

Pregnancy-Associated Deaths in Cuyahoga County

These data summarize the findings of pregnancy-associated deaths to Cuyahoga County residents during 2008-2016 that were identified by the Ohio Department of Health's (ODH) 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. Cuyahoga County and Ohio Pregnancy-Associated Deaths by Pregnancy-Relatedness, 2008-2016

Pregnancy-Relatedness	# Cuyahoga County Deaths	Cuyahoga County Mortality Ratio*	# OH Deaths	OH Mortality Ratio*
Pregnancy-Associated (Total)	65	47.7	610	48.2
Pregnancy-Related	24	17.6	186	14.7
Pregnancy-Associated, but Not Related (due to a cause unrelated to pregnancy)	35	25.7	368	29.1
Pregnancy-Associated, but Unable to Determine Pregnancy-Relatedness	4	**	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. Cuyahoga County Pregnancy-Associated Deaths, by Demographics, 2008-2016

Demographic Characteristic	# of Deaths
Race/Ethnicity	
Black, non-Hispanic	34
White, non-Hispanic	28
Hispanic	1
Other	2
Age Group	
Younger than 20 years	3
20-24 years	14
25-29 years	12
30-34 years	26
35-44 years	10
Source of Pay	
Medicaid	43
Private Insurance	15
Other	7
Education Level	
9th-12th grade; no diploma	13
High school grad. or GED completed	28
Some college; no degree	8
Associate Degree	3
Bachelor's Degree	4
Master's Degree	6
Doctorate or Professional Degree	2
Not Specified	1
Total	65

ODH identified 65 deaths to female residents of Cuyahoga 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 Cuyahoga County was 47.7 per 100,000 live births, compared with 48.2 in all of Ohio during this same time period. PAMR determined 24 of the 65 deaths to be pregnancy-related; 35 were pregnancy-associated but not related. For the remaining 4 deaths, PAMR was unable to make a determination on pregnancy-relatedness.

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

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Table 3. Cuyahoga 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	22
Pregnant within 42 days of death	21
Pregnant 43 to 365 days of death	22
Total	65
Underlying Cause of Death*	
Unintentional Injury	10
Cardiovascular and Coronary Conditions	6
Hemorrhage	5
Malignancies	5
Homicide	4
Amniotic Fluid Embolism	2
Embolisms	2
Mental Health Conditions	2
Pre-eclampsia and Eclampsia	2
Blood Disorders	1
Cerebrovascular Accidents	1
Infections	1
Metabolic/Endocrine Conditions	1
Seizure Disorders	1
Total	43

*Causes of death are displayed only for deaths that occurred during 2008-2014. Among the 14 reviewed Cuyahoga county, 2015-2016 pregnancy-associated deaths, the causes of death were unintentional injury (5), cardiovascular and coronary conditions (2), seizure disorders (1), metabolic/endocrine conditions (1), mental health conditions (1), infections (1), homicide (1), hemorrhage (1), and embolisms (1).

Among the 65 women who died, 22 women were pregnant at the time of death, 21 had been pregnant within 42 days of death, and 22 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 177 unique contributing factors among the 57 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 19 Reviewed Cuyahoga County Pregnancy-Associated Deaths, 2008-2016

Factor Level	Factor Class	# of Occurrences
Patient/Family	Access/Financial	1
	Adherence	16
	Childhood Abuse/Trauma	2
	Chronic Disease	25
	Cultural/Religious	1
	Delay	12
	Environmental	4
	Knowledge	12
	Legal	1
	Mental Health Conditions	8
	Other	3
	Social Support/Isolation	1
	Substance Use Disorder- Alcohol, Illicit/Prescription Drugs	16
	Tobacco Use	4
	Unstable Housing	1
Violence	6	
Provider	Assessment	3
	Clinical Skill/Quality of Care	5
	Communication	3
	Continuity of Care/Care Coordination	3
	Delay	8
	Knowledge	3
	Other	1
	Outreach	1
	Referral	4
System	Access/Financial	7
	Assessment	2
	Clinical Skill/Quality of Care	4
	Communication	2
	Continuity of Care/Care Coordination	8
	Equipment/Technology	2
	Other	2
	Personnel	2
	Policies/Procedures	4