

Idaho Pregnancy- Related Mortality

Counting the Number of Deaths

Summary of Methods for Determining the Number of Maternal Deaths
During and After Pregnancy

Division of Public Health

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Counting the Number of Deaths

There are three main methods to define pregnancy-related deaths. Deaths are categorized depending on the information collected on the death certificate, the cause of death, and the timing of the pregnancy in relation to the death. The three methods include:

- 1) **Deaths due to pregnancy, childbirth, and the puerperium** There are 113 categories of death that are used to rank leading cause of death. “Pregnancy, childbirth, and the puerperium (the period between childbirth and the return of the uterus to its normal size, according to Webster’s Dictionary)” is one of these categories. Death may have occurred during pregnancy, or up to one year after pregnancy from a direct or indirect obstetric cause. National statistics are provided by the National Center for Health Statistics (NCHS) using this method.
- 2) **Maternal deaths** The World Health Organization (WHO) defines a maternal death as “the death of a woman while pregnant or within 42 days of termination of pregnancy from any cause related to or aggravated by the pregnancy or its management”¹. Only states that collect information on the timing of the pregnancy in relation to the women’s death may use this measure. Idaho includes a question on the death certificate regarding time between pregnancy and death, and can conduct analysis for this measure. Until all states collect data based on the timing of the death from the pregnancy, NCHS will not release U.S. data on maternal deaths as defined by the WHO.
- 3) **All deaths to pregnant women** This category includes all deaths to women pregnant at the time of death or pregnant within one year prior to death from all causes of death. These include deaths from pregnancy, childbirth, and the puerperium, cancer, heart disease, and other natural causes, and injury-related deaths such as accidents, homicide, and suicide. These data are based on the question on the Idaho death certificate regarding pregnancy status (see timeline).

TimeLine



The Idaho death certificate includes a specific question on pregnancy status for females aged 10-54 at the time of death:

- 1) Not pregnant within the past year
- 2) Pregnant at time of death
- 3) Not pregnant, but pregnant within 42 days of death
- 4) Not pregnant, but pregnant 43 days to 1 year before death
- 5) Unknown if pregnant within the past year

Not all states include a pregnancy-related question on their death certificate. For these states, information on pregnancy is written in the cause-of-death section or in the section which reports other significant conditions contributing to death.

Pregnancy may result in a live birth, miscarriage, stillbirth, or induced termination.

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1) Deaths due to Pregnancy, Childbirth, and the Puerperium

Idaho and U.S. Number of Deaths, and Death Rate per 100,000 Females, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Idaho Deaths	70	6	6	9	2	6	9	5	10	8	9
Idaho Crude Death Rate Per 100,000 Females	0.9	0.8	0.8	1.2	0.3	0.8	1.1	0.6	1.0	1.0	1.1
Total U.S. Deaths	9,133	795	960	825	931	990	1,138	1,123	1,140	1,231	NA
U.S. Crude Death Rate Per 100,000 Females	0.6	0.5	0.6	0.5	0.6	0.6	0.7	0.7	0.7	0.8	NA

Pregnancy Status at the Time of Death, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Pregnant at time of death	31	2	3	2	1	3	8	1	5	2	4
Not pregnant, but pregnant 42 days before death	18	2	-	3	1	-	1	2	3	4	2
Not pregnant, but pregnant 43 days to 1 year before death	21	2	3	4	-	3	-	2	2	2	3

Cause of death, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Pregnancy with abortive outcome	-	-	-	-	-	-	-	-	-	-	-
Other direct obstetric deaths	30	2	3	2	1	2	4	-	5	6	5
Eclampsia and pre-eclampsia	3	-	-	1	-	-	-	-	-	1	1
Hemorrhage of pregnancy and childbirth, placenta previa	-	-	-	-	-	-	-	-	-	-	-
Complications predominately related to the puerperium	3	1	1	-	-	-	-	-	-	1	-
Obstetric embolism	4	-	-	-	-	-	1	-	3	-	-
All other direct obstetric causes	20	1	2	1	1	2	3	-	2	4	4
Obstetric death of unspecified causes	-	-	-	-	-	-	-	-	-	-	-
Other deaths related to pregnancy, childbirth, and puerperium	21	2	3	4	-	3	-	2	2	2	3
Death from any obstetric cause occurring more than 42 days but less than one year after delivery	21	2	3	4	-	3	-	2	2	2	3
Death from sequelae of direct obstetric causes	-	-	-	-	-	-	-	-	-	-	-
Indirect obstetric causes	19	2	-	3	1	1	5	3	3	-	1

Deaths from pregnancy, childbirth, and the puerperium are assigned to categories O00-O99 of the International Classification of Diseases, Tenth Revision (ICD-10 Codes). If the pregnancy occurred 42 or fewer days prior death, the cause may be from a direct or indirect condition. Indirect obstetric causes include diseases such as pneumonia, heart disease, cancer, but does not include injury. If the death occurred more than 42 days but less than one year after delivery or termination, the death may also be from a direct or indirect obstetric condition but will be given the ICD-10 code O96 (Death from any obstetric cause occurring more than 42 days but less than one year after delivery). Idaho rates are comparable with U.S. rates.

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2) Maternal Deaths (WHO's Definition)

Number of Deaths and Death Ratio per 100,000 Live Births, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Deaths	49	4	3	5	2	3	9	3	8	6	6
Death Ratio Per 100,000 Live Births	21.3	15.9	12.6	21.5	9.0	13.1	40.3	13.1	35.0	26.7	27.1

Pregnancy Status at the Time of Death, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Pregnant at time of death	31	2	3	2	1	3	8	1	5	2	4
Not pregnant, but pregnant within 42 days before death	18	2	-	3	1	-	1	2	3	4	2

Cause of death, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Pregnancy with abortive outcome	-	-	-	-	-	-	-	-	-	-	-
Other direct obstetric deaths	30	2	3	2	1	2	4	-	5	6	5
Eclampsia and pre-eclampsia	3	-	-	1	-	-	-	-	-	1	1
Hemorrhage of pregnancy and childbirth, placenta previa	-	-	-	-	-	-	-	-	-	-	-
Complications predominately related to the puerperium	3	1	1	-	-	-	-	-	-	1	-
Obstetric embolism	4	-	-	-	-	-	1	-	3	-	-
All other direct obstetric causes	20	1	2	1	1	2	3	-	2	4	4
Obstetric death of unspecified causes	-	-	-	-	-	-	-	-	-	-	-
Indirect obstetric causes	19	2	-	3	1	1	5	3	3	-	1

Maternal deaths are assigned to ICD-10 Codes A34, O00-O95, and O98-O99. Because these deaths are based on deaths during pregnancy or pregnant within 42 days prior to death, Idaho rates are comparable only with other states in which the information on the timing of death to the pregnancy is reported on the death certificate. Note the ICD-10 codes O96-O97 not included for maternal deaths are the codes for maternal causes of death more than 42 days after delivery or termination of pregnancy.

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3) All Deaths to Pregnant Women and Women Pregnant Within One Year Before Death

Number of Deaths and Death Rate per 100,000 Females Aged 10-54, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Deaths	121	13	12	16	8	10	14	13	14	10	11
Rate per 100,000 Females Aged 10-54	2.6	2.8	2.4	3.4	1.7	2.1	2.8	2.7	2.9	2.1	2.2

Pregnancy Status at the Time of Death, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Pregnant at time of death	55	6	4	7	2	7	10	6	6	3	4
Not pregnant, but pregnant within 42 days before death	24	2	1	5	3	-	1	2	3	4	3
Not pregnant, but pregnant 43 days to 1 year before death	42	5	7	4	3	3	3	5	5	3	4

Cause of death, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Accidents	34	6	3	5	2	3	4	6	3	1	1
Assault (homicide)	7	1	1	-	1	1	1	1	-	1	-
Diseases of heart	1	-	-	1	-	-	-	-	-	-	-
Intentional self-harm (suicide)	7	-	2	1	2	-	-	-	1	-	1
Legal intervention	1	-	-	-	-	-	-	1	-	-	-
Pregnancy, childbirth, and the puerperium	70	6	6	9	2	6	9	5	10	8	9
All other causes (non-ranking causes)	1	-	-	-	1	-	-	-	-	-	-

Cause of accidental death, 2008-2017

	TOTAL	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	34	6	3	5	2	3	4	6	3	1	1
Motor vehicle accident	20	5	2	3	2	-	2	3	2	-	1
Water transportation accident	1	-	-	1	-	-	-	-	-	-	-
Drowning and submersion	1	1	-	-	-	-	-	-	-	-	-
Fire	1	-	-	-	-	1	-	-	-	-	-
Exposure to excessive natural cold	-	-	-	-	-	-	-	-	-	-	-
Poisoning by drugs	10	-	1	1	-	2	2	2	1	1	-
Poisoning by vapors or gases	1	-	-	-	-	-	-	1	-	-	-

The number of deaths which occurred during pregnancy or within a year after pregnancy are determined from a question on the Idaho death certificate regarding the female's pregnancy status at the time of death. From 2008 to 2017, there were a total of 121 Idaho females aged 10-54 who were pregnant at the time of death or pregnant within one year before death. Of these deaths, over half were pregnancy-related. A total of 28% were due to accidents, 6% were due to assault, and 6% were from intentional self-harm (suicide). During the same period, 5,288 Idaho women aged 10-54 died who were not pregnant or not pregnant within the year prior to death. Of these deaths, 21% were due to accidents, 9% were from intentional self-harm (suicide), and one percent was from assault.

1. Centers for Disease Control and Prevention, National Center for Health Statistics. Compressed Mortality File 1999-2016 on CDC WONDER Online Database, released June 2017. Data are from the Compressed Mortality File 1999-2016 Series 20 No. 2U, 2016, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.