

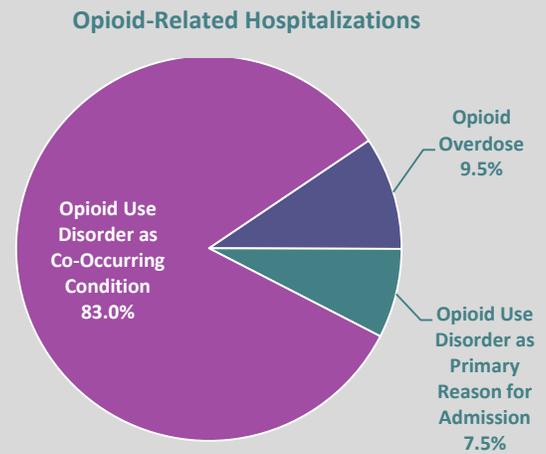


Hospital Admissions for Opioid Overdose and Opioid Use Disorder

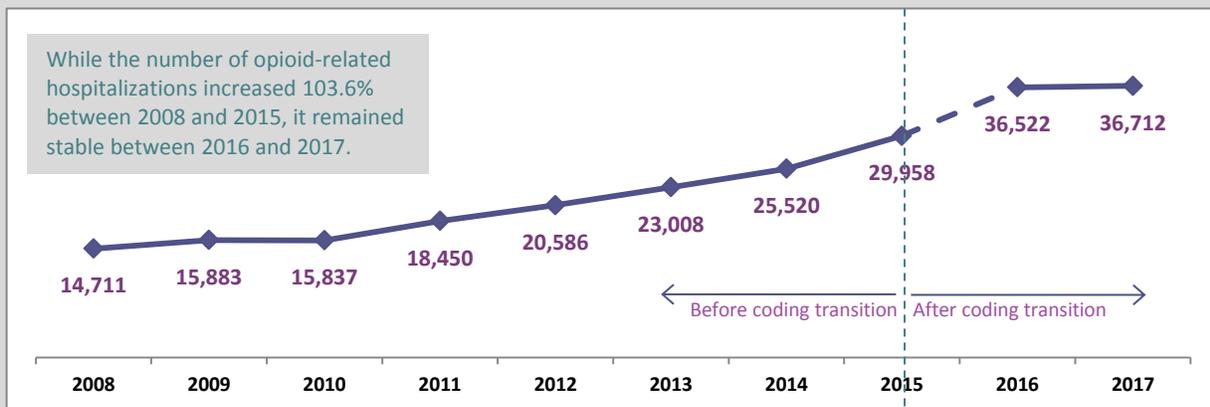
This research brief is part of a series produced by the PA Health Care Cost Containment Council (PHC4) on opioid-related hospitalizations. This edition extends PHC4's previous analyses on opioid overdose to include hospitalizations related to opioid use disorder (opioid dependence and abuse). It includes Pennsylvania residents, age 15 and older, who were admitted to a Pennsylvania general acute care hospital. This analysis does not include opioid-related encounters 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 opioid-related deaths that occurred outside the hospital setting).

1 in 37 Hospitalizations were Related to Opioids in 2017 (36,712 Opioid-Related Hospitalizations)

- **3,500** hospitalizations where *opioid overdose* was the primary reason for the admission.
- **2,736** hospitalizations where *opioid use disorder* (opioid dependence and abuse) was the primary reason for the admission. These patients are often admitted because they are experiencing withdrawal or other symptoms.
- **30,476** hospitalizations where the patient was admitted for another condition but also had *opioid use disorder* as a co-occurring condition (see page 2).

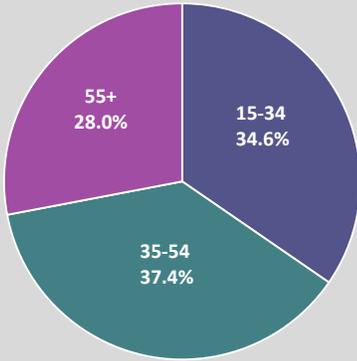


Number of Opioid-Related Hospitalizations 2008-2017

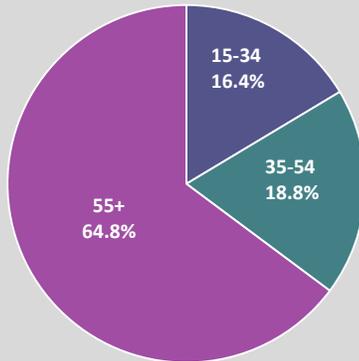


Note: New hospital coding requirements effective October 1, 2015 improved the identification of opioid-related hospital admissions, so values before that date may be underestimated.

Opioid-Related Hospitalizations by Age, 2017

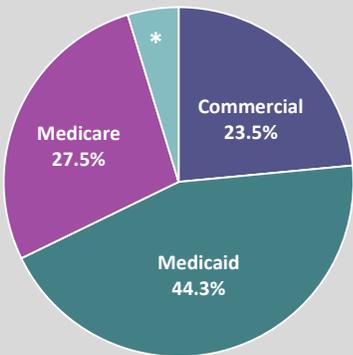


All Hospitalizations by Age, 2017



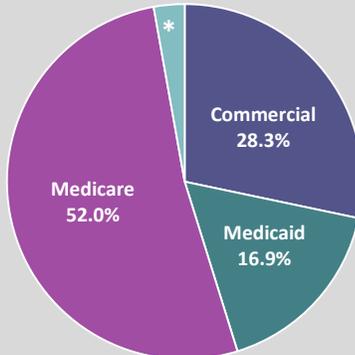
While residents in age groups 15-34 and 35-54 comprised 35.2% of all hospitalizations, they represented 72.0% of the opioid-related admissions. Residents age 55 and older accounted for 64.8% of all hospitalizations and 28.0% of opioid-related admissions.

Opioid-Related Hospitalizations by Payer, 2017



*Other, 4.7%

All Hospitalizations by Payer, 2017



*Other, 2.8%

Medicaid was the payer for 44.3% of opioid-related hospitalizations—the largest percentage among the payer groups. As a comparison, Medicaid comprised 16.9% of all hospitalizations. Medicare was the payer for 27.5% of the opioid-related hospitalizations, compared to 52.0% of all hospitalizations. Commercial payers made up 23.5% of the opioid-related hospitalizations and 28.3% of all hospitalizations.

Patients with Opioid Use Disorder as a Co-Occurring Condition

In 2017, there were 30,476 hospital admissions where the patient was admitted for another condition but had *opioid use disorder* as a co-occurring condition.

The most common reasons these patients were hospitalized (representing 42.5% of the patients) were:

- Mental health disorders (19.5%).
- Substance and alcohol related disorders (8.1%).
- Septicemia and skin infections, conditions often affecting injection drug users (8.6% and 6.3%, respectively).

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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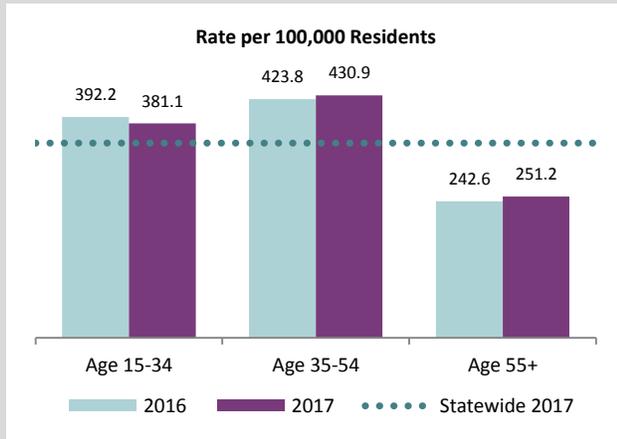
www.phc4.org



Demographic Breakdowns – Opioid-Related Hospitalizations

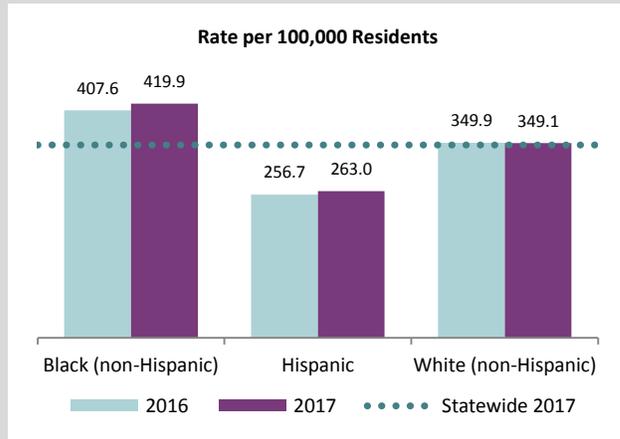
2017 Statewide Rate: 345.9 per 100,000 residents

Age



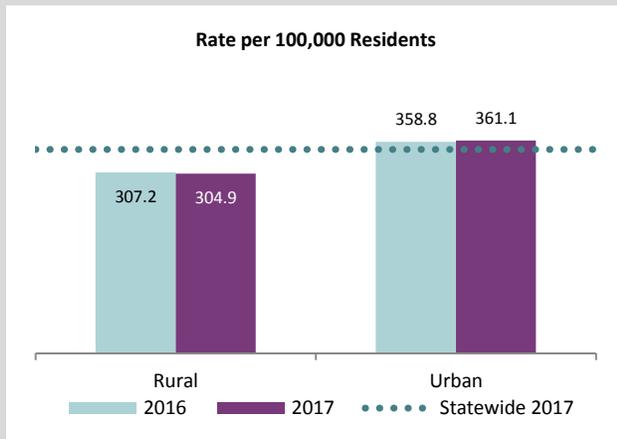
In 2017, residents age 35-54 had the highest rate of opioid-related hospitalizations at 430.9 per 100,000. That rate is 24.6% higher than the statewide rate.

Race/Ethnicity



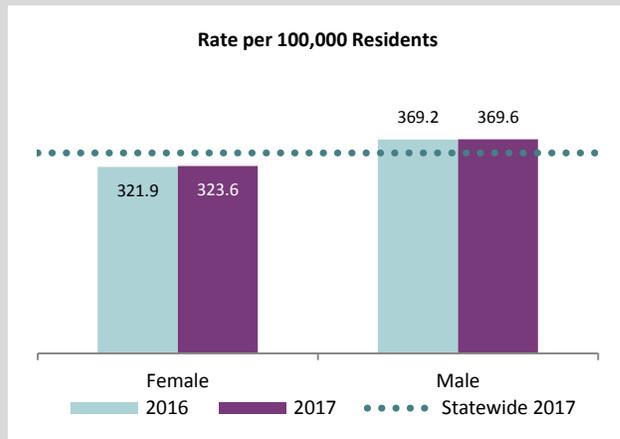
In 2017, black (non-Hispanic) residents had the highest rate of opioid-related hospitalizations at 419.9 per 100,000—a rate that is 21.4% higher than the statewide rate.

Rural/Urban



In 2017, residents of urban counties had the highest rate of opioid-related hospitalizations at 361.1 per 100,000. That rate is 4.4% higher than the statewide rate.

Female/Male

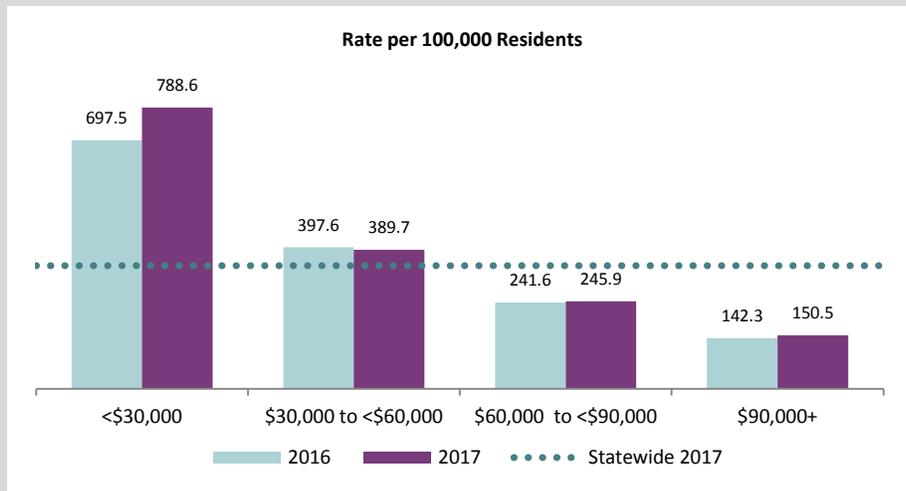


In 2017, male residents had the highest rate of opioid-related hospitalizations at 369.6 per 100,000. That rate is 6.8% higher than the statewide rate.

Rate Calculations: Rates include residents age 15 and older and were calculated using PHC4 hospital discharge data and US Census Bureau data (2016 and 2017 population figures). Rates by income were based on 2016 Census estimates of median household income and population at the zip code level. Rates were calculated using unrounded rates.

2017 Statewide Rate: 345.9 per 100,000 residents

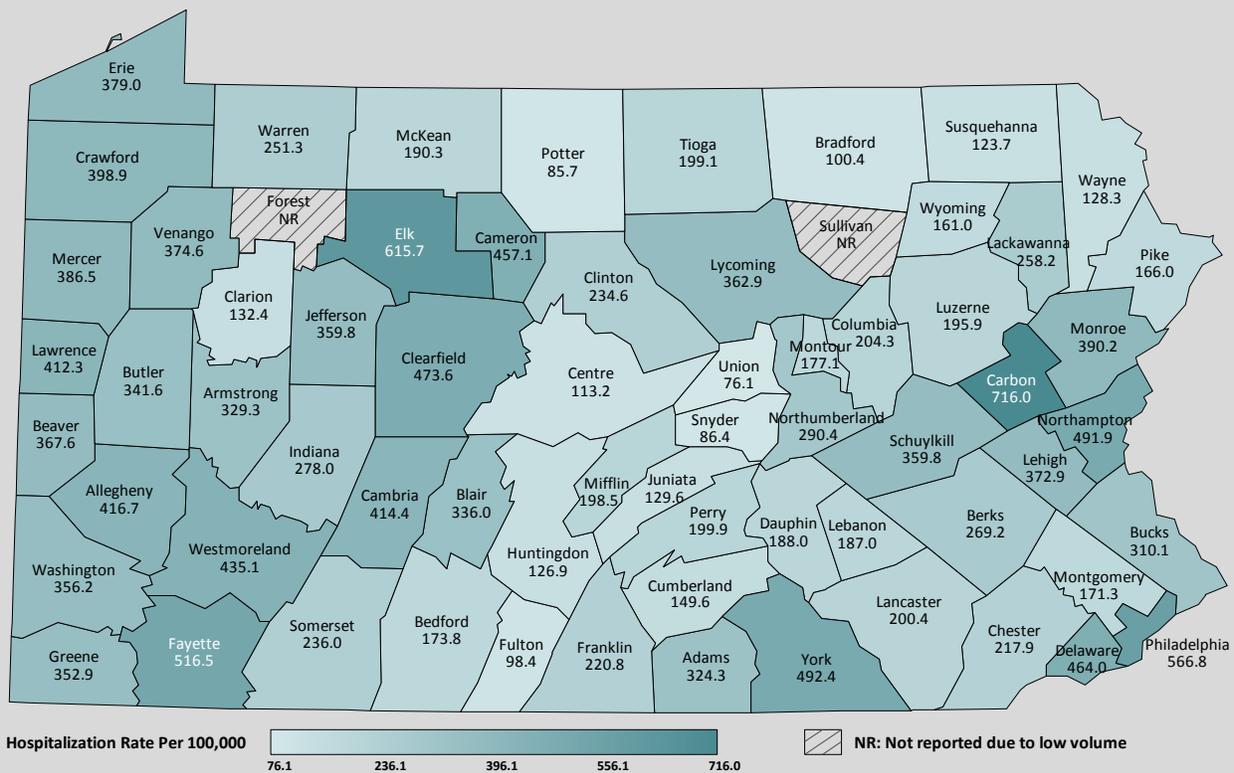
Household Income



In 2017, residents living in areas where the average household income is less than \$30,000 a year had the highest rate of opioid-related hospitalization at 788.6 per 100,000.

That rate is 128.0% higher than the statewide rate.

Opioid-Related Hospitalization Rate per 100,000 County Residents, 2017



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.

Opioid-Related Hospitalization Rate per 100,000 County Residents, 2017

	Number of Hospitalizations	Hospitalization Rate
Statewide	36,712	345.9
Adams	277	324.3
Allegheny	4,303	416.7
Armstrong	182	329.3
Beaver	512	367.6
Bedford	71	173.8
Berks	918	269.2
Blair	344	336.0
Bradford	50	100.4
Bucks	1,624	310.1
Butler	534	341.6
Cambria	465	414.4
Cameron	18	457.1
Carbon	385	716.0
Centre	161	113.2
Chester	920	217.9
Clarion	43	132.4
Clearfield	321	473.6
Clinton	76	234.6
Columbia	115	204.3
Crawford	285	398.9
Cumberland	311	149.6
Dauphin	422	188.0
Delaware	2,147	464.0
Elk	157	615.7
Erie	857	379.0
Fayette	572	516.5
Forest	NR	NR
Franklin	278	220.8
Fulton	12	98.4
Greene	109	352.9
Huntingdon	49	126.9
Indiana	201	278.0
Jefferson	130	359.8

	Number of Hospitalizations	Hospitalization Rate
Juniata	26	129.6
Lackawanna	453	258.2
Lancaster	873	200.4
Lawrence	300	412.3
Lebanon	212	187.0
Lehigh	1,111	372.9
Luzerne	522	195.9
Lycoming	343	362.9
McKean	66	190.3
Mercer	364	386.5
Mifflin	75	198.5
Monroe	553	390.2
Montgomery	1,164	171.3
Montour	27	177.1
Northampton	1,250	491.9
Northumberland	224	290.4
Perry	76	199.9
Philadelphia	7,302	566.8
Pike	79	166.0
Potter	12	85.7
Schuylkill	431	359.8
Snyder	29	86.4
Somerset	150	236.0
Sullivan	NR	NR
Susquehanna	43	123.7
Tioga	68	199.1
Union	29	76.1
Venango	163	374.6
Warren	84	251.3
Washington	620	356.2
Wayne	57	128.3
Westmoreland	1,304	435.1
Wyoming	37	161.0
York	1,796	492.4

NR: Not reported due to low volume.