Health Care Cost Containment Council (PHC4) to examine inpatient hospitalizations for patients whose reason for admission was opioid overdose (overdose for heroin or pain medication). This installment examines changes between 2016 and 2017. It includes Pennsylvania residents, age 15 and older, who were admitted to a Pennsylvania general acute care hospital.



**Heroin Overdoses.** Hospital admissions for heroin overdose went up 12.7% between 2016 and 2017—the lowest increase in recent years. Average annual increases were about 24% between 2011 and 2016. There were 1,753 admissions for heroin overdose in 2017—up

from 1,555 in 2016. Admissions decreased in the second half of 2017 (Quarters 3 and 4). The mortality rate for patients admitted for heroin overdose was 9.6% in 2017—up from 9.3% in 2016.



**Pain Medication Overdoses.** Hospital admissions for pain medication overdose decreased 2.2% between 2016 and 2017. There were 1,747 admissions for pain medication overdose in 2017—down from 1,787 in 2016. The mortality rate for patients admitted for pain medication overdose was 5.0% in 2017—up from 2.9% in 2016.

Pain Medication Categories	2016		2017	
	Number	Percent	Number	Percent
Commonly Prescribed Pain Medication (e.g., oxycodone)	1,069	59.8%	1,017	58.2%
Synthetic Pain Medication (e.g., fentanyl)	201	11.2%	225	12.9%
Methadone	153	8.6%	134	7.7%
Other/Unspecified	364	20.4%	371	21.2%

## \$32 million

In 2017, opioid overdose admissions (heroin and pain medication combined) amounted to an estimated \$32 million in payments. Heroin admissions amounted to an estimated \$16.4 million. Pain medication admissions amounted to an estimated \$15.6 million.

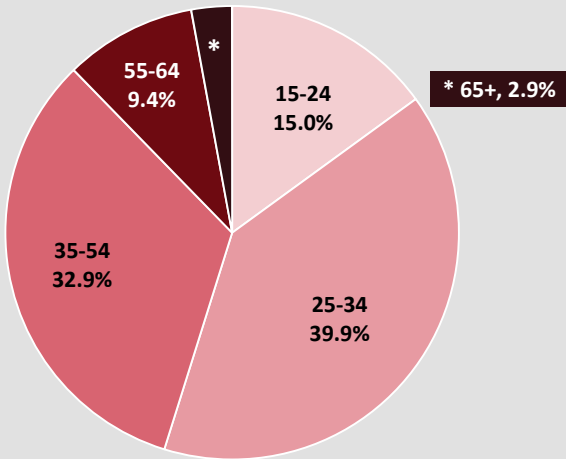
*Calculated by applying the average Medicaid payment (2013 data) to Medicaid cases and the average Medicare fee-for-service payment (2016 data) to Medicare, other insurers and uninsured.*

\* This analysis does not include overdoses that did not result in a hospital admission (e.g., those treated with naloxone and/or treated in the emergency department and not admitted to the hospital or overdose deaths that occurred outside the hospital setting). Data for Quarter 4, 2017 was considered preliminary at the time of this analysis.

**Over 13,500 Hospital Days.** On average, heroin overdose patients and pain medication overdose patients stayed in the hospital 3.4 days and 4.4 days, respectively—for a total of 13,642 days in the hospital in 2017.

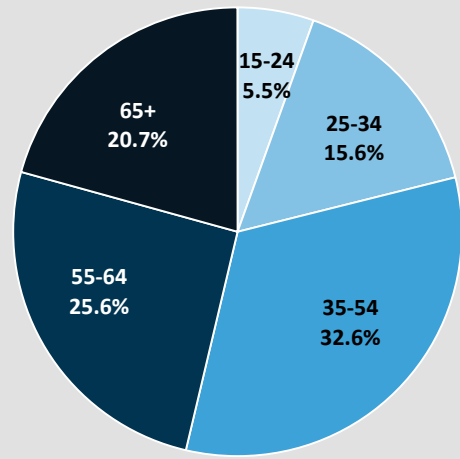
### Overdose Admissions, 2017

**Heroin by Age**



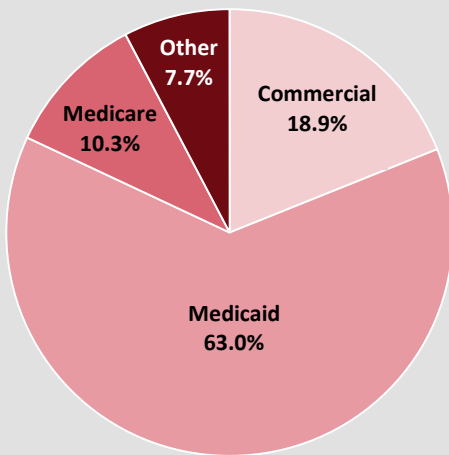
Average age 33 years.

**Pain Medication by Age**

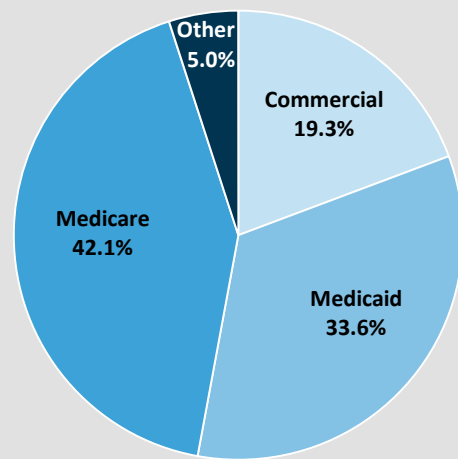


Average age 53 years.

**Heroin by Payer**



**Pain Medication by Payer**



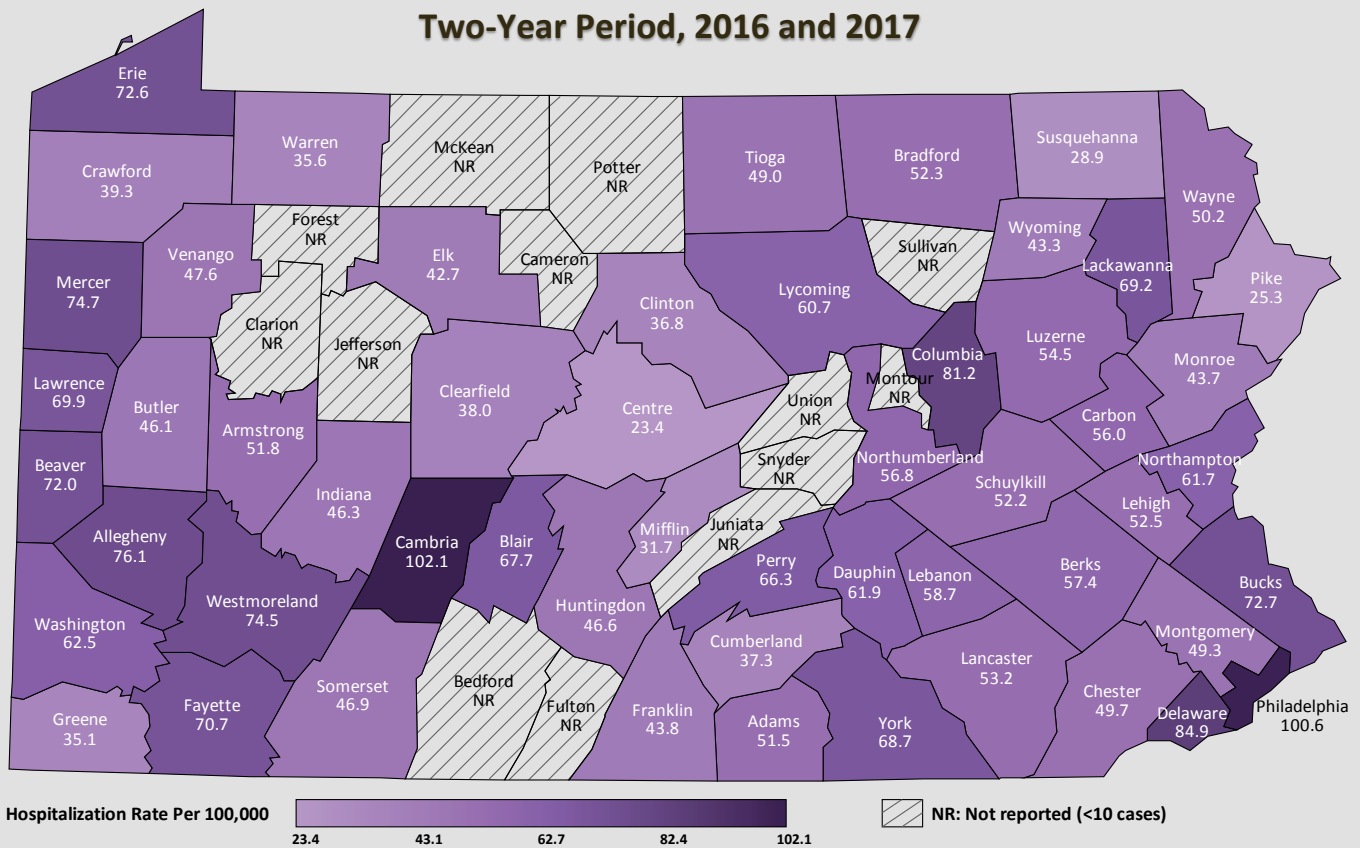
#### About PHC4

Created by the PA General Assembly in 1986, the PA Health Care Cost Containment Council (PHC4) is an independent state agency charged with collecting, analyzing and reporting information that can be used to improve the quality and restrain the cost of health care in the state. Today, PHC4 is a recognized national leader in public health care reporting. PHC4 is governed by a 25-member board of directors, representing business, labor, consumers, health care providers, insurers and state government.

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## Rate of Hospitalization for Opioid Overdose per 100,000 County Residents Two-Year Period, 2016 and 2017



Note: The county rates shown in the map above reflect the rate of hospitalization for opioid overdose (heroin and pain medication combined) for the two-year period, 2016 and 2017 (reporting two years of data minimizes effects of lower volume in some counties). Note that higher rates for some counties might be dependent on larger numbers of residents with high risk characteristics (e.g., factors related to income, race/ethnicity and gender). County rates were not adjusted for these population differences so that important effects of these patient characteristics were not masked by such adjustment.

**Statewide Population-based Rates.** Statewide, there were 64.6 hospitalizations for opioid overdose per 100,000 residents in the two-year period 2016 and 2017. Rates varied by income, education, race/ethnicity and gender...

- **by Income.** The rate was 122.0 per 100,000 for lower income residents (residents living in areas with an average income of less than \$30,000).
- **by Education.** The rate was 113.7 for residents living in areas where less than 10% of the population has a bachelor's degree.
- **by Race/Ethnicity.** The rates for black (non-Hispanic), white (non-Hispanic), and Hispanic residents were 67.5, 65.9 and 50.4, respectively.
- **by Gender.** The rate was 77.8 for males and 52.1 for females.

*Rate Calculations:* Rates include residents 15 years of age and older and were calculated using PHC4 hospital discharge data and US Census Bureau data; rates for the two-year period 2016 and 2017 were based on 2016 population numbers. Rates by income and education were based on Census estimates of median household income and percent of residents with a bachelor's level education at the zip code level.

## Hospitalizations for Opioid Overdose per 100,000 County Residents Two-Year Period, 2016 and 2017

	Number of Hospitalizations		Rate per 100,000 Two-Year Period, 2016 and 2017
	2016	2017	
Statewide	3,342	3,500	64.6
Adams	26	18	51.5
Allegheny	362	425	76.1
Armstrong	16	13	51.8
Beaver	57	44	72.0
Bedford	NR	NR	NR
Berks	87	107	57.4
Blair	32	38	67.7
Bradford	11	15	52.3
Bucks	178	201	72.7
Butler	31	41	46.1
Cambria	58	58	102.1
Cameron	NR	NR	NR
Carbon	17	13	56.0
Centre	22	11	23.4
Chester	103	105	49.7
Clarion	NR	NR	NR
Clearfield	12	14	38.0
Clinton	NR	NR	36.8
Columbia	21	25	81.2
Crawford	14	14	39.3
Cumberland	49	28	37.3
Dauphin	70	68	61.9
Delaware	187	204	84.9
Elk	NR	NR	42.7
Erie	81	84	72.6
Fayette	37	42	70.7
Forest	NR	NR	NR
Franklin	34	21	43.8
Fulton	NR	NR	NR
Greene	NR	NR	35.1
Huntingdon	NR	NR	46.6
Indiana	14	20	46.3
Jefferson	NR	NR	NR

	Number of Hospitalizations		Rate per 100,000 Two-Year Period, 2016 and 2017
	2016	2017	
Juniata	NR	NR	NR
Lackawanna	74	48	69.2
Lancaster	127	103	53.2
Lawrence	22	29	69.9
Lebanon	39	27	58.7
Lehigh	70	85	52.5
Luzerne	73	72	54.5
Lycoming	32	26	60.7
McKean	NR	NR	NR
Mercer	31	40	74.7
Mifflin	NR	NR	31.7
Monroe	27	34	43.7
Montgomery	162	171	49.3
Montour	NR	NR	NR
Northampton	80	76	61.7
Northumberland	28	16	56.8
Perry	14	11	66.3
Philadelphia	608	675	100.6
Pike	NR	NR	25.3
Potter	NR	NR	NR
Schuylkill	30	33	52.2
Snyder	NR	NR	NR
Somerset	12	18	46.9
Sullivan	NR	NR	NR
Susquehanna	NR	NR	28.9
Tioga	NR	NR	49.0
Union	NR	NR	NR
Venango	NR	NR	47.6
Warren	NR	NR	35.6
Washington	59	50	62.5
Wayne	NR	NR	50.2
Westmoreland	116	109	74.5
Wyoming	NR	NR	43.3
York	104	145	68.7

NR: Not reported. Fewer than 10 hospitalizations in at least one year.

