

Pregnancy-Associated Deaths in Mahoning County 2008-2016

These data summarize the findings of pregnancy-associated deaths to Mahoning County residents during 2008-2016 that were identified by the Ohio Department of Health's Pregnancy-Associated Mortality Review (PAMR) and are intended to supplement the statewide report [A Report on Pregnancy-Associated Deaths in Ohio 2008-2016](#).

Table 1. Mahoning County and Ohio Pregnancy-Associated Deaths by Pregnancy-Relatedness, 2008-2016

Pregnancy-Relatedness	# Mahoning County Deaths	Mahoning County Mortality Ratio*	# OH Deaths	OH Mortality Ratio*
Pregnancy-Associated (Total)	17	77.7	610	48.2
Pregnancy-Related	4	**	186	14.7
Pregnancy-Associated, but Not Related (due to a cause unrelated to pregnancy)	12	54.8	368	29.1
Pregnancy-Associated, but Unable to Determine Pregnancy-Relatedness	1	**	56	4.4

*Deaths per 100,000 live births **Ratios are suppressed when the numerator is less than 10 Resident live births source: ODH Bureau of Vital Statistics, Ohio Resident Live Birth File

Table 2. Mahoning County Pregnancy-Associated Deaths, by Demographics, 2008-2016

Demographic Characteristic	# of Deaths
Race/Ethnicity	
White, non-Hispanic	9
Black, non-Hispanic	8
Age Group	
Younger than 20 years	2
20-24 years	5
25-29 years	6
30-34 years	4
Source of Pay	
Medicaid	13
Private Insurance	3
Other	1
Education Level	
9th-12th grade; no diploma	3
High school grad. or GED completed	11
Associate Degree	1
Bachelor's Degree	1
Master's Degree	1
Total	17

ODH identified 17 deaths to female residents of Mahoning County who died from 2008 through 2016 whose deaths were temporally related to pregnancy (Table 1). These deaths occurred while a woman was pregnant or within one year following the end of pregnancy and were all considered pregnancy-associated. Thus, during this period, the pregnancy-associated mortality ratio for Mahoning County was 77.7 per 100,000 live births, compared with 48.2 in all of Ohio during this same time period. PAMR determined 4 of the 17 deaths to be pregnancy-related; 12 were pregnancy-associated but not related. For the remaining 1 death, PAMR was unable to make a determination on pregnancy-relatedness.

Table 2 displays the demographic characteristics of the women who died. Most women had Medicaid insurance, had a high school diploma or equivalent education; about half of the women were white and half were black.

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Table 3. Mahoning County Pregnancy-Associated Deaths by Underlying Cause of Death and Timing of Death in Relation to Pregnancy, 2008-2016*

Characteristic	# of Deaths
Timing of Death	
Pregnant at the time of death	6
Pregnant within 42 days of death	1
Pregnant 43 to 365 days of death	10
Total	17
Underlying Cause of Death	
Unintentional Injury	4
Homicide	2
Autoimmune Diseases	1
Cardiomyopathy	1
Cardiovascular and Coronary Conditions	1
Cerebrovascular Accidents	1
Embolisms	1
Infections	1
Pre-eclampsia and Eclampsia	1
Total	13

* Causes of death are displayed only for deaths that occurred during 2008-2014. The cause of death for the one reviewed Mahoning county, 2015-2016 pregnancy-associated death, was mental health conditions.

Among the 17 women who died, 6 women were pregnant at the time of death, 1 had been pregnant within 42 days of death, and 10 had been pregnant within 43 to 365 days of death (Table 3). The underlying causes of death for deaths that occurred from 2008-2014 are displayed in Table 3. Deaths that occurred during 2015-2016, were not all fully reviewed because of the high volume of deaths to be reviewed in a single year.

The committee identified 49 unique contributing factors among the 14 reviewed, pregnancy-associated deaths. The types of factors identified and the level at which they operated (i.e., patient/family, provider, or system) are displayed in Table 4.

Table 4. Contributing Factors Among 14 Reviewed Mahoning County Pregnancy-Associated Deaths, 2008-2016

Factor Level	Factor Class	# of Occurrences
Patient/Family	Access/Financial	2
	Adherence	3
	Childhood Abuse/Trauma	1
	Chronic Disease	9
	Delay	1
	Environmental	2
	Knowledge	3
	Mental Health Conditions	2
	Other	1
	Social Support/Isolation	3
	Substance Use Disorder- Alcohol, Illicit/Prescription Drugs	3
	Tobacco Use	1
	Unstable Housing	1
	Violence	5
Provider	Assessment	2
	Delay	1
	Knowledge	2
	Referral	1
System	Access/Financial	1
	Continuity of Care/Care Coordination	3
	Law Enforcement	1
	Outreach	1