



Neonatal and Maternal Hospitalizations Related to Substance Use

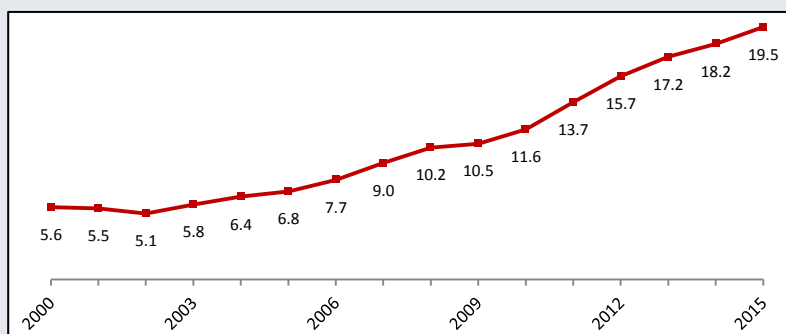
This research brief examines neonatal and maternal hospital stays for Pennsylvania residents where a substance-related condition was present. Neonatal stays include newborns as well as hospitalizations for other neonates less than one year old. Maternal stays include those involving a delivery, as well as other pregnancy-related stays. This research brief looks at trends in hospital discharges across several federal fiscal years (FFY) of data. Each FFY spans the period from October 1 to September 30. The analysis includes neonatal and maternal stays occurring in Pennsylvania general acute care hospitals between FFYs 2000 and 2015.

Neonatal Stays Related to Substance Use

↑ 250%

Between FFY 2000 and FFY 2015, the rate of neonatal hospital stays related to substance use increased by 250%, from 5.6 to 19.5 per 1,000 neonatal stays.

Substance-related Rate per 1,000 Neonatal Stays



1 in 50

A substance-related condition was present in nearly 1 in 50 neonatal hospital stays in FFY 2015. Of the 138,149 neonatal stays in Pennsylvania hospitals that year, a substance-related condition was present in 2,691. There were 788 such stays in FFY 2000 out of 141,540 total neonatal stays. Neonatal drug withdrawal, or neonatal abstinence syndrome (NAS), was present in about 82.0% of the FFY 2015 neonatal drug-related stays. Between FFY 2000 and FFY 2015, the rate of NAS increased from 1.6 to 16.0 per 1,000 neonatal stays – an increase of 870%.

	Substance-related Stays	All Other Stays
Low birth weight	15.3%	6.6%
Respiratory distress	20.7%	9.9%
Difficulty feeding	12.3%	3.4%
Prematurity	16.4%	8.4%

Low birth weight, respiratory distress, difficulty feeding, and prematurity were more likely to occur among neonatal stays related to substance use than among all other neonatal stays (FFY 2015 data).

28,000 Days and \$20 million

Neonatal stays related to substance use add to the overall cost of care through additional days spent in the hospital and increased payments. Overall, neonatal hospitalizations related to substance use added 27,835 hospital days (FFY 2015 data). Additional payments amount to an estimated \$20.3 million.²

	Substance-related Stays	All Other Stays
Average length of stay	14.1 days	3.8 days
Average Medicaid payment ¹	\$17,855	\$10,316

¹ In FFY 2015, Medicaid was the anticipated payer in 2,206 (82.0%) of the 2,691 neonatal stays with a substance-related condition and in 53,463 (39.5%) of the remaining 135,458 neonatal stays. Average payments are based on Medicaid payment data from 2014, the most recent available to PHCA.

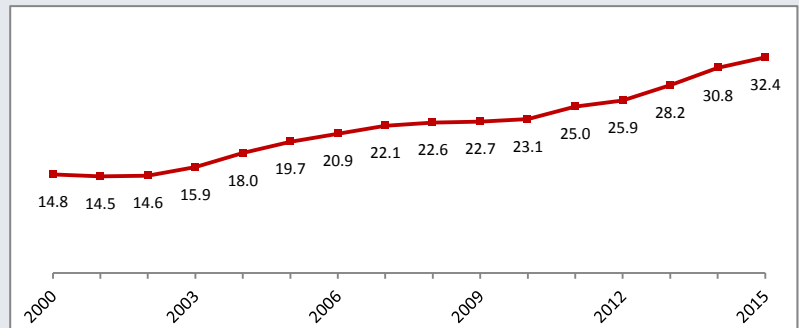
² Estimated by using the additional average Medicaid payment in 2014 for a substance-related neonatal stay (compared to all other stays), times the total number of all substance-related neonatal stays. This assumes that payers other than Medicaid had similar differences in payment.

Maternal Stays Related to Substance Use

↑ 119%

Between FFY 2000 and FFY 2015, the rate of maternal hospital stays related to substance use increased by 119%, from 14.8 to 32.4 per 1,000 maternal stays.

Substance-related Rate per 1,000 Maternal Stays



1 in 30

A substance-related condition was present in nearly 1 in 30 maternal hospital stays in FFY 2015. Of the 142,502 maternal stays in Pennsylvania hospitals that year, a substance-related condition was present in 4,615. There were 2,293 such stays in FFY 2000 out of 154,971 total maternal stays.

↑ 510%

Of the 4,615 maternal hospital stays related to substance use in FFY 2015, 51.9% involved opioid drugs (e.g., heroin). Between FFY 2000 and FFY 2015, maternal hospital stays involving these drugs increased from 2.8 to 16.8 per 1,000 – an increase of 510%. Some of these hospitalizations may include medication-assisted treatment (MAT) to help pregnant women with opioid use disorders.

Maternal stays involving alcohol and cocaine decreased between FFY 2000 and FFY 2015. Maternal stays related to alcohol decreased 36% (from 2.7 to 1.8 per 1,000 maternal stays). Maternal stays related to cocaine decreased 61% (from 7.4 to 2.9 per 1,000 maternal stays).

The average length of stay for maternal stays related to substance use was 3.2 days, compared to 2.7 days for all other maternal stays. Maternal hospital stays related to substance use added 2,109 hospital days (FFY 2015 data).

Additional payments amounted to an estimated \$1.8 million.* In FFY 2015, Medicaid was the anticipated payer in 3,592 (77.8%) of the 4,615 maternal stays with indication of a substance-related condition and in 51,724 (37.5%) of the remaining 137,887 maternal stays. Average payments are based on Medicaid payment data from 2014, the most recent available to PHC4.

**Estimated by using the additional average Medicaid payment in 2014 for a substance-related maternal stay, times the total number of all substance-related maternal stays. This assumes that payers other than Medicaid had similar differences in payment.*

About PHC4

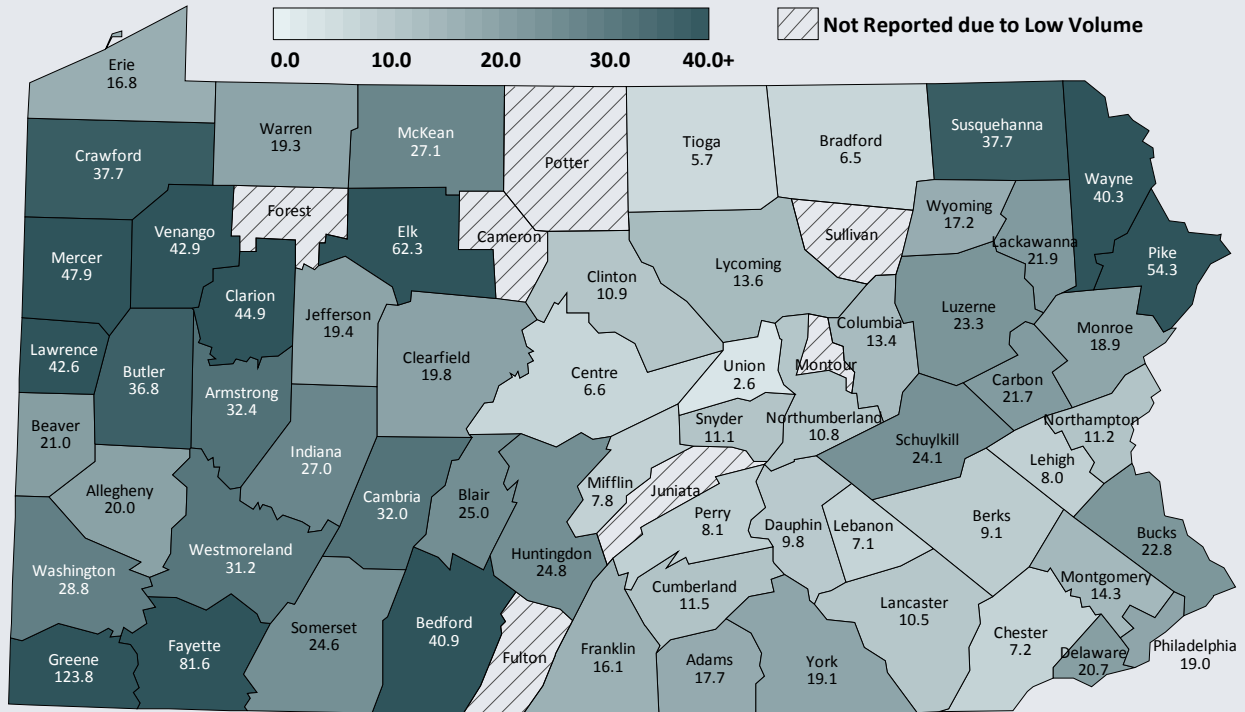
Created by the PA General Assembly in 1986, the PA Health Care Cost Containment Council (PHC4) is an independent state agency charged with collecting, analyzing and reporting information that can be used to improve the quality and restrain the cost of health care in the state. Today, PHC4 is a recognized national leader in public health care reporting. More than 840,000 public reports on patient treatment results are downloaded from the PHC4 website each year, and nearly 100 organizations and individuals annually utilize PHC4's special requests process to access and use data. PHC4 is governed by a 25-member board of directors, representing business, labor, consumers, health care providers, insurers and state government.

Joe Martin, Executive Director
225 Market Street, Suite 400, Harrisburg, PA 17101
717-232-6787 · www.phc4.org



Differences in Rates Across Pennsylvania

Substance-related Rate per 1,000 Neonatal Stays in FFY 2015



Substance-related Rate per 1,000 Maternal Stays in FFY 2015

