

Pregnancy-Associated Deaths in Hamilton County 2008-2016

These data summarize the findings of pregnancy-associated deaths to Hamilton 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. Hamilton County and Ohio Pregnancy-Associated Deaths by Pregnancy-Relatedness, 2008-2016

Pregnancy-Relatedness	# Hamilton County Deaths	Hamilton County Mortality Ratio*	# OH Deaths	OH Mortality Ratio*
Pregnancy-Associated (Total)	43	43.2	610	48.2
Pregnancy-Related	14	14.0	186	14.7
Pregnancy-Associated, but Not Related (due to a cause unrelated to pregnancy)	25	25.1	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. Hamilton County Pregnancy-Associated Deaths, by Demographics, 2008-2016

Demographic Characteristic	# of Deaths
Race/Ethnicity	
White, non-Hispanic	23
Black, non-Hispanic	19
Hispanic	1
Age Group	
Younger than 20 years	4
20-24 years	10
25-29 years	12
30-34 years	6
35-44 years	11
Source of Pay	
Medicaid	29
Private Insurance	7
Other	7
Education Level	
8th grade or less	1
9th-12th grade; no diploma	7
High school grad. or GED completed	18
Some college; no degree	5
Associate Degree	6
Bachelor's Degree	4
Master's Degree	1
Doctorate or Professional Degree	1
Total	43

ODH identified 43 deaths to female residents of Hamilton 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 Hamilton County was 43.2 per 100,000 live births, compared with 48.2 in all of Ohio during this same time period. PAMR determined 14 of the 43 deaths to be pregnancy-related; 25 were pregnancy-associated but not related. For the remaining 4 deaths, PAMR was unable to make a determination on pregnancy-relatedness. The pregnancy-related mortality ratio for Hamilton County was 14.0 per 100,000 live births, compared with 14.7 in all of Ohio.

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

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Table 3. Hamilton 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	15
Pregnant within 42 days of death	9
Pregnant 43 to 365 days of death	19
Total	43
Underlying Cause of Death*	
Unintentional Injury	8
Homicide	6
Infections	4
Pre-eclampsia and Eclampsia	3
Seizure Disorders	3
Cardiovascular and Coronary Conditions	2
Anesthesia Complications	1
Cardiomyopathy	1
Embolisms	1
Hemorrhage	1
Total	30

*Causes of death are displayed only for deaths that occurred during 2008-2014. Among the five reviewed Hamilton county, 2015-2016 pregnancy-associated deaths, the causes of death were infections (2), cerebrovascular accidents (1), unintentional injury (1), and unknown COD (1).

Among the 43 women who died, 15 women were pregnant at the time of death, 9 had been pregnant within 42 days of death, and 19 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 87 unique contributing factors among the 35 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 35 Reviewed Hamilton County Pregnancy-Associated Deaths, 2008-2016

Factor Level	Factor Class	# of Occurrences
Patient/Family	Access/Financial	2
	Adherence	4
	Childhood Abuse/Trauma	2
	Chronic Disease	11
	Cultural/Religious	1
	Delay	4
	Environmental	3
	Knowledge	2
	Mental Health Conditions	5
	Outreach	1
	Social Support/Isolation	1
	Substance Use Disorder-Alcohol, Illicit/Prescription Drugs	8
	Violence	6
Provider	Assessment	4
	Clinical Skill/Quality of Care	6
	Continuity of Care/Care Coordination	2
	Delay	3
	Knowledge	3
	Outreach	2
	Referral	4
System	Access/Financial	4
	Clinical Skill/Quality of Care	1
	Communication	1
	Continuity of Care/Care Coordination	2
	Equipment/Technology	2
	Personnel	1
	Policies/Procedures	1
	Referral	1