Perinatal mortality appended tables

Table 3.41: Perinatal related death and perinatal death classification (PSANZ-PDC) 2018

Refer to Table 3.44 for the full code list.

Perinatal death classification (PSANZ-PDC)		2018 n=604	
		n	Rate
1	**Congenital anomaly**		
1.1	Structural anomaly	<3	s
1.11	Nervous system	25	0.42
1.12	Cardiovascular system	25	0.42
1.13	Genitourinary system	10	0.17
1.15	Musculoskeletal	10	0.17
1.151	Congenital diaphragmatic hernia	<3	s
1.18	Multiple congenital anomaly (no chromosomal/genetic cause or not tested)	15	0.25
1.19	Other congenital anomaly		
1.192	Idiopathic hydrops fetalis	<3	s
1.193	Fetal tumour (includes sacro-coccygeal teratoma)	<3	s
1.198	Other specified	3	0.05
1.199	Congenital anomaly, unspecified	<3	s
1.2	Chromosomal anomaly	<3	s
1.21	Trisomy 21 (Down syndrome)	13	0.22
1.22	Trisomy 18 (Edward syndrome) and Trisomy 13 (Patau syndrome)	22	0.37
1.23	Other trisomies and partial trisomies of the autosomes, not elsewhere classified (includes pathogenic duplications, unbalanced translocations and insertions)	6	0.10
1.24	Monosomies and deletions from the autosomes, not elsewhere classified (includes pathogenic deletions, eg, 22q11.2 deletion syndrome (diGeorge syndrome), Wolff-Hirschorn syndrome, Cri-du-chat syndrome	7	0.12
1.25	Turner syndrome (monosomy X)	<3	s
1.28	Other chromosomal abnormalities, not elsewhere specified (includes triploidy)	6	0.10
1.3	Genetic condition		
1.31	Genetic condition, specified (includes inborn errors of metabolism (eg, Tay-Sachs disease, Fragile X syndrome, imprinting syndromes) and other syndromes with demonstrated genetic mutations (eg, Kabuki syndrome, Fraser syndrome)	6	0.10
1.32	Syndrome/association with demonstrated chromosomal/gene anomaly	4	0.07
2	**Perinatal infection**		
2.1	Bacterial		
2.11	Group B Streptococcus	5	0.08
2.12	E coli	<3	s
2.14	Spirochaetal, eg, syphilis	<3	s
2.18	Other bacterial	<3	s
2.19	Unspecified bacterial	3	0.05
2.2	Viral		
2.21	Cytomegalovirus	<3	s
2.22	Parvovirus	<3	s
2.23	Herpes simplex virus	<3	s
2.3	Protozoal, eg, toxoplasma	<3	s
2.9	Other unspecified organism or no organism identified	3	0.05
3	**Hypertension**		
3.1	Chronic hypertension: essential	3	0.05
3.5	Pre-eclampsia	13	0.22
3.6	Pre-eclampsia superimposed on chronic hypertension	3	0.05
4	**Antepartum haemorrhage (APH)**		
4.1	Placental abruption	18	0.30
4.2	Placenta praevia	<3	s
4.9	APH of undetermined origin	39	0.66

Perinatal death classification (PSANZ-PDC)		2018 n=604	
		n	Rate
5	**Maternal conditions**		
5.1	Termination of pregnancy for maternal psychosocial indications	8	0.14
5.2	Diabetes		
5.21	Gestational diabetes	<3	s
5.22	Pre-existing diabetes	14	0.24
5.3	Maternal injury	<3	s
5.31	Accidental	6	0.10
5.32	Non-accidental	<3	s
5.4	Maternal sepsis	<3	s
5.5	Antiphospholipid syndrome	<3	s
5.6	Obstetric cholestasis	<3	s
5.8	Other specified maternal conditions		
5.88	Other specified maternal medical or surgical conditions	6	0.10
6	**Complications of multiple pregnancy**		
6.1	Monochorionic twins	<3	s
6.11	Twin to twin transfusion syndrome (TTTS)	12	0.20
6.12	Selective fetal growth restriction (FGR) (ie, affecting only one twin)	5	0.08
6.13	Monoamniotic twins (including cord entanglement)	3	0.05
6.18	Other	<3	s
6.19	Unknown or unspecified	3	0.05
6.2	Dichorionic twins		
6.21	Early fetal death in a multiple pregnancy (<20 weeks' gestation)	4	0.07
6.28	Other	<3	s
6.29	Unknown or unspecified	<3	s
7	**Specific perinatal conditions**		
7.1	Fetomaternal haemorrhage	7	0.12
7.2	Antepartum cord or fetal vessel complications (excludes monochorionic twins or higher order multiples)		
7.21	Cord vessel haemorrhage	<3	s
7.22	Cord occlusion (true knot with evidence of occlusion or other)	<3	s
7.28	Other cord complications	5	0.08
7.3	Uterine abnormalities		
7.31	Developmental anatomical abnormalities (eg, bicornuate uterus)	<3	s
7.5	Fetal antenatal intracranial injury		
7.52	Fetal antenatal ischaemic brain injury	<3	s
7.53	Fetal antenatal haemorrhagic brain injury	4	0.07
7.6	Other specific perinatal conditions		
7.63	Amniotic band	4	0.07
7.68	Other	<3	s
8	**Hypoxic peripartum death**		
8.1	With intrapartum complications (sentinel events)		
8.12	Cord prolapse	<3	s
8.15	Birth trauma	<3	s
8.2	Evidence of significant fetal compromise (excluding other complications)	3	0.05
8.9	Unspecified hypoxic peripartum death	<3	s
9	**Placental dysfunction or causative placental pathology**		
9.1	Maternal vascular malperfusion	17	0.29
9.2	Fetal vascular malperfusion	13	0.22
9.3	High grade villitis of unknown etiology (VUE)	9	0.15
9.4	Massive perivillous fibrin deposition/maternal floor infarction	<3	s
9.5	Severe chronic intervillositis (Histiocytic intervillositis)	3	0.05
9.6	Placental hypoplasia (small for gestation placenta)	4	0.07
9.7	No causal placental pathology demonstrated, with antenatal evidence of poor placental function identified (such as abnormal fetal umbilical artery Doppler)	<3	s

Perinatal death classification (PSANZ-PDC)		2018 n=604	
		n	Rate
9.8	Placental pathological examination was not performed, with antenatal evidence of poor placental function was identified (such as abnormal fetal umbilical artery Doppler)	3	0.05
9.9	Other placental pathology (eg, multiple pathologies with evidence of loss of placental function leading to death)	4	0.07
10	**Spontaneous preterm labour or rupture of membranes (<37 weeks' gestation)**		
10.1	Spontaneous preterm	<3	s
10.11	With histological chorioamnionitis	42	0.71
10.12	Without histological chorioamnionitis	15	0.25
10.13	With clinical evidence of chorioamnionitis, no examination of placenta	4	0.07
10.17	No clinical signs of chorioamnionitis, no examination of placenta	9	0.15
10.19	Unspecified or not known whether placenta examined	<3	s
10.2	Spontaneous preterm preceded by premature cervical shortening	26	0.44
11	**Unexplained antepartum fetal death**		
11.1	Unexplained antepartum fetal death despite full investigation	22	0.37
11.2	Unclassifiable antepartum fetal death with incomplete investigation	54	0.91
11.3	Unclassifiable antepartum fetal death due to unknown level of investigation	<3	s
12	**Neonatal death without obstetric antecedent**		
12.1	Neonatal death with no obstetric antecedent factors despite full investigation	<3	s

Categories where no deaths occurred have been removed from the table (refer to Table 3.44 for full code list).

's' indicates rate suppressed due to small numbers.

Sources: Numerator: PMMRC's perinatal data extract 2018; Denominator: MAT births 2018.

Table 3.42: Neonatal death and primary neonatal death classification (PSANZ-NDC) 2018

Refer to Table 3.45 for the full code list.

Neonatal death classification (PSANZ-NDC)		2018 n=154	
		n	Rate
1	**Congenital anomaly**		
1.1	Structural anomaly	<3	s
1.11	Nervous system	<3	s
1.12	Cardiovascular system	6	0.10
1.13	Genitourinary system	<3	s
1.15	Musculoskeletal	<3	s
1.151	Congenital diaphragmatic hernia	<3	s
1.18	Multiple congenital anomaly (no chromosomal/genetic cause or not tested)	4	0.07
1.19	Other congenital anomaly		
1.193	Fetal tumour (includes sacro-coccygeal teratoma)	<3	s
1.2	Chromosomal anomaly	<3	s
1.21	Trisomy 21 (Down syndrome)	<3	s
1.22	Trisomy 18 (Edward syndrome) and Trisomy 13 (Patau syndrome)	8	0.14
1.23	Other trisomies and partial trisomies of the autosomes, not elsewhere classified (includes pathogenic duplications, unbalanced translocations and insertions)	<3	s
1.24	Monosomies and deletions from the autosomes, not elsewhere classified (includes pathogenic deletions, eg, 22q11.2 deletion syndrome (diGeorge syndrome), Wolff-Hirschorn syndrome, Cri-du-chat syndrome	<3	s
1.28	Other chromosomal abnormalities, not elsewhere specified (includes triploidy)	<3	s
1.3	Genetic condition		
1.31	Genetic condition, specified (includes inborn errors of metabolism (eg, Tay-Sachs disease, Fragile X syndrome, imprinting syndromes) and other syndromes with demonstrated genetic mutations (eg, Kabuki syndrome, Fraser syndrome)	4	0.07
1.32	Syndrome/association with demonstrated chromosomal/gene anomaly	<3	s
2	**Periviable infants (typically <24 weeks)**		
2.1	Not resuscitated (including infants where there is an antenatal plan for no resuscitation at birth or in the circumstance of re-directed care)	55	0.94
2.2	Unsuccessful resuscitation	8	0.14
3	**Cardio-respiratory disorders**		
3.1	Hyaline membrane disease/Respiratory distress syndrome (RDS)	9	0.15

	Neonatal death classification (PSANZ-NDC)	2018 n=154	
		n	Rate
3.2	Meconium aspiration syndrome	<3	s
3.3	Primary persistent pulmonary hypertension	<3	s
3.4	Pulmonary hypoplasia	<3	s
3.6	Air leak syndromes		
3.6.1	Pneumothorax	<3	s
3.9	Other		
3.9.1	Neonatal anaemia/hypovolaemia	<3	s
4	**Neonatal infection**		
4.1	Congenital/Perinatal bacterial infection (early onset <48 hrs)		
4.11	Blood stream infection/septicaemia		
4.111	Positive culture of a pathogen	4	0.07
4.13	Bacterial pneumonia	<3	s
4.15	Multiple site bacterial infection	<3	s
4.19	Unspecified congenital infection	<3	s
4.4	Acquired bacterial infection (late onset >48hrs)		
4.41	Blood stream infection/septicaemia		
4.411	Positive culture of a pathogen	4	0.07
5	**Neurological**		
5.1	Hypoxic ischaemic encephalopathy/Perinatal asphyxia	13	0.22
5.2	Cranial haemorrhage		
5.21	Intraventricular haemorrhage	3	0.05
6	**Gastrointestinal**		
6.1	Necrotising enterocolitis (NEC)	7	0.12
6.3	Gastric or intestinal perforation (excluding NEC)	<3	s
6.8	Other	<3	s
7	**Other**		
7.1	Sudden unexpected death in infancy (SUDI)		
7.13	Unclassified sudden infant death in the neonatal period		
7.131	Bed sharing/unsafe sleep	<3	s
7.2	Multisystem failure		
7.29	Unspecified/undetermined primary cause or trigger event	<3	s
7.3	Trauma		
7.31	Accidental	<3	s
7.4	Treatment complications		
7.41	Surgical	<3	s

Categories where no deaths occurred have been removed from the table (refer to Table 3.45 for full code list).

's' indicates rate suppressed due to small numbers.

Sources: Numerator: PMMRC's perinatal data extract, neonatal deaths only, 2018; Denominator: MAT births excluding fetal deaths 2018.

Table 3.43: Summary of New Zealand perinatal related mortality rates using New Zealand definition (≥20 weeks or ≥400g if gestation unknown), babies of ngā māmā Māori and New Zealand European mothers by year 2009–2018

Māori

Maternal prioritised ethnic group: Māori	n									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total births	17,224	17,102	16,518	16,391	15,241	14,881	15,116	15,367	15,244	14,898
Fetal deaths (terminations of pregnancy and stillbirths)*	140	124	126	111	106	108	91	120	94	119
Terminations of pregnancy	29	19	31	34	24	20	20	35	21	21
Stillbirths	111	105	95	77	82	88	71	85	73	98
Early neonatal deaths <7 days	49	53	39	43	44	47	38	48	48	34
Late neonatal deaths 7–27 days	20	16	11	9	6	11	14	14	11	13
Neonatal deaths <28 days#	69	69	50	52	50	58	52	62	59	47
Perinatal mortalities+	189	177	165	154	150	155	129	168	142	153
Perinatal related mortalities^	209	193	176	163	156	166	143	182	153	166
Perinatal mortalities excluding lethal and terminated fetal abnormalities•	155	146	119	112	111	127	101	124	115	132
Perinatal related mortalities excluding lethal and terminated fetal abnormalities•	168	158	127	120	116	135	110	136	125	143
	Rate									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total births										
Fetal deaths (terminations of pregnancy and stillbirths)*	8.13	7.25	7.63	6.77	6.95	7.26	6.02	7.81	6.17	7.99
Terminations of pregnancy	1.68	1.11	1.88	2.07	1.57	1.34	1.32	2.28	1.38	1.41
Stillbirths	6.44	6.14	5.75	4.70	5.38	5.91	4.70	5.53	4.79	6.58
Early neonatal deaths <7 days										
Late neonatal deaths 7–27 days										
Neonatal deaths <28 days#	4.04	4.06	3.05	3.19	3.30	3.93	3.46	4.07	3.89	3.18
Perinatal mortalities+	10.97	10.35	9.99	9.40	9.84	10.42	8.53	10.93	9.32	10.27
Perinatal related mortalities^	12.13	11.29	10.66	9.94	10.24	11.16	9.46	11.84	10.04	11.14
Perinatal mortalities excluding lethal and terminated fetal abnormalities•	9.00	8.54	7.20	6.83	7.28	8.53	6.68	8.07	7.54	8.86
Perinatal related mortalities excluding lethal and terminated fetal abnormalities•	9.75	9.24	7.69	7.32	7.61	9.07	7.28	8.85	8.20	9.60

* Fetal death rate per 1,000 babies born (includes terminations and stillbirths).

Neonatal death rate per 1,000 live born babies.

+ Fetal deaths and early neonatal deaths per 1,000 babies born.

^ Fetal deaths and early and late neonatal deaths per 1,000 babies born.

• Lethal and terminated fetal abnormalities are all perinatal related deaths with Perinatal Society of Australia and New Zealand Perinatal Death Classification (PSANZ-PDC) of congenital anomaly, and neonatal deaths with PSANZ Neonatal Death Classification (PSANZ-NDC) of congenital anomaly.

Sources: Numerator: PMMRC's perinatal data extract 2009–2018; Denominator: MAT births 2009–2018.

Table 3.43: Summary of New Zealand perinatal related mortality rates using New Zealand definition (≥20 weeks or ≥400g if gestation unknown), babies of ngā māmā Māori and New Zealand European mothers by year 2009–2018 (continued)

NZ European

Maternal prioritised ethnic group: NZ European	n									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total births	26,541	26,105	24,820	24,040	22,895	22,304	21,900	21,379	20,929	20,209
Fetal deaths (terminations of pregnancy and stillbirths)*	234	201	205	189	179	203	172	168	137	159
Terminations of pregnancy	69	74	77	66	59	70	58	56	51	54
Stillbirths	165	127	128	123	120	133	114	112	86	105
Early neonatal deaths <7 days	43	55	51	47	35	53	41	34	31	47
Late neonatal deaths 7–27 days	15	15	7	14	16	6	11	5	15	12
Neonatal deaths <28 days#	58	70	58	61	51	59	52	39	46	59
Perinatal mortalities+	277	256	256	236	214	256	213	202	168	206
Perinatal related mortalities^	292	271	263	250	230	262	224	207	183	218
Perinatal mortalities excluding lethal and terminated fetal abnormalities•	191	166	171	166	153	172	146	139	113	138
Perinatal related mortalities excluding lethal and terminated fetal abnormalities•	202	176	175	173	164	176	150	143	124	146
	Rate									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Total births										
Fetal deaths (terminations of pregnancy and stillbirths)*	8.82	7.70	8.26	7.86	7.82	9.10	7.85	7.86	6.55	7.87
Terminations of pregnancy	2.60	2.83	3.10	2.75	2.58	3.14	2.65	2.62	2.44	2.67
Stillbirths	6.22	4.86	5.16	5.12	5.24	5.96	5.21	5.24	4.11	5.20
Early neonatal deaths <7 days										
Late neonatal deaths 7–27 days										
Neonatal deaths <28 days#	2.20	2.70	2.36	2.56	2.25	2.67	2.39	1.84	2.21	2.94
Perinatal mortalities+	10.44	9.81	10.31	9.82	9.35	11.48	9.73	9.45	8.03	10.19
Perinatal related mortalities^	11.00	10.38	10.60	10.40	10.05	11.75	10.23	9.68	8.74	10.79
Perinatal mortalities excluding lethal and terminated fetal abnormalities•	7.20	6.36	6.89	6.91	6.68	7.71	6.67	6.50	5.40	6.83
Perinatal related mortalities excluding lethal and terminated fetal abnormalities•	7.61	6.74	7.05	7.20	7.16	7.89	6.85	6.69	5.92	7.22

* Fetal death rate per 1,000 babies born (includes terminations and stillbirths).

Neonatal death rate per 1,000 live born babies.

+ Fetal deaths and early neonatal deaths per 1,000 babies born.

^ Fetal deaths and early and late neonatal deaths per 1,000 babies born.

• Lethal and terminated fetal abnormalities are all perinatal related deaths with Perinatal Society of Australia and New Zealand Perinatal Death Classification (PSANZ-PDC) of congenital anomaly, and neonatal deaths with PSANZ Neonatal Death Classification (PSANZ-NDC) of congenital anomaly.

Sources: Numerator: PMMRC's perinatal data extract 2009–2018; Denominator: MAT births 2009–2018.

Table 3.44: Perinatal Society of Australia and New Zealand Perinatal Death Classification (PSANZ-PDC) Version 2017 full code list

1	**Congenital anomaly**
1.1	Structural anomaly
1.11	Nervous system
1.12	Cardiovascular system
1.13	Genitourinary system
1.14	Gastrointestinal system
1.15	Musculoskeletal
1.151	Congenital diaphragmatic hernia
1.152	Gastroschisis/omphalocele
1.16	Respiratory system (includes congenital pulmonary airway malformation (CPAM))
1.17	Haematological
1.18	Multiple congenital anomaly (no chromosomal/genetic cause or not tested)
1.19	Other congenital anomaly
1.192	Idiopathic hydrops fetalis
1.193	Fetal tumour (includes sacro-coccygeal teratoma)
1.198	Other specified
1.199	Congenital anomaly, unspecified
1.2	Chromosomal anomaly
1.21	Trisomy 21 (Down syndrome)
1.22	Trisomy 18 (Edward syndrome) and Trisomy 13 (Patau syndrome)
1.23	Other trisomies and partial trisomies of the autosomes, not elsewhere classified (includes pathogenic duplications, unbalanced translocations and insertions)
1.24	Monosomies and deletions from the autosomes, not elsewhere classified (includes pathogenic deletions, eg, 22q11.2 deletion syndrome (diGeorge syndrome), Wolff-Hirschorn syndrome, Cri-du-chat syndrome)
1.25	Turner syndrome (monosomy X)
1.26	Other sex chromosome abnormalities (eg, Klinefelter syndrome)
1.28	Other chromosomal abnormalities, not elsewhere specified (includes triploidy)
1.29	Unspecified
1.3	Genetic condition
1.31	Genetic condition, specified (includes inborn errors of metabolism (eg, Tay-Sachs disease, Fragile X syndrome, imprinting syndromes) and other syndromes with demonstrated genetic mutations (eg, Kabuki syndrome, Fraser syndrome)
1.32	Syndrome/association with demonstrated chromosomal/gene anomaly
1.39	Genetic condition, unspecified
2	**Perinatal infection**
2.1	Bacterial
2.11	Group B streptococcus
2.12	E coli
2.13	Listeria monocytogenes
2.14	Spirochaetal, eg, syphilis
2.18	Other bacterial
2.19	Unspecified bacterial
2.2	Viral
2.21	Cytomegalovirus
2.22	Parvovirus
2.23	Herpes simplex virus
2.24	Rubella virus
2.25	Zika virus
2.28	Other viral
2.29	Unspecified viral
2.3	Protozoal, eg, toxoplasma
2.5	Fungal
2.8	Other specified organism
2.9	Other unspecified organism or no organism identified
3	**Hypertension**
3.1	Chronic hypertension: essential
3.2	Chronic hypertension: secondary, eg, renal disease
3.3	Chronic hypertension: unspecified
3.4	Gestational hypertension
3.5	Pre-eclampsia
3.6	Pre-eclampsia superimposed on chronic hypertension
3.9	Unspecified hypertension
4	**Antepartum haemorrhage (APH)**
4.1	Placental abruption
4.2	Placenta praevia
4.3	Vasa praevia
4.9	APH of undetermined origin
5	**Maternal conditions**
5.1	Termination of pregnancy for maternal psychosocial indications
5.2	Diabetes
5.21	Gestational diabetes
5.22	Pre-existing diabetes
5.3	Maternal injury
5.31	Accidental
5.32	Non-accidental
5.4	Maternal sepsis
5.5	Antiphospholipid syndrome
5.6	Obstetric cholestasis
5.8	Other specified maternal conditions
5.81	Maternal suicide
5.88	Other specified maternal medical or surgical conditions

6 Complications of multiple pregnancy

6.1 Monochorionic twins
- 6.11 Twin to twin transfusion syndrome (TTTS)
- 6.12 Selective fetal growth restriction (FGR) (ie, affecting only one twin)
- 6.13 Monoamniotic twins (including cord entanglement)
- 6.18 Other
- 6.19 Unknown or unspecified

6.2 Dichorionic twins
- 6.21 Early fetal death in a multiple pregnancy (<20 weeks' gestation)
- 6.22 Selective fetal growth restriction (FGR)
- 6.28 Other
- 6.29 Unknown or unspecified

6.3 Complications of higher order multiples (3 or more fetuses)
- 6.31 Twin to twin transfusion syndrome (TTTS)
- 6.32 Selective fetal growth restriction (FGR)
- 6.33 Monoamniotic multiples (including cord entanglement)
- 6.34 Early fetal death in a multiple pregnancy (<20 weeks' gestation)
- 6.38 Other
- 6.39 Unknown or unspecified

6.4 Complications where chorionicity is unknown

6.8 Other

6.9 Unspecified

7 Specific perinatal conditions

7.1 Fetomaternal haemorrhage

7.2 Antepartum cord or fetal vessel complications (excludes monochorionic twins or higher order multiples)
- 7.21 Cord vessel haemorrhage
- 7.22 Cord occlusion (true knot with evidence of occlusion or other)
- 7.28 Other cord complications
- 7.29 Unspecified cord complications

7.3 Uterine abnormalities
- 7.31 Developmental anatomical abnormalities (eg, bicornuate uterus)
- 7.38 Other
- 7.39 Unspecified

7.4 Alloimmune disease
- 7.41 Rhesus isoimmunisation
- 7.42 Other red cell antibody
- 7.43 Alloimmune thrombocytopenia
- 7.48 Other
- 7.49 Unspecified

7.5 Fetal antenatal intracranial injury
- 7.51 Subdural haematoma
- 7.52 Fetal antenatal ischaemic brain injury
- 7.53 Fetal antenatal haemorrhagic brain injury

7.6 Other specific perinatal conditions
- 7.61 Rupture of membranes after amniocentesis
- 7.62 Termination of pregnancy for suspected but unconfirmed congenital anomaly
- 7.63 Amniotic band
- 7.68 Other

7. 8 Unspecified

8 Hypoxic peripartum death

8.1 With intrapartum complications (sentinel events)
- 8.11 Uterine rupture
- 8.12 Cord prolapse
- 8.13 Shoulder dystocia
- 8.14 Complications of breech presentation
- 8.15 Birth trauma
- 8.16 Intrapartum haemorrhage
- 8.18 Other

8.2 Evidence of significant fetal compromise (excluding other complications)

8.3 No intrapartum complications and no evidence of significant fetal compromise identified

8.9 Unspecified hypoxic peripartum death

9 Placental dysfunction or causative placental pathology

9.1 Maternal vascular malperfusion

9.2 Fetal vascular malperfusion

9.3 High grade villitis of unknown etiology (VUE)

9.4 Massive perivillous fibrin deposition/maternal floor infarction

9.5 Severe chronic intervillositis (histiocytic intervillositis)

9.6 Placental hypoplasia (small for gestation placenta)

9.7 No causal placental pathology demonstrated, with antenatal evidence of poor placental function identified (such as abnormal fetal umbilical artery Doppler)

9.8 Placental pathological examination was not performed, with antenatal evidence of poor placental function was identified (such as abnormal fetal umbilical artery Doppler)

9.9 Other placental pathology (eg, multiple pathologies with evidence of loss of placental function leading to death)

10 Spontaneous preterm labour or rupture of membranes (<37 weeks' gestation)

10.1 Spontaneous preterm
- 10.11 With histological chorioamnionitis
- 10.12 Without histological chorioamnionitis
- 10.13 With clinical evidence of chorioamnionitis, no examination of placenta
- 10.17 No clinical signs of chorioamnionitis, no examination of placenta
- 10.19 Unspecified or not known whether placenta examined

10.2 Spontaneous preterm preceded by premature cervical shortening

11 Unexplained antepartum fetal death

11.1 Unexplained antepartum fetal death despite full investigation

11.2 Unclassifiable antepartum fetal death with incomplete investigation

11.3 Unclassifiable antepartum fetal death due to unknown level of investigation

12 Neonatal death without obstetric antecedent

12.1 Neonatal death with no obstetric antecedent factors despite full investigation

12.2 Neonatal death unclassifiable as to obstetric antecedent with incomplete investigation

12.3 Neonatal death unclassifiable as to obstetric antecedent due to unknown level of investigation

Table 3.45: PSANZ Neonatal Death Classification (PSANZ-NDC) Version 2017 full code list

1 Congenital anomaly

1.1 Structural anomaly

- 1.11 Nervous system
- 1.12 Cardiovascular system
- 1.13 Genitourinary system
- 1.14 Gastrointestinal system
- 1.15 Musculoskeletal
  - 1.151 Congenital diaphragmatic hernia
  - 1.152 Gastroschisis/omphalocele
- 1.16 Respiratory system (includes congenital pulmonary airway malformation (CPAM))
- 1.17 Haematological
- 1.18 Multiple congenital anomaly (no chromosomal/genetic cause or not tested)
- 1.19 Other congenital anomaly
  - 1.192 Idiopathic hydrops fetalis
  - 1.193 Fetal tumour (includes sacro-coccygeal teratoma)
  - 1.198 Other specified
  - 1.199 Congenital anomaly, unspecified

1.2 Chromosomal anomaly

- 1.21 Trisomy 21 (Down syndrome)
- 1.22 Trisomy 18 (Edward syndrome) and Trisomy 13 (Patau syndrome)
- 1.23 Other trisomies and partial trisomies of the autosomes, not elsewhere classified (includes pathogenic duplications, unbalanced translocations and insertions)
- 1.24 Monosomies and deletions from the autosomes, not elsewhere classified (includes pathogenic deletions eg, 22q11.2 deletion syndrome (diGeorge syndrome), Wolff-Hirschorn syndrome, Cri-du-chat syndrome)
- 1.25 Turner syndrome (monosomy X)
- 1.26 Other sex chromosome abnormalities (eg, Klinefelter syndrome)
- 1.28 Other chromosomal abnormalities, not elsewhere specified (includes triploidy)
- 1.29 Unspecified

1.3 Genetic condition

- 1.31 Genetic condition, specified (includes inborn errors of metabolism (eg, Tay-Sachs disease, Fragile X syndrome, imprinting syndromes) and other syndromes with demonstrated genetic mutations (eg, Kabuki syndrome, Fraser syndrome)
- 1.32 Syndrome/association with demonstrated chromosomal/gene anomaly
- 1.39 Genetic condition, unspecified

2 Periviable infants (typically <24 weeks)

2.1 Not resuscitated (including infants where there is an antenatal plan for no resuscitation at birth or in the circumstance of re-directed care)

2.2 Unsuccessful resuscitation

2.9 Unspecified or not known whether resuscitation attempted

3 Cardio-respiratory disorders

3.1 Hyaline membrane disease/Respiratory distress syndrome (RDS)

3.2 Meconium aspiration syndrome

3.3 Primary persistent pulmonary hypertension

3.4 Pulmonary hypoplasia

3.5 Pulmonary haemorrhage

3.6 Air leak syndromes

- 3.6.1 Pneumothorax
- 3.6.2 Pulmonary interstitial emphysema
- 3.6.3 Other

3.7 Patent ductus arteriosus

3.8 Chronic neonatal lung disease (typically, bronchopulmonary dysplasia)

3.9 Other

- 3.9.1 Neonatal anaemia/hypovolaemia

4 Neonatal infection

4.1 Congenital/Perinatal bacterial infection (early onset <48 hrs)

- 4.11 Blood stream infection/septicaemia
  - 4.111 Positive culture of a pathogen
  - 4.112 Clinical signs of sepsis + ancillary evidence but culture negative
- 4.12 Bacterial meningitis
- 4.13 Bacterial pneumonia
- 4.15 Multiple site bacterial infection
- 4.18 Other congenital bacterial infection eg, gastroenteritis, osteomyelitis, cerebral abscess
- 4.19 Unspecified congenital infection

4.2 Congenital/Perinatal viral infection

4.3 Congenital fungal, protozoan, parasitic infection

4.4 Acquired bacterial infection [late onset >48hrs]

- 4.41 Blood stream infection/septicaemia
  - 4.411 Positive culture of a pathogen
  - 4.412 Clinical signs of sepsis + ancillary evidence but culture negative
- 4.42 Bacterial meningitis
- 4.43 Bacterial pneumonia
- 4.48 Other acquired bacterial infection eg, gastroenteritis, osteomyelitis
- 4.49 Unspecified acquired infection

4.5 Acquired viral infection

4.6 Acquired fungal, protozoan, parasitic infection

5 Neurological

5.1 Hypoxic ischaemic encephalopathy/Perinatal asphyxia

5.2 Cranial haemorrhage

- 5.21 Intraventricular haemorrhage
- 5.22 Subgaleal haemorrhage
- 5.23 Subarachnoid haemorrhage
- 5.24 Subdural haemorrhage
- 5.28 Other intracranial haemorrhage

5.3 Post haemorrhagic hydrocephalus
5.4 Periventricular leukomalacia
5.8 Other

6 Gastrointestinal

6.1 Necrotising enterocolitis (NEC)
6.2 Short gut syndrome
6.3 Gastric or intestinal perforation (excluding NEC)
6.4 Gastrointestinal haemorrhage
6.8 Other

7 Other

7.1 Sudden unexpected death in infancy (SUDI)

- 7.11 Sudden infant death syndrome (SIDS)
  - 7.112 SIDS Category IA: Classic features of SIDS present and completely documented
  - 7.113 SIDS Category IB: Classic features of SIDS present but incompletely documented
  - 7.114 SIDS Category II: Infant deaths that meet category I except for one or more features
- 7.12 Unknown/Undetermined
- 7.13 Unclassified sudden infant death in the neonatal period
  - 7.131 Bed sharing/unsafe sleep
  - 7.132 Not bed sharing

7.2 Multisystem failure

- 7.21 Secondary to intrauterine growth restriction
- 7.28 Other specified
- 7.29 Unspecified/undetermined primary cause or trigger event

7.3 Trauma

- 7.31 Accidental
- 7.32 Non accidental
- 7.39 Unspecified

7.4 Treatment complications

- 7.41 Surgical
- 7.42 Medical

7.5 Unsuccessful resuscitation in infants of 28 weeks' gestation or more without an obvious sentinel event
7.8 Other specified