

Pregnancy-Associated Deaths in Butler County 2008-2016

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

Pregnancy-Relatedness	# Butler County Deaths	Butler County Mortality Ratio*	# OH Deaths	OH Mortality Ratio*
Pregnancy-Associated (Total)	24	57.5	610	48.2
Pregnancy-Related	6	**	186	14.7
Pregnancy-Associated, but Not Related	16	38.3	368	29.1
Pregnancy-Associated, but Unable to Determine Pregnancy-Relatedness	2	**	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. Butler County Pregnancy-Associated Deaths, by Demographics, 2008-2016

Demographic Characteristic	# of Deaths
Race/Ethnicity	
White, non-Hispanic	21
Black, non-Hispanic	1
Other, non-Hispanic	2
Age Group	
Younger than 20 years	1
20-24 years	3
25-29 years	12
30-34 years	6
35-44 years	2
Source of Pay	
Medicaid	21
Private Insurance	2
Other	1
Education Level	
8th grade or less	1
9th-12th grade; no diploma	8
High school grad. or GED completed	9
Some college; no degree	3
Associate Degree	1
Bachelor's Degree	1
Master's Degree	1
Total	24

ODH identified 24 deaths to female residents of Butler 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 Butler County was 57.5 per 100,000 live births, compared with 48.2 in all of Ohio during this same time period. PAMR determined 6 of the 24 deaths to be pregnancy-related; 16 were pregnancy-associated but not related. For the remaining 2 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 white, had Medicaid insurance, and had a high school diploma or less education.

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Table 3. Butler 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	2
Pregnant 43 to 365 days of death	16
Total	24
Underlying Cause of Death*	
Unintentional Injury	6
Mental Health Conditions	3
Blood Disorders	1
Cardiomyopathy	1
Homicide	1
Malignancies	1
Metabolic/Endocrine Conditions	1
Total	14

*Causes of death are displayed only for deaths that occurred during 2008-2014. Among the five reviewed Butler county, 2015-2016 pregnancy-associated deaths, the causes of death were unintentional injury (2), autoimmune disease (1), cardiovascular and coronary conditions (1), and infections (1).

Among the 24 women who died, 6 women were pregnant at the time of death, 2 had been pregnant within 42 days of death, and 16 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 74 unique contributing factors among the 19 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 Butler County Pregnancy-Associated Deaths, 2008-2016

Factor Level	Factor Class	# of Occurrences
Patient/Family	Access/Financial	1
	Adherence	3
	Childhood Abuse/Trauma	1
	Chronic Disease	9
	Cultural/Religious	1
	Delay	2
	Environmental	2
	Knowledge	4
	Legal	1
	Mental Health Conditions	8
	Other	4
	Social Support/Isolation	4
	Substance Use Disorder- Alcohol, Illicit/Prescription Drugs	11
	Unstable Housing	2
Violence	2	
Provider	Assessment	5
	Communication	2
	Delay	1
	Other	1
	Referral	1
System	Communication	1
	Continuity of Care/Care Coordination	2
	Equipment/Technology	1
	Legal	1
	Outreach	1
	Personnel	1
	Policies/Procedures	2