APPENDIX J - PERINATAL MORTALITY CLASSIFICATIONS – QUICK REFERENCE SHEET

PSANZ-PDC

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 (include congenital pulmonary airway malformation (CPAM))
  - 1.17 Haematological
  - 1.18 Multiple Congenital anomaly (no chromosomal/genetic cause or not tested)
  - 1.19 Other congenital abnormality
    - 1.192 Idiopathic hydrops fetalis
    - 1.193 Fetal tumour (include sacro-coccygeal teratoma)
    - 1.198 Other specified
    - 1.199 Congenital anomaly, unspecified
- 1.2 Chromosomal anomaly
  - 1.21 Down syndrome (trisomy 21)
  - 1.22 Edward syndrome and Patau syndrome (trisomy 18, trisomy 13)
  - 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 e.g. 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 (e.g. Klinefelter syndrome)
  - 1.28 Other chromosomal abnormalities, not elsewhere specified (includes Fragile X syndrome, imprinting syndromes, triploidy)
  - 1.29 Unspecified
- 1.3 Genetic anomaly
  - 1.31 Genetic condition, specified (e.g. Tay-Sachs disease; includes inborn errors of metabolism)
  - 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 e.g. 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 e.g. Toxoplasma
- 2.5 Fungal
- 2.8 Other specified organism
- 2.9 Other unspecified organism

3 Hypertension
- 3.1 Chronic hypertension: essential
- 3.2 Chronic hypertension: secondary, e.g. 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
  - 5.31 Maternal suicide
  - 5.32 Other specified maternal medical or surgical conditions

6 Specific Perinatal Conditions
- 6.1 Monochorionic twins
  - 6.11 Twin to twin transfusion syndrome (TTTS)
  - 6.12 Selective fetal growth restriction (FGR) (i.e. 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 (e.g. 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 Complications of antenatal, diagnostic or therapeutic procedures:
    - 7.611 Complications of prenatal diagnostic procedures (e.g. amniocentesis, chorionic villus sampling,) (e.g. rupture of membranes after amniocentesis)
    - 7.612 Complications of fetal ultrasound guided needle interventions (e.g. FBS/fetal transfusion, thoracocentesis, vesicocentesis, fetal cardiac valvoplasty, division of amniotic bands, fetal skin biopsy, unipolar/bipolar diathermy, RFA procedures)
    - 7.613 Complications of fetal shunt interventions (e.g. pleuroamniotic shunt, vesicoamniotic shunt)
    - 7.614 Complications of minimally invasive fetoscopic interventions (e.g. fetoscopic laser surgery for TTTS, FETO for CDH, laser ablation of posterior urethral valves)
    - 7.615 Complications of open maternal fetal surgery (e.g. open maternal fetal surgery for spina bifida)
    - 7.618 Other
  - 7.62 Termination of pregnancy for suspected but unconfirmed congenital anomaly.
  - 7.63 Amniotic band
  - 7.68 Other
- 7. 9 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 recognised 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
- 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 identified (such as abnormal fetal umbilical artery Doppler)
- 9.9 Other placental pathology (e.g. 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

APPENDIX J - PERINATAL MORTALITY CLASSIFICATIONS – QUICK REFERENCE SHEET

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

PSANZ-NDC

1 Congenital Anomaly (Please refer to PSANZ PDC)

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
- 3.61 Pneumothorax
- 3.62 Pulmonary interstitial emphysema
- 3.68 Other

3.7 Patent ductus arteriosus
3.8 Chronic neonatal lung disease (typically, bronchopulmonary dysplasia)
3.9 Other
- 3.91 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 e.g. 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 e.g. 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 Unclassified Sudden Infant Death in the neonatal period
  - 7.121 Bed sharing
  - 7.122 Not bed sharing
- 7.19 Unknown/Undetermined

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

PSANZ ASSOCIATED CONDITIONS

Associated conditions for both stillbirths and neonatal deaths

Categories 1 -11 PSANZ PDC

13 Genetic testing results not diagnostic
13.1 Copy number variant of unknown or uncertain significance
13.2 No mutation identified matching phenotype
13.3 Tested for genetic mutations but failed
13.4 Not tested or not known if tested for genetic mutations

14 Associated placental pathology
14.1 Delayed villous maturation
14.2 Large chorioangioma
14.3 Early bleeding often leading to preterm prelabour ROM
14.8 Other associated placental pathology

15 Associated cord pathology
15.1 True knot (excluding histological evidence of causation)
15.2 Hypercoiled cord
15.3 Tethered cord
15.4 Velamentous insertion
15.8 Other cord associated cord pathology

16 Fetal Growth Restriction
16.1 Autopsy evidence (brain:liver ratio equal to or greater than 4:1)
16.2 Antenatal ultrasound evidence of FGR
16.3 Clinical examination of the baby (by paediatrician, pathologist)
16.4 Birthweight (less than 10th centile for gestational age)
- 16.41 Customised centiles
- 16.42 Population centiles

17 Maternal risk factors (optional category)
17.1 Smoking
17.2 Substance use
17.3 High BMI
17.4 Maternal mental health disorder
17.5 Socioeconomic deprivation
17.6 Refugee or asylum seeker

Associated conditions for neonatal deaths only

NDC Categories 1- 6
In addition to the above for associated maternal/fetal conditions the NDC Categories 1- 6 can be used to assign associated neonatal conditions